

**CRITICAL REFLECTIVE PRACTICE:
CONCEPTUAL EXPLORATION AND MODEL
CONSTRUCTION**

by

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*TO: (1) my brother Jacob Hendrik de Villiers van Aswegen
with love*

*(2) all my mentors with gratitude: **PROF HIL BRINK**
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MRS MS NORVAL
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SUMMARY

Although it is relatively easy to study and learn about a practice discipline in the safe environment of an academic institution, it is far more complex to make sense of what has been learned when faced with the real world of practice. Practitioners need to *think on their feet* and have to find new ways of managing complex problems which do not fit directly into the theoretical frameworks learned in a more formal setting. Knowledge of what the various disciplines say is not in itself sufficient, experiential knowledge is necessary.

The key to learning in the experiential domain is *critical reflective practice* and *emancipatory learning*, which empower practitioners to explicate their implicit theories. If autonomy is the goal of professional education, the key is to help adult learners to distance themselves from their own values and beliefs in order to entertain more abstract modes of perception.

The purpose of this inquiry was therefore, to **construct a model for facilitation of critical reflective practice**, based on thorough analysis of the main concepts (critical thinking and reflection), related viewpoints, models and theories; and the data gathered and analyzed during, the **naturalistic inquiry**. The inquirer sought to develop each participant through Socratic & Learning Through Discussion (Dialogical) Technique, Critical Incident Reporting and participation in Critical Reflective Exercises.

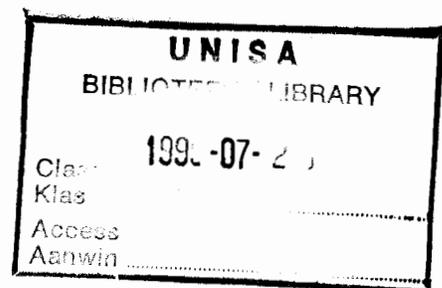
The constructed model for facilitation of critical reflective practice evolved from empirical observations, intuitive insights of the inquirer and from deductions combining ideas from several fields of inquiry. The model for facilitation of critical reflective practice postulates that practitioners have the inherent potential to change from *auto-pilot practice* to *critical reflective practice*. The purpose of the model is the facilitation of heightened awareness of *the self*, to enable health care professionals to *consciously* meet community needs and expectations. The desired outcome is *transformative intellectuals* who will strive to *empower* others to become critical reflective learners and practitioners.

KEY TERMS

Critical Reflective Practice; Critical Thinking; Critical Reflective Learning; Reflection; Creativity; Praxis; (Self-) Consciousness; Transformative Intellectual; Regulation Through Choice; Experiential Learning; Emancipatory Learning; Guided Critical Reflective Technique; Dialogical Thinking; Empowerment; Autonomy; Vision; Motivation; Communication; Caring & Naturalistic Paradigm.

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Chapter I: An overview of the study

1.1. Background and rationale

"Nursing is a profession which calls for commitment, maturity, and an ability to assess and synthesize a great deal of information quickly and accurately." (WHO Expert Committee, 1996) It is therefore, desirable for health care professionals to internalize the skills of critical thinking and reflective practice.

Although it is relatively easy to study and learn about a practice discipline in the safe environment of an academic institution, it is far more complex to make sense of what has been learned when faced with the real world of practice. Schön (1987) refers to the practice situation as a 'swampy low land,' where many unpredictable and uncontrollable factors impinge on everyday activities. As a result practitioners continuously have to respond to demands that are unique to a specific situation and time. Practitioners' need to 'think on their feet' and have to find new ways of managing complex problems that do not always fit directly into the theoretical frameworks learned in a more formal setting (Robinson & Vaughan, 1992: 125). This problem suggests that practitioners need to be creative.

Philosophically and practically, creative thinking, critical thinking and reflection cannot be clearly separated (Perkins, 1986: 15). Creativity is seen as the ability to sense gaps or problems within known information, forming ideas or hypotheses about what should be done, testing and modifying those ideas, and taking appropriate action in a unique way. Creativity conjures up visions of curiosity, imagination, discovery, innovation and invention. It comprises several intertwined abilities rather than a single characteristic (Murray & Zentner, 1989: 107).

Practitioners' need to be self-confident enough to be able to adjust and modify their understanding of theory, making use of knowledge in a way that is unique to the particular setting in which it occurs. Knowledge of what the various disciplines say is not in itself sufficient, experiential knowledge is necessary (Teasdale, In: Robinson & Vaughan, 1992: 128).

Experiential knowledge is knowledge gained through direct encounter with a subject, issue, person or thing. It is knowledge through relationship, therefore, experiential knowledge is necessarily personal and idiosyncratic. To learn experientially is to learn more about yourself: your skills, values, beliefs, attitudes and so on (Burnard, In: Robinson & Vaughan, 1992: 176-178). The key to learning in the experiential domain is critical thinking and reflection in practice and on practice.

Critical thinking and reflection involve a "learned conversation" (Brookfield, 1987: 238) with yourself. Within this conversation emotive aspects - feelings, responses, intuition, sensing are central as the practitioner deliberately breaks with the traditional modes of thought to prompt forward leaps in creativity (Parnes, 1972; Torrance, 1979; Clarke, 1986; Garrison, 1991).

One alternative interpretation of critical, reflective thinking is that of emancipatory learning. The idea of emancipatory learning is derived from the work of Habermas (1979). Emancipatory learning is that "which frees people from personal, institutional, or environmental forces that prevent them from seeing new directions, from gaining control of their lives, their society, and their world." (Apps, 1985: 51) The outcome of emancipatory learning, according to Schlossberg (1984: 5) is a change in assumptions about oneself and the world," resulting in a corresponding change in behaviour and relationships. Critical, reflective thinking ability is crucial to understanding personal relationships, envisioning alternatives and more productive ways of organizing the work environment, and successful transformation. It involves political literacy.

Although media reports (Khumalo, 1994: 49; Ncayiyana, 1994: 120; "Opinion," The Star, 7.9.95), suggest that health care practitioners should not become involved in political actions, Robinson (Robinson & Vaughan, 1992: 201) argues that life is not that simple - it is only the naive who voice such a viewpoint. What is necessary is that practitioners should be empowered through critical, reflective skills to participate in a more positive manner. "Without thinking skills, quality nursing and decision-making on moral issues will not be possible. Reflection that requires thinking skills is fundamental to many other virtues in nursing." (Botes & Rossouw, 1995, cited in Poggenpoel & Muller, 1996: 11)

Pearson (Robinson & Vaughan, 1992: 213) seems to underpin this viewpoint, and states that "nursing, as a collective, frequently misses the point of its very existence: the provision of a service to those who need, seek, or are directed to nursing." Practitioners, according to this author can no more nurse without critically reflecting upon what they are doing than theorists can produce theories without engaging in the sort of practice distinctive of their activity. It is the critical, reflective nurse practitioner, not the "auto-pilot" practitioner (Palmer, Burns & Bulman, 1994: 1) who can criticize the theory in use and determine its value for directing actions to achieve desired outcomes. Being a critical, reflective practitioner the nurse is not only a user of theory, but she may be a modifier as well. She is also a chooser of theory.

Practitioners need to be empowered through critical thinking and reflective skills to explicate their implicit theories. This would, according to Pearson (Robinson & Vaughan, 1992: 223) result in *action* with the following qualities. It would:

- Look to the future, in that it seeks to transform
- Value collaboration, in that it seeks to involve.
- Lead to development, in that it seeks to build and grow.
- Be concerned with generating theory in grounded action, rather than vice versa.
- Be agnostic, in that it seeks to reexamine and reformulate, rather than to prescribe.
- Be situational, in that it seeks to recognize contents and their full meanings.

This type of *action* is only possible, if the practitioner has a "heightened awareness" of herself (*the self*), an ability to live with the tentative, and if she is not "robbed of the reality of her own existence and that of her clients." (Gulino, 1982, In: Robinson & Vaughan, 1992: 352)

The viewpoints of Pearson (1992) and Gulino (1982) are seen as important within the context of this study. Self-awareness in the current South African climate of change, reform, and reorganization (Reconstruction and Development Programme) by the African National Congress (1994) is seen as even more important. Only by thinking critically and reflectively, by making a *conscious* effort to meet challenges and problems will health care professionals be able to meet community needs and expectations. It is the opinion of the inquirer that what is needed in a fast changing, South African Health System, is the development of what Grundy

(1989: 189) identified as a "critical consciousness." Dubos (1962), cited in Hester (1994:9) remarked, "The persons most likely to become creative and act as leaders are not those who enter life with the largest amount of detailed, specialized information, but rather those who have enough theoretical knowledge, critical judgement, and discipline of learning to adapt rapidly to new situations and problems that constantly arise in the modern world."

Critical thinking and reflective skills enhance ability to analyze issues and form judgements, find solutions and evaluate conclusions, to research and negotiate, and anticipate the actions of others. As long as individuals or groups refuse to recognize the conditioned associations that operate at the base of their thinking, they cannot develop the traits of mind necessary for a significant transcendence of prejudice. Their thinking will remain primarily associational and impressionistic, influenced by desire, egocentricity, and sociocentricity - typically self-serving, resistant to criticism, and characterized by lack of intellectual and moral character (Paul, 1990 (b), 159- 160).

As human beings, health care professionals such as nurse practitioners have a right to their own moral perspective - whether conservative, liberal, theistic, or non-theistic - but, they should be able to analyze the perspective they choose, compare it accurately with other perspectives, and scrutinize the facts they conceptualize and judge critically and reflectively. To enable them to gain these skills and internalize them, role models in the health care professions (such as educators) need to adopt the principles of critical, reflective thinking to the domain of ethical judgement and reasoning (Paul, 1990 (b): 188).

Critical, reflective learning processes demand a willingness to meet learners and practitioners on their own terms and to get to know them as individuals. The role model's dominant activity must shift from telling to facilitating learning, encouraging discussion, active participation and critical reflection on learning experiences. At the core of active, critical, and reflective learning is a deceptively simple requirement: learners or practitioners must be personally invested in the learning process. They must care - deeply - about their personal and professional growth and the contribution that they themselves can make. Role models in the health care professions need to develop "a mind that watches itself." (Albert Camus, quoted in Garrison, 1991: 27) However, critical reflective thinking and action involve risk taking, as the individuals engage in a process that challenges and changes the status quo (Hedin, 1989: 81).

Critical reflection is a profoundly difficult thing to do without expert guidance and support, as it can be arduous and painful at times (Palmer, et.al. 1994: 110) - it results in knowledge of, and awareness of the feelings that accompany certain situations (Barell, 1995: 247). Critical, reflective process involves reflective self-criticism - "thinking about one's own thinking, to make one's own thinking object of one's thought, to discover its limitations and weaknesses." (Paul, 1990 (b): 300) Reflective self-criticism, an essential characteristic of autonomous practitioners, requires provisional or hypothetical detachment from one's own view. Self-criticism results in self-regulation - "regulation through choice" (Deci & Ryan, 1987: 1025) - characterized by flexibility and the absence of pressure. "Autonomy connotes an inner endorsement of one's actions, the sense that they emanate from oneself and are one's own. " (Deci & Ryan, 1987: 1024)

If autonomy is the goal of professional education, the key issue according to Dittman (1976: 463) is to bring its facilitation "from the unconscious, unplanned level to the level of conscious awareness." The process of critical thinking and reflection is seen within the literature and context of this study as the key to conscious awareness. Critical reflective practitioners are actively engaged with life, and see themselves as creating and re-creating aspects of their personal, professional and political lives. They, according to Brookfield (1987: 57) appreciate creativity, they are innovators, and they mirror a sense that life is full of possibilities. Critical reflective practitioners see the future as open and malleable and not closed and fixed. Critical reflective practitioners are self-confident about their potential for changing aspects of their worlds, both as individuals and through collective action.

However, critical thinking and reflective skills are not naturally acquired skills. According to De Bono (1974: 49) it needs to be learned in a deliberate manner as it is much more than knowing the rules of logic or learning to avoid logical errors. According to Jordaan (1995: 60) critical thinking skill development is not possible if educators proceed to teach according to the "banking model of education," that is, "depositing" information with the students and "withdrawing" the same information. Students do not, as an incidental consequence of memorizing conventional course material, acquire the abilities to efficiently and critically compare, classify, order, estimate, elaborate, form hypotheses, weigh evidence, draw conclusions, devise arguments, judge relevance, use analogies, etc. (Nickerson, 1987; Perkins, 1985).

McKinnon & Renner (1971: 1051-1052) found that the majority of college entrants do not have adequate skills to argue logically about the importance of a given principle when the context is slightly adhered to. They, moreover, found that critical thought processes can be improved. Their results show a statistically significant difference between students exposed to what they call inquiry oriented courses and those who were not. McKinnon & Renner (1971: 1052) are also of the opinion that such an improvement in critical thinking skills is not necessarily domain specific, transfer to other domains and everyday life can occur.

Despite a growing body of literature on the subject of critical thinking and reflective learning, practical suggestions for ways of improving these skills are limited. Most of the literature is highly theoretical and far removed from the practical concerns that constantly confront educators and students. It seems that critical thinking and reflective skills are best developed in an atmosphere of dialogue, interchange, and problem solving (de Bono, 1974; Meyers, 1987; Mezirow, 1990; Marsick, 1990; Barell, 1995). Individuals cannot learn to engage in reflective thought, and to think critically until they can, at least momentarily, set aside their own visions of the truth. As part of this process, adult learners must be taught to "*abstract from*" their immediate experiences in such a way as to expand their thinking abilities (Meyers, 1987: 27).

One thorny problem in tertiary education is to figure out ways to help adult learners to get some distance from their own values and beliefs so that they can entertain more abstract modes of perception. The key to the movement from concrete to abstract is, according to Meyers (1987: 29) the order of this movement: concrete experience first, then abstraction. Although this idea seem like mere common sense, it stands in direct opposition to traditional teaching methods, which introduce abstractions first and then seek to have learners confirm those abstractions through some concrete method of verification.

Teaching of abstractions in an artificial context, devoided of any association with the world as learners know it are *disembedded learning*. As Lawson & Renner (1975: 338) suggest, "It is the experience with the materials of the discipline that produces the person who can understand abstract content, and not studying the abstract content that produces students who can interact with materials and invent abstract generalizations."

As universities are involved in the education of tomorrow's leaders they have, according to Nickerson (1987:61) the choice to either "train for excellence" or to deliver graduates who are "capable of blindly following authority, acting without thought for the consequences of their actions, having their opinions molded and their behaviour shaped by illogical arguments and logical persuaders of an astonishing variety of types, believing that the future will be what it will be and taking no steps to make it what it could be. and failing to make any effort to see things from other people's points of view."

Therefore, educators must rethink their roles and concentrate on facilitating in students the skills and attitudes needed for self-directed critical thinking, reflection and inquiry. The real fruits of education are the thought processes and attitudes that result from the study of a discipline, not the information accumulated. Students must actively struggle with real problems and issues - and see their educators and role models doing the same. "Attitudinal aspects of critical, reflective thinking are better practiced than preached." (Meyers, 1987: 9)

Academic excellence is not mirrored in students that have an exaggerated respect for lecturers' opinions, for discourse in textbooks, a desire to be spoon-fed, a tendency to "parrot whatever they are told," to plagiarize textbooks, to reject the repeated demand that they experience and think for themselves, and to be exclusively examination orientated (Jordaan, 1995: 59-60). Professional health care practitioners from such an academic milieu will not be able to meet the demands of a changing health care system. Active knowledge, acquired through critical thinking and reflection, would be improved if educators approached their teaching task as one of guiding, supporting and accompanying learners in their learning. Meaningful knowledge involves conceptual change (Gravett, 1995: 33).

Conceptual change involves "a qualitative change in the way a person understands, conceptualizes and experiences a phenomenon, an idea or an aspect of the surrounding world." (Gravett, 1995: 34) The instructional processes (the guiding, accompaniment and supporting of critical, reflective learning) aimed at a conceptual change should therefore be dialogic and inquiring. Ramsden (1988(a): 22) supports this view as follows: "... contemplation, reflection, working things out, and discussion with others learning the same subject matter is (thus) not a luxury but a necessity." If educators want students to learn

critically and reflectively, they will have to tell them less. If teaching does not encourage students' curiosity and does not allow for critical thinking and reflection, educators should not be shocked if students display a "desperate desire to memorize authoritative statements, nor if they develop a view of science and literature as an inexplicable mystery irrelevant to everyday concerns." (Ramsden, 1988 (a): 26)

Education, should seek to inspire in that it calls the individual person to faith, seeks to arouse curiosity and a sense of wonder, seeks to develop judgement, encourages perseverance and independence in the pursuit of truth, seeks to inspire creativity, clearer insight and a sense of adventurousness (Higgs, 1993: 87). Education should be an attempt to bring influences to bear that will actualize the individual learner's character, abilities and capacities. It should be an activity directed at self-realization through the processes of critical thinking and reflection whereby future health care professionals are equipped for the task of living and meaningful practice, guided in their aspirations and actions by their own sense of self-determination.

Essentially, the normative nature of education implies that it should be concerned with inspiring in learners the skills and attitudes necessary to know how to think, how to understand, how to appreciate, how to make use of knowledge and how to discover its inherent values, its usefulness, its clarifying and revealing powers, its insight and its truth for a meaningful human existence (Higgs, 1993: 87).

1.2. Problem statement

Despite widespread interest in, and recognition of the importance of internalizing critical thinking and reflective skills in adult learners there is no clear agreement concerning:

- the attributes of the concepts critical thinking and reflection,
- the processes involved in critical, reflective learning, or even as to
- how to develop these skills in adult learners.

The following questions arise:

- [1] What is critical thinking? What is reflection?
- [2] What is the relationship between critical thinking, reflective ability and creativity?
- [3] To what extent is there a universal meaning and definition of critical thinking and reflection? What refinements are needed?
- [4] What are the essential characteristics of a critical reflective practitioner/thinker? Fundamentally, what does a critical, reflective attitude involve? What is the core (heart) of a critical, reflective attitude?
- [5] Can an ethic of *caring* be developed through the process of critical reflection on practice?
- [6] What are the learning processes/phases involved in critical, reflective learning?
- [7] How should critical, reflective practice [within the context of nursing] be reflected in a conceptual framework and model?
- [8] What is the effect of critical, reflective practice on nurse practitioners' attitudes or perceptions toward:
 - personal awareness,
 - patients/clients,
 - colleagues, and
 - professional growth and competence?

From the research questions six objectives were identified for this study.

1.3. Research objectives

The inquirer set the following objectives:

- [1] Conceptual analysis of the main concepts: critical thinking and reflection, as well as conceptual analysis of closely related concepts.
- [2] Review of available literature (theoretical viewpoints) regarding critical thinking, reflection and the processes involved in critical reflection.
- [3] Construction of a conceptual framework and model for development of critical, reflective learning and practice [within the context of nursing practice]
- [4] Application and evaluation of selected strategies to raise self-consciousness and critical reflective thinking.

- [5] Assess students' attitude and feelings towards the selected guided, critical reflective techniques.
- [6] Evaluation and refinement of the constructed model after peer review.

1.4. Overall aim/purpose

The purpose of this inquiry was to construct a model for facilitation (development) of critical thinking and reflective skills in nurse practitioners, based on thorough analysis of the main concepts (critical thinking and reflection); related viewpoints, models and theories; and the data gathered and analyzed during the empirical study .

1.5. Paradigmatic perspective

1.5.1. Explanation of the concept paradigm and it's application within the context of this inquiry

Actions of the inquirer required reference to a paradigm: "As we think, so do we act." (Lincoln & Guba, 1985: 15) What is a paradigm? A paradigm may be viewed as a set of basic beliefs (or metaphysics) that deal with ultimates or first principles. It is a world view, a general perspective that defines for "its holder, the nature of the 'world,' the individual's place in it, and the range of possible relationships to that world and its parts . . ." (Guba & Lincoln, In: Denzin & Lincoln, 1994: 107)

A paradigm is a way of breaking down the complexity of the world, and as such is deeply embedded in the socialization of the inquirer. The chosen paradigm is normative in that it tells the inquirer what is important, legitimate and reasonable (Patton, 1990: 203). The beliefs are basic in that they must be accepted simply on faith (however well argued); there is no way to establish their ultimate truthfulness (Guba & Lincoln, In: Denzin & Lincoln, 1994: 107).

Field & Morse (1985: 138) define a paradigm as a "collection of logically connected concepts and propositions that provide a theoretical perspective or orientation that frequently guides research approaches toward a topic." Kuhn (Snyman, 1993: 58) states that the paradigm defines the problem area for the researcher. What the researcher would

be investigating and where he or she could be doing it. The problem literally provides clues about the possible solutions - in the form, *inter alia*, of model solutions, theoretical predictions, etcetera. The paradigm also determines the acceptability of solutions as embodied in the ontological, theoretical and methodological commitments.

Inquiry paradigms define for the inquirer what it is they are about, and what falls within and outside the limits of legitimate inquiry. Three fundamental and interconnected questions must be asked. The three questions, identified by Guba & Lincoln (Denzin & Lincoln, 1994: 108) are:

- [1] **The ontological question.** What is the form and nature of reality and, therefore, what is there that can be known about it?
- [2] **The epistemological question.** What is the nature of the relationship between the knower or would-be-knower (inquirer) and what can be known?
- [3] **The methodological question.** How can the would-be-knower (inquirer) go about finding out whatever he or she believes can be known?

Within the context of this study the inquirer was influenced by what is known as the Naturalistic Paradigm. Therefore, the three fundamental, interconnected questions stated above are answered as follows:

- [1] **The ontological question** (the nature of reality). Realities are seen as multiple, with differences among them that cannot be resolved through rational process or increased data. Realities are constructed and holistic. Therefore, individual personal reality is self-created (Emery, 1978: 39; Erlandson, Harris, Skipper & Allen, 1993:23). Realities are "social constructions of the mind," and there exist as many such constructions as there are individuals . . . " (Guba & Lincoln, 1989: 43) Rather than trying to resolve differences, they are compared to enhance each others meanings. As a result prediction and control is seen as unlikely outcomes within the context of this study, although some level of understanding is achieved (Lincoln & Guba, 1985: 37).
- [2] **The epistemological question** (the relationship between the inquirer and what can be known [participants]). Inquirer and participants are interactive and inseparable. The inquirer and the "object" (adult learners) of the inquiry interact to influence one another

(Lincoln & Guba, 1985: 37). Within the context of the naturalistic paradigm (this study) the inquirer elects to use herself as the primary data-gathering instrument as it is virtually impossible to devise a priori, a non human instrument with sufficient adaptability to encompass and adjust to the variety of realities that will be encountered (Lincoln & Guba, 1985: 39).

The inquirer within this inquiry is seen as a subjective partner with the participants in the literal creation of data (Guba & Lincoln, 1989: 45). Therefore, the results of this inquiry were *literally created* by the interaction between the inquirer and the participants, and not "discovered" as if it had always been "out there." (Guba & Lincoln, 1989: 67)

[3] **The methodological question** (how can the inquirer go about finding out what can be known?). The inquirer within the context of this study and the framework of the naturalistic paradigm elected mainly qualitative methods, because they are seen as more adaptable to dealing with multiple realities and more sensitive to and adaptable to the many shaping influences and value patterns that may be encountered (Lincoln & Guba, 1989: 40).

The methodology within this inquiry involved a continuing dialectic of iteration, analysis, critique, reiteration, reanalyzes, and so on, leading to the emergence of a joint construction of a case - thus, a *hermeneutic dialectic* process was followed (Guba & Lincoln, 1989: 85).

1.5.2. Methodological implications of the naturalistic paradigm

The following discussion is a summary of some methodological implications of the naturalistic paradigm for this inquiry.

15.2.1. Research setting

The selection of a suitable site is a critical decision in naturalistic inquiry. Marshall & Rossman (1989: 54) note: "The ideal site is where (1) entry is possible; (2) there is a high probability that a rich mix of many of the processes, people, programs, interactions, and/or

structures that may be part of the research question will be present; (3) the inquirer can devise an appropriate role to maintain continuity of presence for as long as necessary, and (4) data quality and credibility of the study are reasonably assured by avoiding poor sampling decisions."

The naturalistic inquirer elects to carry out research in the natural context of the entity for which study is proposed because naturalistic ontology suggests that realities are wholes that cannot be understood in isolation from their contexts (Lincoln & Guba, 1985: 39). Within this study the selected site is a tertiary (higher) education environment for adult learners - a medical university and its practice environment (campus hospital and community clinics).

The selected setting was chosen due to practical reasons, namely being a full-time lecturer at the chosen institution:

- [1] The inquirer was able to build trusting relations with the participants in this study.
- [2] Entry into the setting was possible.
- [3] There was a high probability that a rich mix of the processes, interactions, and structures of interest will be present.
- [4] Prolonged engagement was possible. That is substantial involvement at the site of the inquiry, to overcome the effects of misinformation, distortion, or presented "fronts" to establish the rapport necessary to uncover constructions/assumptions.
- [5] The inquirer, being a staff member for eight years, understood the context's culture.
- [6] Peer debriefings were possible, as two senior colleagues were prepared to act as critiques.

1.5.2.2. Sampling method

Participants (respondents) who will enter into the hermeneutic process must be selected. But such sampling is not carried out for the sake of drawing a group that is representative of some inquirer's ability to identify emerging themes that take adequate account of contextual conditions and cultural norms (Erlandson, et al., 1993: 82). The logic and power of purposeful sampling lies, according to Patton (1990: 169) in selecting "*information-rich* cases for study in depth. Information-rich cases are those from which one can learn a great

deal about issues of central importance to the purpose of the research ". Within this inquiry the following strategies were used to choose *who* and *what not* to investigate:

[1] **Criterion sampling.** Criterion sampling was used to include adult learners (students) who complied with the following criteria. The participant should:

- [i] have given informed consent.
- [ii] be a senior student (for e.g., B Cur [I et A] I & III; B Cur Hons and M Cur)
- [iii] be able to speak, read and write English.
- [iv] be willing to participate in reflective exercises, critical incident reporting, and personal interviewing.
- [v] be a student following a pre-graduate/post-graduate course in the discipline of nursing, as the ultimate aim of this study is to develop a model for facilitation of critical reflective practice in nurse practitioners.

[2] **Opportunistic sampling.** Opportunistic sampling was used to follow new leads during the inquiry and to take advantage of the unexpected. Thus, allowing flexibility.

Purposive sampling method was used based on its characteristics. As Glaser & Strauss (1967: 48) suggest in their discussion of "theoretical" sampling (a term almost synonymous with "purposeful" sampling): "The criteria of theoretical sampling are designed to be applied in the on-going joint collection and analysis of data associated with the generation of theory. Therefore, they are continually tailored to fit the data and are applied judiciously at the right point and moment in the analysis. The analyst can continually adjust his control of data collection to ensure the data's relevance to the impersonal criteria of his emerging theory."

This flexibility suggests that purposeful sampling has certain particular characteristics:

[1] **Emergent sampling design.** Within the context of this study there can be no specification of the sample; it cannot be "drawn" in advance (Lincoln & Guba, 1985: 201). Sampling must be continuous (Lincoln & Guba, 1985: 210). The basic rule is, according to Erlandson, et.al., (1993: 83-84): "There are no rules for sample size." In qualitative research the inquirer is rather looking for quality than quantity, more for information richness than information volume.

Patton (1990: 186) adds that in the end sampling size, like all aspects of qualitative research, is subject to peer review, consensual validation, and judgement. What is crucial is that the sampling procedures and decisions be fully described, explained, and justified so that information users and peer reviewers have the appropriate context for judging the sample. Patton believes that by using the directed power of a small purposive sample, and by not attempting to overgeneralize from it, the inquirer can do much to allay fears about inadequate sample size.

[2] **Serial selection of sample units.** The purpose of *maximum variation sampling* - to document unique variations that have emerged in adapting to different conditions (Lincoln & Guba, 1985: 200) - is best obtained by selecting each unit of the sample only after the previous unit has been tapped and analyzed. Each successive unit was therefore chosen to extend on information already obtained, to obtain other information that contrasts with it, or to fill gaps in the information obtained.

Successive units within the context of this inquiry were selected in accordance with the need to extend, test, and fill in information.

[3] **Selection to the point of redundancy.** Naturalistic sampling, is based on informational, not statistical considerations. Its purpose is to maximize information, not facilitate generalization (Lincoln & Guba, 1985: 202). Therefore, the criterion invoked to determine when to stop sampling, within the context of this inquiry, was informational redundancy, not a statistical confidence level.

Purposive sampling was also used in the phase of conceptual analysis of the selected concepts: critical thinking, reflection, and its closely relating concepts, the conceptual framework construction phase; and the model construction phase. Existing definitions, viewpoints, models and theories on critical thinking, reflection and its related concepts were reviewed and used as a basis for construction of the conceptual framework and model. The inquirer worked back and forth between the literature and the research setting.

The sampling criteria were:

[1] Review and inclusion of cross-disciplinary sources (Extensive review of behavioural, educational, sociological, social psychological, organizational, nursing, medical and

research literature).

[2] Primary, and secondary sources. Primary sources, however, were given preference.

1.5.2.3. Data-gathering sources and data analysis

Within the naturalistic paradigm data gathering and data analyses are "complementary, ongoing, and often simultaneous processes." (Erlandson, et.al., 1993: 85) In qualitative data gathering and analysis, attention was given to constructing a comprehensive, holistic portrayal of the social and cultural dimensions of the particular context (setting). In order to obtain this holistic qualitative portrayal, each unit (case), site, or event was treated as a unique entity with its own particular meaning.

1.5.2.3.1. Data-gathering sources

The basic means and sources of data collection in this study, are summarized in this chapter, as follows:

[1] **Construction of critical incidents.** Participants were requested to record specific events occurring in the social context being studied. They were requested to record the critical incident in *descriptive* terms that are as specific as possible. By being recorded as single events, critical incidents, according to Erlandson, et.al., (1993: 107) facilitate ongoing analysis.

Critical incidents are brief descriptions written by the participants (learners) of significant events in their lives. The inquirer in this study provided the participants with a set of guidelines that identified the kind of incident to be described and asked for details of time, place, and people involved in the incident and the reasons why the event was so significant.

Critical incident technique was used within this study, because it is seen as a means of probing the participants' assumptive worlds. The critical incident technique is rooted in the phenomenological research tradition which presumes that learners' general assumptions are embedded in, and can be inferred from, their specific description of particular events (Brookfield, In: Mezirow, 1990: 180).

The purpose of using critical incident technique as a data-gathering source is that it enables the inquirer to enter the participant's (learner's) frame of reference so that the participant's structures of understanding and interpretive filters can be experienced and understood by the inquirer. As a technique, critical incidents are ideographic rather than nomothetic; that is according to Brookfield (Mezirow, 1990: 180), they seek to highlight particular, concrete, and contextually specific aspects of people's experiences. Their value for fostering critical, reflective and transformative learning is seen as twofold:

First, because critical incidents are accounts written by people about actions in their own lives, they are indisputable sources of data representing the participants' (learners') existential realities. Critical incident responses stand alone as primary data sources giving insight into learners' assumptive worlds in expressions that are indisputably the learners' own. Secondly, critical incident exercises are much less threatening to complete than asking participants to respond to general questions. The emphasis in the incidents is on recalling specific situations, events, and people rather than asking the participant to identify general assumptions (Brookfield, In: Mezirow, 1990: 180).

- [3] **Critical reflective exercises.** In this inquiry the inquirer utilized the media to develop the participants' critical thinking and reflective skills. Critical reflective exercises were built around a journal article, and the *Choice on termination of pregnancy act, Act No. 92 of 1996*. These exercises were seen as an important part of this study in that it focussed on real problems and issues, and drew upon the learners' (participants') own experiences.

An important value of assignments based on printed media is the challenge they present to learners' habitual ways of thinking. Learners often are under the misapprehension that everything appearing in print is supposedly objective news reporting. Thus, these exercises forced the participants to raise questions regarding point of view, opinion, or bias in the popular press and their personal view, opinion or bias. The exercises were chosen because the inquirer felt that it might develop a "healthy" scepticism in the printed word.

Guidelines and broad questions were provided for critical reflection on the journal article and Act (see annexure V, p. L and VII, p. LIII).

[4] **Socratic & Learning Through Discussion (Dialogical) Technique**

In this inquiry the inquirer utilized Socratic discussion/questioning and Learning Through Discussion (LTD) techniques to develop the participants' critical thinking and reflective skills. The techniques were chosen as they are dialogical in nature and allow participants to: (1) take responsibility for their own learning and that of peers; (2) develop and evaluate their thinking in comparison to that of other participants; and (3) learn a sense of intellectual discipline and thoroughness. Participants learn that all thoughts can be pursued in at least four directions: (1) their origin; (2) their support; (3) their conflicts with other thoughts; and (4) their implications and consequences.

Guidelines for participation and continuous evaluation were provided (see annexure II, p. XXXIX and III, p. XLIII). After completion of the specific course content, summative evaluation regarding Socratic and LTD technique were obtained through a questionnaire.

Use of a questionnaire was seen as necessary, in that the participants were already studying for the end of the year examination.

[5] **Reflexive Journal.** A reflexive journal was kept by the inquirer in order to record information about the inquirer's schedule and logistics, insights, and reasons for methodological decisions. The reflexive journal is "a kind of diary in which the investigator on a daily base, or as needed, records a variety of information about *self* (therefore the term "reflexive") and *method*." (Lincoln & Guba, 1985: 327) Lincoln (1981), Reinharz (1979), & Spradley (1979) suggests that the journal should consist of separate parts that include:

- (1) the *daily schedule and logistics* of the study,
- (2) a *personal diary* that provides the opportunity for catharsis, for reflection upon what is happening in terms of one's own values and interests, and for speculation about growing insights; and
- (3) a *methodological log* in which methodological decisions and accompanying rationales are recorded

Entries should be made on a daily basis in the daily schedule and personal diary, and as needed in the methodological log (Lincoln & Guba, 1985: 327). According to Erlandson, et.al., (1993: 143) the reflexive journal can support not only the credibility of the inquiry but also the transferability, dependability, and confirmability of the study.

The keeping of a reflexive journal, while serving a different purpose, need not be a separate activity from those activities associated with data collection and analysis.

1.5.2.3.2. Data analysis

The analysis of qualitative data is best described as "a progression, not a stage; an ongoing process, not a one-time event." (Erlandson, et.al., 1993: 111) The analysis of the data gathered in a naturalistic inquiry begins the first day the inquirer arrives at the setting. The collection and analysis of the data obtained go hand-in-hand as theories and themes emerge during the study. Qualitative data analysis is a search for general statements about relationships among categories of data; it builds grounded theory (Marshall & Rossman, 1989: 112).

" Within the naturalistic paradigm it must be in the forefront of the inquirers mind that data analysis occurs during data collection and after data analysis. Data analysis in a naturalistic inquiry "must include the interactive process of collection and analysis as well as the forming of a gestalt at the conclusion of the project." (Erlandson, 1993: 113) Tesch (1990) identifies several characteristics of qualitative data analysis that can be viewed as commonalities of the analytical process. These include: analysis is a cyclic process and a reflexive activity; the analytic process should be comprehensive and systematic but not rigid; data are segmented and divided into meaningful units, but connection to the *whole is* maintained; data are organized according to a system derived from the data itself. Analysis is, on the whole, an inductive, data-led activity.

Tesch (1990) also points to the flexibility of analysis and to the absence of rules of how it should best be done. Analysis implies being artful (Guba & Lincoln, 1981) and playful (Goetz & LeCompte, 1984). Analysis within the naturalistic paradigm, is not about adhering to any one correct approach or set of right techniques; "it is imaginative, artful, flexible, and reflexive. It should also be methodical, scholarly, and intellectually rigorous." (Coffey & Atkinson, 1996: 10)

An assumption of the naturalistic inquirer is that the human instrument (the inquirer) is capable of ongoing fine tuning in order to generate the most fertile array of data. One effect of this continuous adjustment process is that as data were gathered within the context of this inquiry, the inquirer analyzed it in order to make decisions regarding revision in data collection procedures and strategies. Analysis within the context of this study is not simply one of the later stages of the research, to be followed by an equally separate phase of "writing up results."

The inquirer used the following methodological tools:

- [1] Participants assisted the inquirer in data analysis (member checking). **Member checking** was conducted continuously - both formal and informal - by:
- summarizing the data at the end of Socratic & LTD (dialogical) group discussions, thus, allowing the participant to immediately correct errors of fact or challenge interpretations;
 - verifying interpretations and data gathered in critical incident reports and problem solving exercises in follow-up discussions (informal interviews), by allowing the participants to compare the content of the typed reports with their original handwritten reports;
 - conducting informal conversations with the participants;
 - allowing the participants to review the final report (Erlandson, et.al., 1993: 142).
- [2] **Peer debriefing.** In this study the inquirer utilized the help of peers (colleagues) who have some general understanding of the inquiry to analyze the materials, test the working hypotheses and emerging designs, and listen to the inquirer's ideas and concerns. The main purpose of using peer debriefers was that it allowed the inquirer to think aloud and explore various hypotheses, while the peer debriefers asked probing questions, played *devil's advocate*, and provided alternative explanations. The sessions also allowed the inquirer to vent frustrations and emotions that may cloud the inquiry.
- [3] **Linking concepts and data.** As part of the analytic process, the inquirer used coding as a way to organize the qualitative data. Coding was seen as representing the decisive links between the original 'raw data,' that is, the textual material: interview transcripts,

fieldnotes, critical incident reports, reflective journal writings, on the one hand and the inquirer's theoretical concepts on the other. Coding in this study allowed the inquirer to differentiate and combine the data retrieved and the reflections made about the information. The coding process enabled the inquirer to identify meaningful data and set the stage for interpreting and drawing of conclusions.

In this study the coding process was thought of as essentially heuristic, in that it provided a way to interact with and think about the data. This viewpoint is verbalized by Seidel & Kelle (1995: 58) who said that "codes do not serve as denominators of certain phenomena but as *heuristic devices* for discovery". Taking the naturalistic perspective regarding a priori coding (a list of codes before data gathering) into account, the inquirer used a partway approach between the a priori and inductive approach: that of creating a general accounting scheme for codes that are not content specific, but points to the general domain in which codes can be developed inductively.

The predefined codes were changed and developed as the inquiry continued. Others emerged progressively during the data collected (thus grounded empirically). Clear operational definitions were developed for every code, so that it could be applied consistently. Codes were given a name that is closest to the concept it is describing.

Definitions for codes were checked by peers in order to expand or amend it. The checking process was seen as an aid to definitional clarity and served as a reliability check. Data were coded as selected, and enabled the peer debriefers to uncover inquirer bias and the inquirer to identify incomplete or equivocal data that should be clarified (see annexure: XVII, p. CXX and XVIII, p. CXXI for the symbols and codes developed).

The final product of the multiple iterations of the hermeneutic dialectic inquiry, utilized within this study, is a case report (within the context of this inquiry the completed thesis with its annexures).

1.5.2.4. **Criteria for judging the adequacy of a naturalistic inquiry**

Criteria that are meaningful within a qualitative study (naturalistic inquiry) are different from those used for positivist inquiry. Leininger (1993, In: Talbot, 1995: 528-529) developed six criteria appropriate for analysis of any qualitative research study: transferability, credibility, meaning-in-context, recurrent patterning, saturation, and confirmability. Guba & Lincoln (1989: 236-238) identified the following criteria: credibility (prolonged engagement, persistent observation; peer debriefing, negative case analysis; progressive subjectivity, and member checks); transferability, dependability, and confirmability. Although some of these criteria are already discussed in this chapter a short summary follows:

[1] **Credibility.** Credibility in this study "refers to the truth as known or experienced by the people being studied." (Leininger, 1993, In: Talbot, 1995: 528) It refers to establishment of a match between the constructed realities of the participants (respondents) and those realities as represented by the inquirer (Guba & Lincoln, 1989: 237).

In this inquiry the following techniques were used to increase credibility:

1. **Prolonged engagement.** This was possible in that the inquirer is a staff member of the selected site. Immersion in and understanding of the context's culture thus was not a problem. The trust and rapport necessary to uncover constructions, misinformation, distortion, and presented "fronts", were integral to the situation.
2. **Persistent observation.** Sufficient observations were possible, which enabled the inquirer to identify those characteristics and elements in the situation that are most relevant to the problem or issue being pursued and to focus on them in detail. The purpose of persistent observation is, according to Guba & Lincoln (1989: 237), to add depth to the scope which prolonged engagement affords.
3. **Peer debriefing.** As previously explained in this chapter, the process of engaging with a "disinterested" peer, in extended and extensive discussions of one's

findings, conclusions, tentative analyses, and stresses were utilized in this study. The purpose being both "testing out" the findings with someone who has no personal investment in the situation and also helping to make propositional the tacit and implicit information which the inquirer might possess. The disinterested peer posed "searching questions" in order to help the inquirer to identify personal bias, values and her role in the inquiry; to facilitate "working hypotheses" outside the context; to search for and try additional methodological steps in the emergent design and reduce the psychological stress.

4. **Progressive subjectivity.** This entails the process of monitoring the inquirer's own developing construction, as no inquirer engages in an inquiry as a tabula rasa. The technique of progressive subjectivism is designed to provide a check on the degree of inquirer subjectivism, in order to ensure that participants' constructs are offered the attention which they deserve. This requirement was met in this study in that the inquirer:

- * prior to engaging in any activity in the context of the study, recorded a priori construction - what was expected once the study is under way. Recordings were done in the reflexive journal.
- * also recorded developing constructions and decisions at regular intervals, throughout the study. The debriefers (peer reviewers and promotors) had access to the reflexive journal in order to challenge the inquirer about such constructions and decisions.

5. **Member checks.** The process consisted of verifying hypotheses, data, preliminary categories, and interpretations with the participants. This process occurred continuously during both data-gathering and data analysis. Member checks were both formal and informal (for example: after Socratic & LTD discussion; after critical incident reporting and analysis; and completion of critical reflective exercises).

[2] **Transferability.** This refers to whether particular findings from a qualitative inquiry can be transferred to another similar context or situation, and still preserve the particularized meanings, interpretations, and inferences from the completed inquiry

(Leininger, 1993, In: Talbot, 1995: 528). The major technique for establishing the degree of transferability is thick description: setting out all the working hypotheses for this study, and to provide an extensive and careful description of the time, the place, the context, the culture in which those hypotheses were found to be salient (Guba & Lincoln, 1989: 242). Within this study the inquirer provided as complete a data base as humanly possible in order to facilitate transferability judgements on the part of others who may wish to apply the study to other situations.

- [3] **Dependability.** Methodological changes and shifts in constructions are expected products of an emergent design (naturalistic inquiry) dedicated to increasingly sophisticated constructions (Guba & Lincoln, 1989: 242). Far from being threats, within this inquiry, the inquirer treated such changes and shifts as hallmarks of a maturing inquiry.

The changes and shifts, in this inquiry, may be inspected (traced) in the documentation of the reflexive journal kept by the inquirer. Outside reviewers can thus explore the process, judge the decisions made, and understand which salient factors in the context led the inquirer to the decisions and interpretations made. Data reviewers can thus utilize the technique of inquiry audit.

- [4] **Confirmability.** This is concerned with assuring that data, interpretations, and outcomes of the inquiry is rooted in contexts and persons apart from the inquirer and not simply figments of the inquirer's imagination. Within the naturalistic paradigm assurance of integrity of the findings is rooted in the data. This means that data (constructions, assertions, facts, and so on) can be tracked to their sources, and that the logic used to assemble the interpretations into structurally coherent and corroborating wholes is both explicit and implicit in the narrative of the case study [thesis] (Guba & Lincoln, 1989: 243).

Confirmability, according to Leininger (1993, In: Talbot, 1995: 529), refers to the "repeated direct participatory and documented evidence observed and obtained from primary sources. "The "raw products" (notes, critical incident reports, completed critical reflective exercises) and the "processes used to compress them," (reflexive journal) remain available to be inspected and confirmed by outside reviewers of the study.

[51 **Saturation.** It refers to the "full taking in of occurrences. " The inquirer, according to Leininger (1993, In: Talbot, 1995: 529) must have done an exhaustive exploration of whatever phenomenon is being studied. In this inquiry, this requirement was met through "exhaustive exploration" of the concepts critical thinking and reflection during conceptual analysis and the literature review of viewpoints, models and theories; and methodological tools such as interviews (informal) were used to ensure full exploration, elaboration, correction, revision and expansion.

The hermeneutic, dialectic process applied in this inquiry limited opportunities for error to go undetected and/or unchallenged. It is difficult to maintain false fronts, or support deliberate deception when information is subject to continuous and multiple challenges from a variety of stakeholders (Guba & Lincoln, 1989: 244).

1.5.3. Case reporting mode

The case report is a "*joint construction* that emerges as a result of the hermeneutic dialectic process." (Guba & Lincoln, 1989: 180) The data analysis resulted in several, individual participant case studies, which were verified with the participants.

The case report mode was selected for this inquiry, because it suits the naturalistic paradigm. The case study report in this thesis contains the following: (1) Substantive considerations; and (2) Methodological considerations, thus, meeting all the criteria stated by Lincoln & Guba (1985: 361-363) and Guba & Lincoln (1989: 224), for a good report.

- * *Axiomatic criteria*, demanding the inquiry to resonate with the axiomatic assumptions (the basic belief system) that underlie its guiding paradigm. It must, for example, reflect multiple rather than single realities.
- * *Rhetorical criteria* that relate to form and structure, including unity, overall organization, simplicity or clarity, and craftsmanship.
- * *Action criteria*: the ability of the report to evoke and facilitate action by the readers. These criteria include fairness, educativeness, and actionability or empowerment (see 1.5.4., "Ethical considerations").

* *Application or transferability criteria*: the extent to which the report facilitates the drawing of inferences by the reader which may apply this to his or her own context or situation.

These criteria include the presence of thick description, provision of vicarious experience, metha-phoric power, and personal reconstructability.

1.5.4. Motivation for use of the confirmatory approach

Qualitative studies can be designed to confirm or test an existing model or theory. In the confirmatory modes, as Gherardi & Turner (1987, In: Miles & Huberman, 1994: 90) point out, data are used to fill gaps in a puzzle. Therefore, the conceptual framework and model constructed within *this* inquiry are viewed as this inquirer's "first cut" at making some explicit theoretical statements. The inquirer sought to test or further explicate conceptualization.

The design (confirmatory qualitative research) was chosen to provide clarity and focus, and thus, prevent diffuseness and data overload. Construction of a conceptual framework and preliminary model forces the inquirer to be selective: (a) to decide which variables are most important; (b) which relationships are likely to be most meaningful, and, consequently (c) what information should be collected and analyzed. A conceptual framework explains, either graphically or in narrative form, the main aspects to be studied i.e. the key factors, construct or variables, and the presumed relationship among them.

The conceptual framework within the context of this inquiry was seen as a way to prevent data overload: "If you don't know what matters more, everything matters." (Miles & Huberman, 1994: 55). According to these two authors data collection is inescapably a selective process, the challenge is to be explicitly mindful of the purposes of the study and of the "conceptual lenses you are training on it - while allowing yourself to be open to and reeducated by things you didn't know about or expected to find." (p. 56)

Conceptual frameworks can be rudimentary or elaborative, theory-driven or commonsensical, descriptive or causal. As *the* inquirer collected data from the participants, the conceptual framework and model were revised to make it more precise. Thus, empirical feeble *bins* were replaced with more meaningful ones, and relationships were reconstructed.

Theory building relies on a few general constructs that, according to Miles & Huberman (1994: 18), subsume "a mountain of particulars." Categories such as *critical thinking* and *reflective practice* are the labels that the inquirer put on intellectual *bins* containing many discrete events and behaviour. Any inquirer, no matter how inductive in approach, knows which *bins* are likely to be in play in the study and what is likely to be in them. *Bins* come from theory and experience and (often) from the general objectives of the study being envisioned. "Setting out bins, naming them, and getting clearer about their relationships lead to a conceptual framework." (Miles & Huberman, 1994: 18) The conceptual framework in *this* study is structured according to Dickoff, James & Wiedenbach's (1968: 420-423) survey list, namely:

- **Purpose (Terminus):** *What is the goal or the endpoint of this activity?*
- **Agent:** *Who practices the activity?*
- **Recipient:** *Who receives the activity?*
- **Framework (Context):** *In what context is the activity taking place?*
- **Dynamics:** *What is the energy source of the activity?*
- **Procedure:** *What is the guiding procedure, technique or protocol of the activity? (See chapter 5)*

1.5.5. Ethical implications of the naturalistic paradigm

The naturalistic inquirer, by implications of his/her own paradigm, values, and complexity, depth, and impact of the inquiry need to remain true to the principles of developing a true partnership with the study's participants. Therefore, according to Erlandson, et.al., (1993: 158-159) the naturalistic inquirer:

[1] seeks to *empower* all who participate in the study. Each participant's/individual's constructions are openly solicited and honoured and provided with access to the development of shared constructions.

Within the context of this study this ethical requirement was met through the process of *member checking*

[2] seeks to provide opportunities to be *educative*. Opportunities to share, confront, criticize, and learn from one another's constructions are a central feature of naturalistic inquiry. Each participant involved in the study should emerge with

naturalistic inquiry. Each participant involved in the study should emerge with more information and better understanding than he or she initially had.

The inquirer in this study sought to develop each participant through Socratic & LTD (dialogical) technique, critical incident reporting and participation in critical reflective exercises. The techniques enabled the participants to critically reflect on incidents, problems, experiences, personal actions, and implicit and explicit theories. In addition the techniques provided an educative opportunity for the inquirer in that it resulted in better understanding of the participants' (respondents') personal realities and the process of critical thinking and reflective practice.

- [3] promotes *connection* by developing shared constructions among the stakeholders and with external referents. Such connections, according to Erlandson, et.al., (1993: 159) blunts the need for justification of separate positions and enable all involved to jointly reach richer levels of understanding and insight.

Within this study this principle was adhered to by use of techniques such as *member checking, peer debriefing, reflexive journal writing, thick description, purposive sampling* and *audit trail*.

In addition to the three ethical aspects, identified by Erlandson, et.al., (1993) and discussed above, the inquirer also identified and provided for the following ethical requirements:

- [1] **Recognition of the inquirer's frame of mind.** The inquirer attempted to meet this requirement through *reflexive journal writing*. Thoughts, assumptions, values and reflections were challenged during *peer debriefing* sessions. In addition the meta-theoretic assumptions (non-epistemological beliefs) which might have influenced the inquiry are explicitly stated. (see 1.5.6. of chapter 1)
- [2] **Recognition of the inquirer's competence boundaries.** Questions such as the following was asked: Does the inquirer have the expertise to carry out a study of good quality? Is the inquirer prepared to study, be supervised or consult? Questions such as these are important as unacknowledged incompetence, is responsible for underdesigned, poorly collected data and superficial conclusions.

In this inquiry the inquirer was supported by more experienced colleagues in the field of qualitative research, and could rely on consultation from two (2) senior promoters. A thorough study of available literature on qualitative research, naturalistic paradigm, model and theory construction was utilized to overcome *the* inquirer's acknowledged lack of experience in the area.

[3] **Informed consent.** Do the participants have full information about what the inquiry will involve? Is their "consent" to participate freely given - voluntary and uncoerced? Although the major topic and data collection methods in a naturalistic inquiry may change during the data-gathering period, the inquirer explained:

- (1) the focus of the inquiry and reasons for the inquiry;
- (2) the methods of data collection (informal interviews/follow-up discussions; completed critical incident reports and analysis; completed critical reflective exercises and a questionnaire);
- (3) why these techniques were used;
- (4) how the participants may benefit from participation;
- (5) the role of the participants' in the inquiry;
- (6) how the participants' confidentiality would be protected;
- (7) the participants role in verifying the correctness of the analyzed data (member checks to verify and deepen conclusions);
- (8) that the participants may find their involvement in critical thinking and reflection inherently disruptive, as well as measures to support participants;
- (9) the duration of the study, and that no monetary reward is give. Benefits which may derive from their improved personal insight, professional growth, and extension of practice skills were emphasized;
- (10) that the study would end when saturation of data is reached, or when it no longer follows the standards formulated during the planning phase; and
- (11) that any participant may:
 - choose what experiences he or she wishes to share during critical incident reporting or during personal journal writing.
 - end participation if wished, despite initial consent to participate.

- [4] **Research integrity and quality.** Is the study conducted carefully, thoughtfully, and correctly in terms of some reasonable set of standards? According to Miles & Huberman (1994: 294) this is more than a technical issue. If the inquirer provides a set of conclusions that is poorly prepared or fraudulent, it involves being dishonest with colleagues, supervisors, participants, and anyone else that reads the report.

In this inquiry the inquirer utilized *peer debriefing* sessions, *member checks* and *rich descriptions* to improve quality.

- [5] **Worthiness of this project.** Is this study worth doing? Will it contribute in some significant way to a broader domain? Is it congruent with the values important to the inquirer and the discipline involved? In general questions such as these are important as an opportunistic study, without larger significance or meaning, is likely to be pursued in a shallow way.

The inquiry was seen as worthwhile pursuing by the inquirer, in that various authors remarked on the need for health care practitioners (such as nurses) to become conscious of their meaning perspectives, knowledge and actions, their practice experiences, and the potentialities and constraints of their work setting (Schön, 1987; Melia, 1987; Bines & Watson, 1992; Street, 1991; Champion, 1992; Palmer, et.al., 1994).

Careful analysis of the main concepts critical thinking and reflection/reflective practice- and study of available literature on the processes involved in critical, reflective thinking were seen as necessary in order to provide a basis for construction of a model for the development of critical thinking and reflection in nurse practitioners. It is the personal opinion of the inquirer that such a model is relevant not only to individual nursing practitioners, but also to the broader domain of nursing and other health care disciplines.

- [6] **Consciousness of the affective dimensions of the inquiry.** The inquirer must be conscious of the affective dimensions of the inquiry and final report, as it contains both ideas and emotions. The ethical dimensions is reflected in participants' experiencing anticipative stages of reactions (from "terror" of exposure to denial and acceptance) when they read the final report.

The inquirer, therefore, should give careful attention to the research aftermath. In this study this ethical requirement was met by the fact that the inquirer was emotionally *available* for participants during the critical incident reporting, reflective journal writing and during discussion sessions.

1.5.6. Meta-theoretic assumptions

The meta-theoretic assumptions refer to a variety of non-epistemological beliefs. Their origin is philosophical in nature, and therefore not meant to be tested (Mouton & Marais, 1990: 19-20).

The following meta-theoretic assumptions are stated for this study:

1. **Nursing:** Is a goal directed service to assist the individual, family and community to promote, maintain and restore health. Nursing involves care of the dying patient and the care of a recently deceased patient within the execution of the nursing regimen.
2. **Parameters of Nursing Practice:** Include the individual, family, groups and community. The family and community refer to an identifiable group of persons sharing a common interactive pattern and/or geographical location. Nursing practice is a "complex, comprehensive activity that is subject to innumerable risk factors." It is a "hazardous occupation, because a multiplicity of human factors plays a dominant role in its practice and because so many variable affect each-patient and nurse-other health professional interaction." (Searle, 1987: 58)
3. **The nurse practitioner as a social system:** The nurse practitioner is an open system, receiving stimuli from the outer world and, in turn, influencing that world through personal behaviour. The nurse practitioner is a part of "all that is within and around him - whether it is a cell, organ system, family or society. He/she is more than the sum of all the parts." (Murray & Zentner, 1989: 70) This view, called *holistic*, will provide a foundation for considering all the areas that affect the nurse practitioner as critical, reflective being.

4. **Nursing as profession:** The professional person (nurse) is one, who, by "virtue of intellectual capacity, education and moral outlook, is capable of the exercise of intellectual and moral judgement, at a high level of responsibility." (Darley, 1961: 83) Professional judgement is based on broad knowledge, penetrating wisdom about the particular circumstances and great moral certitude about one's actions. This is the essence of all professionalism (Darley, 1961: 83).

5. **The core of nursing:** The core of nursing is "concern, care, cure, competency, comprehensiveness and co-ordination." (Searle, 1987: 62) The *caring* aspect is the central concern of nursing - "its expressive dimension." (Searle, 1987: 63) *Caring* involves an "engrossment" or "motivational displacement" whereby the nurse practitioner moves away from his or her own viewpoint and looks at things as though from the viewpoint of the other person and makes the other person's motives his or her own (Noddings, 1984: 16).

The universal nature of *caring* is seen as its reliance on willingness of the carer (nurse practitioner) to move from self-centeredness to other-centeredness, and its emphasis on the practicality and wholeness of the relationship (Mayerhoff, 1971; Heidegger, 1962; Griffin, 1983). The ethics of *the caring relationship* is "not to be thought of as mainly a matter of actions that ought to be done; it is to a great extent an ethics of virtue." (Brown, Kitson & McKnight, 1992: 35)

6. **The nurse as autonomous practitioner:** Mirrors self-determination, in that the practitioner has the ability to "evidence preferences and communication decisions, to give reasons for a particular choice, to give reasons that are rational, and to take account of a reasonable weighing of risks and benefits, to understand alternatives and understand information provided, and to arrive at a choice that a reasonable person would have arrived at." (Meisel & Roth, 1981: 2473-2477)

7. Assumptions of the inquirer

The inquirer assumes:

- Nurse practitioners who can recognize that their habitual expectations of others' conduct is reflective of cultural conditioning can communicate more honestly and openly with other caring professionals and patients/clients.
- The ability to be critical, analytical and reflective regarding the assumptions underlying personal actions and those of others, is professionally, organizationally and culturally beneficial as well personally liberating.
- A health system in which nurse practitioners are encouraged to use critical thinking and reflective processes in examination of assumptions underlying policies and habitual practices, and allowed to challenge these will likely be more productive and less subject to crippling actions such as strikes.
- Nurse practitioners (and students) lacking critical reflective ability develop attitudes of acceptance and resignation to whatever changes are visited upon them by external circumstances.
- Critical reflective nurse practitioners (and students) are not likely to become involved in political dogmas, promises of fanatical leaders and unethical conduct at the cost of patients.
- Nurse practitioners (and students) with critical thinking and reflective skills are more free of self-deception, partiality, constraints and coercion.
- Critical reflective nurse practitioners (and students) are open to discourse with alternate perspectives on disputed validity claims.
- Only if adult learners' powers of critical analysis and reflection are nurtured will a truly responsive democracy flourish. Not to develop these capacities is inherently anti-democratic.
- Critical reflective practice requires the ability to balance idealism with realism.

1.6. Division of chapters within this inquiry

The division of chapters is as follows

Chapter 1: An overview of the study

Chapter 2: Research methodology, design and strategies

Chapter 3: Creating conceptual meaning through the process of conceptual analysis

Chapter 4: Review of viewpoints, models, theories and strategies

Chapter 5: Conceptual framework for facilitation of Critical Reflective Practice

Chapter 6: Application & Evaluation of selected Guided Critical Reflective Techniques

Chapter 7: Construction of a model for facilitation of Critical Reflective Practice & Peer Review of the constructed model

Chapter 8: Evaluation of the inquiry and recommendations

1.7. Conclusive remarks

In this chapter an overview was given of the rationale, problem statement and questions, overall aim, paradigmatic perspective and its resulting influence on this inquiry, motivation for use of the confirmatory mode as framework, ethical considerations and division of chapters. The following chapter focuses on the research methodology, design, strategies and methods.

Chapter 2: Research methodology, design and strategies

2.1. Introduction

Chapter 1 included the: (1) rationale for the inquiry (1.1.: p.1); (2) problem statement (1.2.: p.8); (3) research objective (1.3.: p. 9); (4) overall aim/purpose (1.4.: p.10); (5) paradigmatic perspective and resulting methodological implications (1.5. p.10); and (6) division of chapters for the inquiry [thesis] (1.6.: p.34). As stated previously, the inquirer elected to carry out the study in the natural context of the entity for which the study was proposed, that is a tertiary (higher) education environment for adult learners (1.5.2.1.: p. 12-13).

The methodological dimension of this chapter is concerned with the questions: *How did the inquirer attain knowledge to reach the research objectives? How did the inquirer ensure that the overall aim/purpose is reached?*

The methodological dimension refers to the means the inquirer employed to reach the overall aim/purpose. The means, according to Mouton (1996: 36) include three methodological dimensions:

- **Research techniques** (most concrete level)
- **Research methods** (involves a higher level of abstraction)
- **Methodological paradigms** (highest level of complexity or abstraction)

Discussion of the three methodological dimensions included in chapter 1 of the thesis, are however, summarised in chapter 2 to explain the methodology followed in each phase of the inquiry.

2.2. Research techniques

Research techniques can be defined as the "specific and concrete means which the researcher uses to execute specific tasks." (Mouton, 1996: 36) Such tasks are related to specific stages in the research process, such as sampling, data collection and data analysis.

Stages specific to this inquiry are visualized in figure 2.1., followed by a short explanation of each of the four (4) phases. In reality the four phases discussed in this chapter, cannot be seen as separate entities, as the inquiry necessitated moving back and forth between the different phases. Bias and subjective involvement of the inquirer were limited and exposed by peer reviewers' critique of each step taken in the four phases.

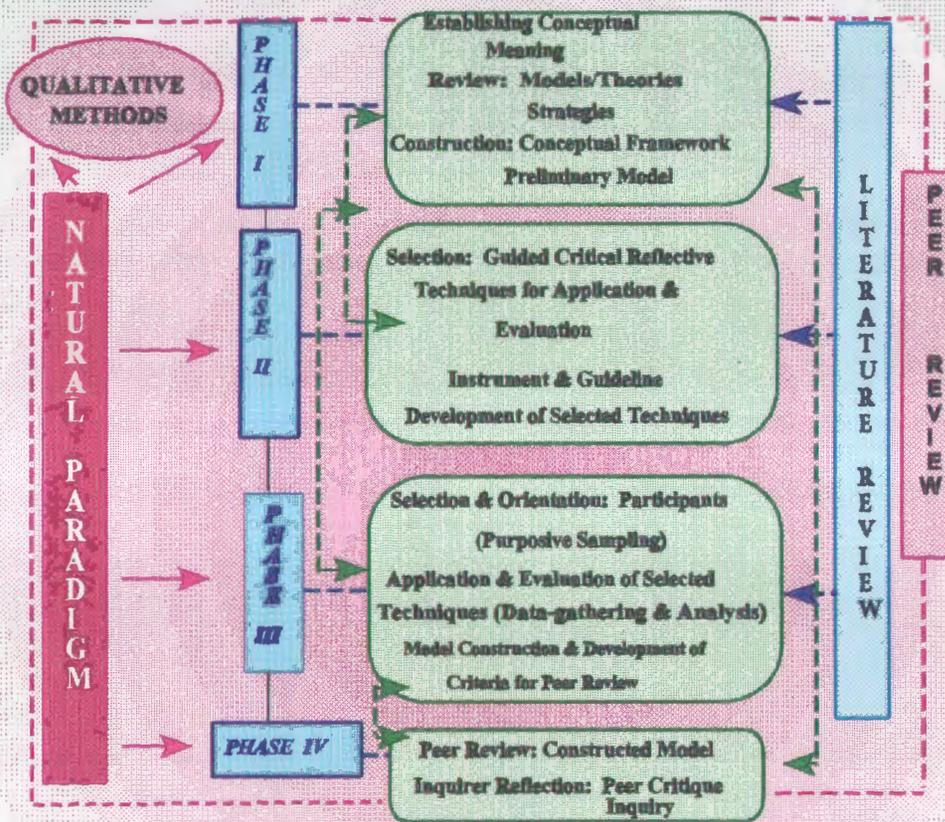


Figure 2.1. Phases & Flow of the Inquiry

- **Phase 1**

- ▶ **Literature Review.** The literature review started in phase one of the inquiry, continued during phases 2 and 3. It was finalised after three years, in November 1997. Prolonged engagement with available literature was necessary to maintain openness in perception. The sources included the opinions of experts in a variety of disciplines, on the selected concepts, applicable models, theories and strategies. This was necessary as it forced the inquirer to be selective and it provided clarity and focus.

The central themes, application possibilities and constraints of the available models, theories and guided reflective strategies were identified during the first review of the applicable concepts, models and theories. The knowledge thus attained was synthesised in chapter 3 and chapter 4 of the study. The literature review enabled the inquirer to:

- obtain clarity regarding the nature of main bins (concepts) and their supporting concepts;
 - develop and select working definitions for the main bins;
 - develop a working definition for the umbrella bin (concept), namely critical reflective practice;
 - gain insight into the:
 - processes involved in critical reflective and creative thinking;
 - the pre-requisites for facilitation of critical reflective thinking; and
 - available strategies or techniques for facilitation of critical reflective and creative ability. This resulted in construction of a preliminary model (diagram) for facilitation of critical reflective practice (figure 5.11.: p. 440).
- ▶ **Construction of the conceptual framework and model (diagram).** Construction of a conceptual framework and model (diagram) forced the inquirer to make some explicit theoretical statements and to:

- decide which variables are most important;
- which relationships are likely to be most meaningful; and
- what information should be collected and analyzed.

The conceptual framework in the inquiry was structured according to the survey list, of Dickoff, et.al. (1968: 420-423) namely: purpose, agent, recipient, framework, dynamics and procedure (5.5.: p.282). From the conceptual framework a preliminary model for facilitation of critical reflective practice was developed (figure 5.11.: p.440). This model was revised as the inquiry continued and new insight was gained.

- **Phase 2**

The literature review was continued during phase two while previous work was critically examined and the necessary changes made. This phase was characterized by:

- ▶ **thorough study of available, guided reflective techniques and strategies.** The purpose was to identify strategies which could be applied and used to evaluate the inquiry, and assess students' attitudes towards guided critical reflective techniques (4.10.: p.185).
- ▶ **the development of instruments and guidelines for the selected techniques** (Socratic & LTD[dialogical]: Annexure II & III, p. XXXIX & XLIII; Critical Incident Reporting & Analysis: Annexure IX, p. LVII; Guided Critical Reflective Exercises [Critical Reflection on: Act. 92 of 1996: Annexure IV & V, p. XLV & L, and the selected journal article: Annexure VII, p. LIII). The selected techniques, the motivation for their use as well as the instruments and guidelines for their operationalization were subjected to peer critique.

- **Phase 3**

During phase three the literature review was continued and previous work critically examined to make the changes needed. This phase was characterized by:

► **Orientation and selection of potential participants:**

- Application and evaluation of Socratic & LTD (dialogical) technique were limited to students registered for the B Cur (I et A) III course, as engagement with this group of students would be of longer duration. Orientation was done at the beginning of the academic year of 1997 (chapter 1, [4]: p.18 & chapter 6, 6.2.1.: p. 341).

Socratic & LTD (dialogical) technique was applied and evaluated from February 1997 to October 1997. Feedback regarding the effectiveness of the techniques took place on a continuous basis (see Annexure III, p. XLIII) and after completion of all the course material of Nursing Education III (Annexure I, p. XXXIV & Chapter 6, 6.5.: p. 349-359).

- Application and evaluation of the Critical Incident Technique and critical reflective exercises based on the media, started in June 1997 and involved students from the B Cur (I et A) I & III, B Cur Hons and M Cur groups. The listed student groups were selected for participation in the techniques as they were accessible on campus.

Reporting and analysis of critical incidents and participation in the critical reflective exercises were seen as time consuming, therefore participation was on a voluntary basis and participants could withdraw at any time. Guidelines for recording and analysis of the critical incidents and critical reflective exercises (by participants) were provided during orientation (Annexure V, p. L & VII, p. LIII; VIII, p. LIV & IX, p. LVII).

During the period of the application and evaluation of the selected techniques the inquirer, due to students studying full-time and working part-time over weekends, could not interview students whose reports had been received and analysed. The inquirer considers the omission of the final interviews (to confirm the analysed reports and make participants conscious of their thinking modes) as a limitation in the inquiry.

Analysis of the incidents and exercises, however, confirmed that they could be profitably used as a tool for critical reflective learning (chapter 6, 6.7.3., p.370-379).

Member checks (with participants) were done through informal discussion, after completion of specific incident reports or exercises (critical reflection on Act No.92 or the journal article). Checking up on members served to clarify unclear feedback, feelings about the different techniques and reasons for withdrawing from participation.

► **Model construction and development of criteria for peer review**

The inquirer reflected critically on the diagram of the preliminary model constructed in phase one of the inquiry (figure 5.11., p340), the conceptual framework (chapter 5, p. 268), and the application and evaluation of the selected techniques (chapter 6, p. 341). This exercise resulted in a revised edition of the diagram (figure 7.1., p. 383). The revised model encompassed contextuality, visual presentation, concepts, interrelationships and criteria for peer review (chapter 7, p.382).

● **Phase 4**

The selection of peers to review the constructed model, was purposefully done. The inquirer identified peers according to specific criteria. The selection was based on their:

- * expertise (in the field of management, education, intensive care nursing, sociology, primary health care and psychology),
- * ability to remain objective (unbiased),
- * personal interest in the topic of inquiry: *critical reflective practice* and *transformational leadership* and
- * willingness to undertake a comprehensive evaluation of the constructed model.

Five (5) peers reviewed the constructed model in February/March 1998:

- Dr. MC Bezuidenhout (D Litt et Phil. Expertise: Management, Intensive Care Nursing & Labour Relations)
- Prof MC Kganakga (M Clinical Psychology. Expertise: Primary Health Care & Psychology)
- Ms. MS Norval (M Cur. Expertise: Nursing Education and Ethos & Professional Practice)
- Ms. SE van der Westhuizen (M Cur Intensive Nursing Care. Expertise: Intensive Care Nursing & Labour Relations)
- Ms. JM Vallun (M Sociology. Expertise: Management, Oncology Nursing & Sociology)

The two (2) senior promoters for the inquiry also critiqued the proposed model:

- Prof HIL Brink (UNISA) and
- Prof PJN Steyn (UNISA).

In phase four, the inquirer's critical reflection on the critique and recommendations of the peer reviewers and the senior promoters (chapter 7: 7.8.3., p.419 - 425), revealed that no major changes were suggested. Overall feedback indicated acceptance of the proposed model for facilitation of critical reflective practice. As no further revision seemed necessary the model was accepted.

2.3. Research methods

Methods, according to Mouton (1996: 36), refers to a higher level of abstraction of research means. It refers to the means required to execute a certain *stage* in the research process and leads to the following classifications:

- **Methods of definition:** theoretical and operational definitions. In phase 1 (chapter 3, p. 48) of the study the inquirer established conceptual meaning by constructing and selecting working definitions for the main *bins* (concepts) in the study:

- Critical thinking (chapter 3, p.51)
- Reflection (chapter 3, p.75)
- Critical reflection (chapter 3, p.85)
- Reflective thought (chapter 3, p.88)
- Reflective learning (chapter 3, p.91)

During concept analysis the inquirer identified the following concepts as important *bins* (concepts) in the inquiry and constructed *working definitions*:

- Praxis (chapter 5, p.279)
- (*Self*) Consciousness (chapter 5, p.271)

After analysis of the above *bins* (concepts) the *working definition* for the main *bin* (concept) of the inquiry, namely *critical reflective practice* (chapter 3, p.112) was constructed.

Construction of the *working definitions* followed on thorough analysis of the available literature over a period of three years (1995-Nov. 1997).

- **Sampling methods.** As stated in chapter 1 (1.5.2.2.: p. 13-15) purposive sampling was central to the inquiry as it was not the inquirer's major concern to generalize the findings to a broader population. The **Purposive sampling method** was also used to select literature, participants and guided reflective techniques for data-gathering and analysis.

The literature review included cross-disciplinary sources (primary and secondary). For purposive selection of participants the inquirer invited *information-rich* and *accessible cases* (individuals) to take part in the study. *Information-rich cases*

included students whom in the opinion of the inquirer, could contribute to the purpose of the inquiry.

Regarding sample size, no predetermined rules could be followed. Interest centred on information richness rather than information volume. Sample size was determined by the willingness of potential participants to enlist in further critical reflective techniques on completion and analysis of some exercises. As a result sample size (n) differs for each of the applied techniques:

- ▶ **Socratic & LTD (dialogical) technique: n=10**
- ▶ **Critical Incident Technique: n=7**
- ▶ **Guided Critical Reflective Exercises:**
 - **Act No. 92 of 1996: n= 7**
 - **Journal Article: n= 3**

The criterion for determining when to stop sampling, was *informational redundancy* and time limitations.

- **Data-gathering sources and data-analysis.** In order to obtain a holistic qualitative portrayal each unit (incident, event, exercise or participant) was treated as a unique entity with its own particular meaning (previously discussed in chapter 1, 1.5.2.3., p. 16). The basic means of data collection were:
 - ▶ **Critical incident reports and analysis of the incident by participants.** This enabled the inquirer to enter the participant's frame of reference to comprehend and experience their structures of understanding and interpretive filters (chapter 1, 1.5.2.3., p. 16: [1]; Annexures X^{P1} -XVI^{P7} : p. LX- CXIV).
 - ▶ **Critical reflective exercises.** The inquirer utilized the media to develop the participants' critical thinking and reflective ability. Critical reflective exercises were designed around a journal article, namely: "Babies from a plastic womb: the end of childbirth as we know it." and the *Choice on termination of pregnancy act, Act No. 92 of 1996* (Annexure VI, p. LII & IV, p. XLV). These exercises forced the participants to reflect on questions regarding their points of view, opinions, or

biases. Guidelines and broad questions were provided by the inquirer for critical reflection (Annexure V, p. L & VII, p. LIII).

- ▶ **Socratic & LTD (Dialogical) Technique.** The inquirer utilized Socratic & LTD techniques to develop participants' critical reflective ability, and to gain feedback on their feelings and attitudes towards the techniques. Guidelines for continuous feedback (Annexure III, p. XLIII) were provided. Summative feedback, after completion of the course content for Nursing Education III, was obtained with the help of a concise questionnaire (Annexure I, p. XXXIV & chapter 6: 6.5., p. 349-359).
- ▶ **Reflexive Journal** (detailed discussion in chapter 1, 1.5.2.3.1., p. 16: [5]). The inquirer kept a reflexive journal to record the daily schedule and logistics of the study, to reflect upon what is happening and to record rationales for decisions taken. Entries in the reflexive journal enabled the inquirer to keep track of the rationale for decisions in order to, provide a framework for discussion with peer reviewers. Feedback during informal discussions with participants and observations of the inquirer were also recorded.

Data-analysis took place as an ongoing process and included the participants' self-analysis (see the guidelines for self-analysis: Annexure: V, p. L; VII, p. LIII & IX, p. LVII), and the inquirer's analysis of the completed incidents and exercises which were submitted. Socratic & LTD (dialogical) technique was analysed on an informal basis during its application, after each session and on completion of the course material (Annexure: I, p. XXXIV & III, p. XLIII). The data obtained from the application and evaluation of all the techniques and exercises are discussed in chapter 6 (p. 350; 361; 367 & 370).

The inquirer attempted to be flexible , comprehensive and shrewd (artful) by dividing the data into meaningful units while maintaining the inter-unit relationships (connections) with *the whole* (the unique individual experience). More than one approach or one set of techniques were used in this analysis. The data were organized according to a system derived from the critical incidents and the critical reflective exercises (see annexures X^{P1} to XVI^{P7} :

p. LX - CXIV for the connection to *the whole* of each participant, incident or exercise).

The methodological tools used for the data analysis included *member checking*, *peer debriefing* and *linking of concepts to codes* (see chapter 1, 1.5.2.3.2., p. 19: [1] to [3]).

- **Criteria for judging the adequacy of the naturalistic inquiry included:** *credibility, transferability, dependability, confirmability* and *saturation* (see chapter 1, 1.5.2.4., p. 22: [1] to [5]).

2.4. Methodological paradigm

At the highest level of complexity, Mouton (1996: 36) refers to the methodological paradigm. In this inquiry the methodological paradigm is naturalistic and qualitative in nature. It does not merely refer to research methods and techniques, but also to certain assumptions and values regarding their use. The paradigmatic perspective and its implications for the study were discussed in chapter 1 (see 1.5. p.10, for a detailed discussion). Use of the *confirmatory approach* in the design was also motivated (see 1.5.4., p. 26). Ethical implications of the naturalistic paradigm were accounted for during the inquiry, (see 1.5.5., p. 27).

2.5. Use of inductive and deductive reasoning

The inquirer used both inductive and deductive thought processes to construct the conceptual framework and the conceptual model for *facilitation of critical reflective practice*. The inquirer approached the synthesis of knowledge for this inquiry from cross disciplinary sources, expert opinion, available models, theories and research, personal experience in active practice and teaching, discussion with colleagues, inductive and deductive reasoning, and careful critical reflective thinking about the information gathered and the purpose of the inquiry.

2.6. Conclusive remarks

Chapter 2 provided the necessary orientation and motivation for the phases distinguished in the inquiry. It is, however important to remember that the specific phases were not linear and the inquirer continuously moved back and forth between the literature review, application and evaluation of the selected techniques and construction and critique of the framework and model. Chapter 3, contains a detailed exploration of the *bins* (concepts) in the study and the resulting *working definitions* for the study.

Chapter 3: Creating conceptual meaning through the process of conceptual analysis

3.1. Introduction/Rationale

Creating conceptual meaning provides, according to Chinn & Kramer (1995: 78), a foundation for developing theory. Conceptual meaning conveys thoughts, feelings, and ideas that reflect on the human experience of the concept. The meaning of a concept is formed from: (1) the word or the symbolic label, (2) the thing itself (objects, property, or event), and (3) feelings, values, and attitudes associated with the word and with the perception of the thing.

Conceptual meaning is created, in part, by "increasing our awareness of the range of possible uses and meanings of the words." (Chinn & Kramer, 1995: 79) Creating conceptual meaning formulates as exactly as possible what is intended so that members of the discipline can follow the reasoning and logic on which the theory is based. Theories, which are constructed from clarified concepts, help to unravel hidden or difficult nuances of experiences that might remain hidden from view. Therefore, methods for creating conceptual meaning are intended to contribute to theory development by strengthening the conceptual quality of the theory (Chinn & Kramer, 1995: 80). Through the process of creating conceptual meaning a tentative definition of the concept(s), and a set of tentative criteria to determine if the concept(s) exists in a particular situation are formulated.

Conceptual meaning within the context of this inquiry was obtained through the method of conceptual analysis. Conceptual analysis, according to Walker & Avant (1995: 37) is a strategy that allows the inquirer to examine the attributes and characteristics of a concept. The purpose of concept analysis is not to provide a final viewpoint on the attributes or characteristics of the concepts being studied. It is an attempt to capture the critical elements of the chosen concepts in the current moment of time, in order to encourage communication and promote understanding. Within the context of this inquiry the phenomenon being studied was: critical, reflective practice.

Conceptual analysis was seen as useful for several reasons: (1) it refines ambiguous concepts in a theory, (2) it clarifies overused vague concepts, so that every one who subsequently uses these terms will be speaking of the same thing, and (3) it results in a precise operational definition that by its very nature has construct validity, that is, it accurately mirrors the concepts theoretical base (Walker & Avant, 1995: 38).

However, within the context of this study and the requirements of the naturalistic paradigm, this phase (construction of conceptual meaning) was viewed as the inquirer's "first cut" at making some explicit theoretical statements. The inquirer within this study, sought to test and further explicate the conceptualizations during the empiric inquiry. During the data-gathering and analysis' phase (phase 2), the inquirer was mindful to be open to the unexpected. Thus, as the inquirer gathered feedback from the peer reviewers', the operational definitions were revised to make it more precise. In spite of this, the inquirer wishes to draw the reader of this thesis attention to the fact that critical reflective practice is a social construction of the mind. As such it enables the reader to reach some level of understanding, and not precise prediction in similar or different contexts of transferability.

Conceptual analysis within the context of this inquiry was seen as necessary, as it helped to provide clarity and focus. It also provided a method to examine the ways in which the concepts -critical thinking and reflection- are used in existing writings. The concept critical thinking, for example, frequently appears in cross-disciplinary literature with diverse meanings. The meanings conveyed reflect different assumptions about the phenomena of critical thinking. By becoming aware of these meanings, the inquirer within this study could explore the extent to which the meanings were consistent with this inquiry's purpose.

Resulting from this conceptual analysis phase, the inquirer attempted to construct a tentative, "new" concept, that of critical reflective practice. Tentative in that, the inquirer recognized that the empirical findings may lead to redefinition of the concept or refinement of it.

Following, is a discussion of the literature reviewed during the conceptual analysis phase on the selected concepts (critical thinking and reflection), it's related concepts, surrogate concepts, and other important influencing concepts.

3.2. Discussion of the literature reviewed

According to Schwartz-Barcott & Kim (Rodgers & Knafl, 1993: 112) a successful review of the literature requires a broad systematic, cross-disciplinary approach. Therefore, the inquirer within the context of this analysis extensively reviewed behavioural, educational, sociological, social psychological, organizational, nursing and medical literature.

Although reference was given to primary sources, secondary sources were also included.

The literature reviewed was analyzed over a period of three years, which included a search - for current viewpoints - in May 1997 and November 1997. For purposes of these searches : "Dialog Information Services [DIALOG] Database, and CINAHL (R) Database: WebSPIRS, 1982 to 1997 were searched. Although the DIALOG search listed forty-seven (47) files, and CINAHL two thousand, nine hundred and sixty-one (2961) records, limited written articles or textbooks for the period after 1990 have been identified. From the listed files and records the inquirer selected forty six articles (1987-1997) to study. However, the articles studied revealed no "new" or further relevant information that could be included in chapter 3.

The final search in November 1997 (a CD ROM Search & OPAC Search) confirmed that authors and theorists still refer to Brookfield (1987,1990, 1993), Dewey (1933); Ennis (1962, 1981), Habermas (1974, 1976, 1977, 1984), McPeck (1981), Meyers (1986, 1987), Mezirow (1981, 1990), Paul (1984, 1990), Perkins (1986), Schön (1983, 1987, 1991), Siegel (1980, 1985, 1988, 1990), and Usher (1985, 1988). It would seem that the listed theorists are recognized as the experts in this field of study, and that more current authors fail to formulate a personal viewpoint (definition) of the concepts included in this inquiry.

The set of questions that provided an initial direction for the inquiry, were those discussed in chapter 1 of this thesis. (See 1.2. p.8, question [1] to [4]). As these questions suggest,

the initial review of the literature focused on central questions of meaning, definition and measurement. During the empiric phase, the focus shifted to more subtle elements of personal experience by the participants.

Once a few definitions were in hand, the inquirer looked for major points of contrast and similarity. It immediately became clear that concepts, such as critical thinking and reflection, were used differently by various scholars. For some scholars, critical thinking and reflective practice is an aspect of cognitive functioning or logical reasoning, a way of thinking. For others, it is a personal and interpersonal process. This type of comparison provided some idea of the degree of consensus among users of the particular concepts, and led to an understanding of the intersubjectivity of meaning. Although actual definitions provided helpful, important data regarding the meaning and attributes of the selected concepts, the authors rarely provided such definitions in their writings.

Consequently, this inquirer identified and included all statements that provide a clue about how the author defines or views the selected concepts.

Critical, reflective practice is a very important, yet undeveloped concept. The literature reviewed included various definitions on: critical thinking, reflection, critical reflection, reflective thought, and reflective learning. Scholars also distinguish between concepts such as: affective reflectivity, discriminant reflectivity, judgemental reflectivity, conceptual reflectivity, psychic reflectivity, theoretical reflectivity, reflection-in-action, reflection-on-action, and reflective self-criticism.

In order to describe the nature of critical, reflective practice the inquirer within this study decided that it was necessary to include the above mentioned concepts within this analysis.

3.3. Conceptual analysis:

3.3.1. Concept: Critical thinking

3.3.1.1. Introductory remarks

As a concept critical thinking has been interpreted in a variety of ways. The following definitions will show that it has been equated with the development of logical reasoning abilities (Hallet, 1984; Ruggiero, 1975), with the application of reflective judgement (Kitchener, 1986), with assumption hunting (Scriven, 1976), and with the creation, use, and testing of meaning (Hullfish & Smith, 1961). Ennis (1962) lists twelve aspects of critical thinking which include analytical and argumentative capacities such as recognizing ambiguity in reasoning, identifying contradictions in arguments, and ascertaining the empirical soundness of generalized conclusions. D'Angelo (1971) specifies attitudes that are necessary conditions for being critical, including curiosity, flexibility, scepticism, and honesty. As the central component of critical thinking O'Neill (1985) proposes the ability to distinguish bias from reason and fact from opinion. To Halpern (1984), critical thought is the rational and purposeful attempt to use thought as moving toward a future goal.

Critical thinking is generally conceptualized as an intellectual ability suitable for development by those involved in higher education (Drake, 1976; Meyers, 1987; Stice, 1987; Young, 1980). Empirical studies of the development of critical thinking capacities focus on young adults (Kitchener, 1986; King, Kitchener & Wood, 1985) or college students (Perry, 1970, 1981). While this settings for critical thinking is undoubtedly crucial, it is but one of the many settings in which critical thinking is practiced in adult life.

Critical thinking is not seen as a wholly rational, mechanical activity. Emotive aspects - feelings, emotional responses, intuitions, sensing - are central to critical thinking in adult life. In particular, the ability to imagine alternatives to one's current way of thinking and living is one that often entails a deliberate break with the rational modes of thought in order to prompt forward leaps in creativity (Clark, 1986; Garrison, 1991; Parnes, 1972; Torrance, 1979).

One alternative interpretation of the concept of critical thinking is that of *emancipatory learning*. The idea of emancipatory learning is derived from the work of Habermas

(1979), who distinguishes this as one of the three domains of learning (technical and communicative learning being the other two). As interpreted by adult educators (Apps, 1985; Collins, 1985; Hart, 1985), emancipatory learning is evident in learners becoming aware of the forces that have brought them to their current situations and taking action to change some aspect of these situations. To Apps (1985: 151), "emancipatory learning is that which frees people from personal, institutional, or environmental forces that prevent them from seeing new directions, from gaining control of their lives, their society and their world."

A second concept closely related to that of critical thinking is *dialectical thinking*. Dialectical thinking is viewed as a particular form of critical thinking that focuses on understanding and resolution of contradictions. As proposed by Basseches (1984), dialectical thinking is thinking in which elements of relativistic thought are fused with elements of universalistic thought. Dialectical thinkers engage in a continual process of making judgements about their lives, identifying the general rules implicit in these judgements, modifying the original judgements in view of the appropriateness of these general rules. To Deshler (1985:6), "dialectical thinking is thinking which looks for, recognizes, and welcomes contradictions as a stimulus to development." Change is regarded as the fundamental reality, forms and structures are perceived as temporary, relationships are held to involve developmental transformations, and openness is welcomed. Hence, all humans are involved in a constant process of trying to create order in the world - to discover what elements are missing from our existing ordering and to create new frameworks that include these. Daloz (1986: 141) echoes this idea in his belief that dialectical thinking "presumes change rather than a static notion of 'reality'. As each assertion is derived from the one before, truth is always emergent, never fixed; relative, not absolute."

The definitions on critical thinking and its related concepts, quoted in the following discussion, indicate that being a critical thinker involves more than cognitive activities such as logical reasoning or scrutinizing arguments for assertions unsupported by empirical evidence. Thinking critically involves recognition of the assumptions underlying personal beliefs and behaviour. It means giving justifications for ideas and actions, it means trying to

judge the rationality of these justifications. It means, thinking through projects, and anticipating the consequences of those actions based on these justifications.

Critical thinking, involves a reflective dimension. The idea of *reflective learning* is a third concept closely related to that of critical thinking. Boyd & Fales (1983: 100) define reflective learning as "the process of internally examining and exploring issues of concern, triggered by an experience, which creates and clarifies meaning in terms of self, which results in a changed conceptual perspective." Boud, Keogh, & Walker (1985: 3) view reflection as "a generic term for those intellectual activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciation." To Schlossberg (1984: 5), the outcome of these activities is "a change in assumptions about oneself and the world" requiring "a corresponding change in one's behaviour and relationships."

From the preceding citations of various viewpoints regarding critical thinking, it becomes clear that critical thinking is a lived activity, not an abstract academic pastime. The ability to think critically is crucial to understanding personal relationships, envisioning alternative and more productive ways of organizing the practice situation (workplace), and becoming politically literate.

The literature reviewed contained several definitions from various perspectives. The definitions reviewed, emphasized the goals, processes, methodology, essential characteristics and scope of critical thinking. The review underlined one of the major difficulties with understanding critical thinking in an educational context as being the major differences in how broadly or narrowly the construct of critical thinking is viewed - in its boundaries - rather than in what is viewed to be the core (Sternberg, 1986: 4). In its weak sense critical thinking is viewed as a set of discrete micro-logical skills concerned with technical reasons, while in its strong sense critical thinking is viewed as a set of integrated macro-logical skills concerned with insight and the development of emancipatory reason.

The literature indicated that there is some convergence of meaning in the concepts of critical thinking, creative thinking and problem solving. Therefore, critical thinking, according to Garrison (1991: 290) should be viewed as an umbrella (arching) concept encompassing problem solving and creative thinking. The rational activities of critical

thinking are often associated with problem solving. Kurfiss (1988: 45) believes that the major difference between the two concepts is that critical thinking involves reasoning about open-ended or "ill-structured" problems, while problem solving is narrower in scope." Critical thinking is more than simply analyzing arguments, there is a context of discovery (inventive and creative phases), as well as a context of justification which represents the presentation of argument. In contrast problem solving is largely concerned with logical reasoning and inference.

Therefore, in agreement with D'Angelo (1971: 19) this inquirer views problem solving as a part of critical thinking. D'Angelo says that:

"It would be inaccurate to define critical thinking in terms of problem solving. Critical thinking consists of more skills than are used in a problem solving approach, and some of these steps include intuitive and creative elements that do not involve any evaluation or justification."

McPeck (1981: 62) agrees with D'Angelo's viewpoint that logic plays a comparatively minor role in critical thinking, which consists of more skills than those used in problem solving. The element of creativity in relation to critical thinking, may be described as "sensing difficulties, problems, gaps in information, missing elements, something askew; making guesses and formulating hypotheses about these deficiencies; evaluating and testing these guesses and hypotheses; possibly revising and retesting them; and finally communicating the results." (Taylor, cited in Sternberg, 1988: 47)

Perkins (1986: 15) feels that creativity is more of a thinking style rather than an ability, and that creative individuals often define problems for themselves rather than accept problems as defined by others. He suggests that philosophically, creative and critical thinking cannot be clearly separated. He states: "if you're talking about really good critical thinking, you're talking about thinking that is insightful. It's not just nitpicking; it cuts to the heart of the matter - and that, rather plainly is creative thinking."

The concept of creative thinking has been defined as a process, a product, a personality and an environmental condition. Creativity "is the ability to sense gaps or problems within known information, forming ideas or hypotheses about what should be done, testing and

modifying those ideas, communicating those ideas, and taking appropriate action in a unique way." (Murray & Zentner, 1989:107) Creativity conjures up visions of curiosity, imagination, discovery, innovation and invention. It is several abilities rather than a single characteristic. The creative practitioner often has a high degree of psychologic health, is persistent, self-assertive, energetic, dominant, individualistic and playful. The creative person can see many relationships among elements, relationships that baffle the conformer, the person who does only what is expected by the traditional system (Murray & Zentner, 1989:108).

Creative thinking, is a combination of flexibility in thinking and reorganization of understanding to produce innovative ideas and solutions. The creative individual is someone who regularly solves problems, fashions products, or defines new questions that make an impact on his or her society. The creative person thinks both divergently and convergently and is able to maintain balance between the two styles of thinking. Creativity thrives in an atmosphere of moderate tension, in which the persons sense that the old ways of doing things are not quite adequate.

The individual who behaves creatively is oriented towards setting and solving meaningful problems, using an inner drive to recombine his "storehouse of experiences in new ways." (Parnes, 1972: 9) Torrance (1979:12) views creativity as an outcome of fluency, flexibility, originality and elaboration - rational thinking functions that serve as criteria to evaluate creativity. Clark (1986: 161), views creativity and intuitive processes as the expression of the highest level of human intelligence.

Critical thinking also includes learning new concepts and contemplating abstract philosophical issues. Each of these processes inherently demands creative-thinking abilities besides logical reasoning (Garrison, 1991:293). Critical thinking, according to Ennis (1987, cited in Jordaan, 1995:60-61), is practical reflective activity that has reasonable belief or action as its goal. It includes creative thinking, as formulation of hypotheses, alternative ways of viewing problems, possible solutions and plans for investigating something all come under this definition.

3.3.1.2. Discussion of various definitions and viewpoints on critical thinking

The word *critical* comes from the Greek word for "critic" (*kritikos*), which means to

question, to make sense of, to be able to analyze. The word is also related to the word *critize*, which is often only used destructively, to "tear down someone else's thinking." Criticism, however can also be *constructive* - analyzing for the purpose of developing a better understanding (Chaffee, 1991: 37). The Pocket Oxford Dictionary (Thompson [ed.], 1992: 200] defines the adjective critical as: "1 fault-finding, censorious. 2. skillful at or engaged in criticism," and critique as : "critical analysis." The Oxford Combined Dictionary of Current English and Modern English Usage (Sykes [ed.], 1982: 63) defines critique as a "person who attempts or is skilled in criticism, one who censures."

■ ***Critical thinking is moved by reason and reflective thought***

Reasoning "involves the review of evidence against as well as evidence in support of a position." Reasoning "does not necessarily yield the truth." (Gambrill, 1990: 94-95)
 Rationality "concerns the methods of thinking we use not the conclusions of our thinking." "Rational thinking need not be cold. Emotions in fact, is one type of evidence. A bad feeling about a choice is a reason not to make it - although not an overriding reason." (Baron, 1990: 32-33) Reasoning is "a thoughtful approach to clinical decision making," thus, it requires a "sceptical attitude." (Gambrill, 1990: 23)

To think critically is to "examine assumptions, beliefs, propositions, and the meaning and uses of words, statements, and arguments." (Bandman & Bandman, 1995:4) Ennis (1985:1) emphasizes the focus of critical thinking as "deciding what to believe or... do" based on "reasonable, reflective thinking....". Critical thinking is reflective thinking, which does not occur by accident. People "consciously search out good reasons for what they are doing or plan to do. Critical thinking is focused thinking, purposeful and aimed toward decision-making." It is about believing things because the thinker has evaluated the reasons, not "because we have always done it that way." (Norris & Ennis, 1989: 12)

Siegel (1985:7), defines critical thinking as being "appropriately moved by reason and... to generate and seek out good reasons." This definition points out the connection between critical thinking and the classic philosophical idea of rationality. To be a critical thinker is to be appropriately moved by reason. To be a rational practitioner is to believe and act based on reason. Critical thinking is the "educational cognate of rationality": critical

thinking involves bringing to bear all matters relevant to the rationality of belief and action; and education aimed at the promulgation of critical thinking is nothing less than education aimed at fostering of "rationality and the development of rational persons." (Siegel, 1988: 32) Rationality is being coextensive with the relevance of reasons. A critical thinker, according to Siegel (1988: 32), is therefore a person who appreciates and accepts the importance, and convicting force, of reasons. When assessing claims, making judgements, evaluating procedures, or contemplating alternative actions, the critical thinker seeks reasons on which to base assessments, judgements and actions.

In seeking reasons, the critical thinker recognizes and commits himself to "principles." For, as Peters (1972: 5) puts it: "principles are needed to determine the relevance (and strengths) of reasons, reason is always a matter of abiding to general rules or principles. The concepts of principles, reasons and consistency go together, in fact, they define a general concept of rationality."

Ennis (1985, In: Paul, 1990(a):31) defines critical thinking as "rational reflective thinking concerned with what to do or believe." This definition calls attention to the wide role of critical thinking in everyday life, for all behaviour depends on what individuals believe - all human action depends on what individuals decide to do. For Ennis (1985), belief and action are connected, but are preceded by reflectively thinking through what to do and what to believe. Critical thinking must fit or relate to the context. However, like Siegel's (1990) definition it assumes the individual to have a clear concept of rationality and of conditions under which decisions can be said to be reflective. Lipman (Paul, 1990(a):31) defines critical thinking as "skillful, responsible, thinking that is conducive to judgement because it relies on criteria, is self-correcting, and is sensitive to context."

In nursing education, critical thinking has been narrowly defined as a rational-linear problem-solving activity that reflects the nursing process. It has also been described simply as the scientific process. Yet, according to Kataoka-Yahiro & Saylor (1994:352) it is a mistake to define critical thinking in nursing only as problem solving, scientific methodology, or nursing process because it encompasses the interaction of all of these and more. According to these authors "the critical thinking process is reflective and reasonable thinking about nursing problems without a single solution and is focused on

deciding what to believe and do."

Lipman (1988[b]: 1-2) defined critical thinking as "reflective thinking that is concerned with criteria, sensitive to context, and self-correcting." He asserts that when an individual forms a judgement, he or she is using criteria as reasons by which to make that judgement. Reasons can be based upon ideas, principles, values, and concepts of what is worthwhile in a discipline. In order to become efficient at identifying criteria, the individual must possess the general ability to analyze concepts by identifying their significant attributes.

To avoid indiscriminate scepticism and negativity, critical thinking must be guided and shaped by reason. Reason transcends the particular, is opposed to arbitrariness and is determined to account for facts (Peters, 1972:209-229). The individual who is accustomed to reasoning "is one who has taken a critic into his own consciousness, . . . is prepared to discuss things, [and] to look at a situation impartially." To Peters development of criticism is an essential aspect of reason. He states (1972:211):

"Science is the supreme example of reason in action not just because of the opportunities for criticism which it provides, but also because of the agreement in judgements which it permits by means of its testing procedures. These guarantee objectivity and the escape from arbitrariness."

■ *Critical thinking is proactive, sceptical, deliberative and evaluative thought*

Gavier (1985:70) defines critical thinking in a narrow and technical way as "thinking about another product of thought (an argument, claim, theory, definition, question, problem [hypothesis]), a comparison, synthesis, simplification, and much else, in a special, sceptically, deliberative, evaluative way." This definition implies that critical thinking is a process of evaluating cognitive products and processes.

McPeck (1981: 6), states "that perhaps the most notable characteristic of critical thought is that it involves a certain scepticism, or suspension of assent, towards a given statement, established norm or mode of doing things." Scepticism implies not taking things for granted but more important, allows alternate possibilities. In this sense critical means not

only questioning but a more proactive form of thought. In essence, it is the "search for a more satisfactory insight or resolution of a troubling situation." (Garrison, 1991: 289)

Critical thinkers, according to Brookfield (1987: 7) are sceptical of claims of universal truths or ultimate explanations. They are reflectively sceptical, and do not take things as read. Simply because a practice or structure has existed for some long time does not mean that it is appropriate for current situations.

■ ***Critical thinking involves more than argumentation and indiscriminate questioning***

Blair (1985:70-75) identifies critical thinking as "an activity, that applies to a lot more than arguments." He views the usefulness of critical thinking as threefold: First, there are certain concepts, tools or mechanisms that can be, and must be, employed everywhere, regardless of the subject matter or content. Second, the vocabulary of criticism contains terms that have general application, even if the specifics of the application vary from field to field Third, certain habits of mind or disposition and various habits of critical reaction, can transfer from one subject to another. According to Blair (1985:75) "argumentation belongs at the center of critical thinking, as a **sine qua non** of the enterprise."

In a manner similar to McPeck, Brookfield (1987:15) views critical thinking as more than indiscriminate questioning of ideas and activities. He says that the two activities central to critical thinking are "(1) identifying and challenging assumptions and (2) explaining and imagining alternatives." Brookfield views critical thinking as a constructive activity with the ultimate purpose of gaining insight for purposes of changing things for the better.

■ ***Critical thinking mirrors a desire to explore opposing viewpoints and suspend judgement***

A critical thinker is a person who can think well and impartially about his or her own beliefs and viewpoints, as well as beliefs and viewpoints dramatically opposed to his or her own. Beliefs and viewpoints are not just thought about, but explored for adequacy, cohesion and reasonableness. "A person who thinks critically is not just willing and able to

explore alien, potentially threatening viewpoints, but also desires to do so. Such a person questions own deeply held beliefs, and if there are no opposing viewpoints ready at hand, seeks them out or constructs them him or herself." (Paul, 1990(b): iii)

■ ***Critical thinking mirrors specific attitudes and skills***

Critical thinking also involves attitudes and passions because it does not lend itself to compartmentalization. It is not a "species of thinking; rather a species of living." (Paul, 1990(b): iii) It is living, in Socrates' phrase, "an examined life, a deeply examined life." (Paul, 1990(b): iii)

It is characterized by humility (to recognize that you don't know), self-confidence (to assert that you do not know), morality (enough to feel that there is something wrong in acting as if you know when you don't). It is part of a way of living your life, how you respond, think, feel about the issue, other people and yourself (Paul, 1990(b): xv). A critical thinker has a "critical attitude" or "critical spirit." (Siegel, 1988: 39) A critical thinker is not only able to assess reason properly, but is also disposed to do so well. A critical attitude involves willingness to seek, and to base judgement and action upon reasons which reject partiality and arbitrariness, are committed to objective evaluation of relevant evidence and values such aspects of critical thinking as intellectual honesty, justice to evidence, sympathetic and impartial consideration of interests, objectivity, and impartiality.

"The reasonable person has integrated with his or her assessment skill a host of 'rational passions," which together constitute and instantiate the critical attitude. Such a person actively seeks reasons and evidence on which to base judgements; such an attitude involves a love of truth, a concern for accuracy in observation and inference. It demands revulsion at distortion, disgust at evasion, admiration of theoretical achievement, respect for the considered arguments of others (Siegel, 1988: 49).

Critical thinkers are slow to believe, they wait for evidence and weigh evidence. They are uninfluenced by emphasis and confidence with which assertions are made (Paul, 1990(b): 2-6). They have "a passionate drive for clarity, accuracy, and fair-mindedness, a fervor for

getting to the bottom of things . . . for listening sympathetically to opposing points of view, a compelling drive to seek evidence, an intense aversion to contradiction, sloppy thinking, inconsistent application of standards, a devotion to truth against self-interest - [which are] essential components of the rational person." (Paul, cited in Siegel, 1988: 40)

Critical thinkers have a feeling of humility which is necessary to the wholehearted acceptance of the possibility of oneself being in error. Therefore, the critical thinker is emotionally secure, self-confident, and capable of distinguishing between faulty beliefs and having a faulty character. A positive self-image, and psychological health, are important features of the psychology of the critical thinker - for their absence may present practical obstacles to the execution of critical thinking (Siegel, 1988: 41).

Critical thinking is "thoughtful consideration about issues of great import, issues that imply considerable risk or danger. It consists of a range of very specific analytical or evaluative skills such as identifying bias in a statement, judging the logic of an argument, or evaluating the accuracy of given factual claim." (Beyers, 1983: 48)

Basic components of critical thinking, according to Schank (1990: 2) include the ability to pay attention, to copy accurately, to follow an argument, to detect ambiguity or false inferences, to test guesses by summoning contrary instances, and to organize one's time and thoughts for study. These skills, according to this author cannot be taught in a discrete course on critical thinking. It needs to be acquired gradually. Critical thinking involves the cognitive skills of "comprehension, application, analysis, and evaluation." (Mathews & Gaul, 1979:17)

Critical thinking is a composite of attitudes, knowledge, and skills, which include (1) the attitudes of inquiry involving the ability to recognize problems and accept the need for evidence supporting what is proposed to be true; (2) knowledge of the nature of valid inferences, abstractions, and generalizations in which the weight or accuracy of different kinds of evidence is logically determined; and (3) skills in employing and applying these attitudes and knowledge (Saarman, Freitas, Rapps & Riegel, 1992: 26-34).

■ *Critical thinking is deliberate thinking about thinking*

According to Paul (1990(b): 397-402) critical thinkers think in a deliberate way about their own thinking. It is virtually impossible for the mind to become disciplined and self-directed, unless it is systematically stimulated to turn inward upon itself and so become consciously aware of its own operations, its own powers and disabilities. Critical thinkers do not mirror other-directedness, but disciplined self-command. They have three things: 1) explicit standards or criteria for assessing their thought, 2) insight into the elements of thought, and 3) they practice orchestrating those elements to improve their thinking, and take charge of it.

Standards for, or perfections of, thinking, implicit in what may be called universal ideals of thought include: 1) clarity ; 2) accuracy; 3) relevance; 4) consistency; 5) depth; 6) breadth; 7) fairness; 8) logicalness; 9) significance; and 10) adequacy. The elements of thought, the various basic structures that a disciplined critical thinker orchestrates and uses when achieving self-command and self-directness in thought is: 1) beliefs; 2) inferences; 3) reasons; 4) evidence; 5) experiences; 6) assumptions; 7) ideas/concepts; 8) purpose/goal; 9) issues; 10) implications; 11) consequences; and 12) points of view.

The critical thinker's ability to refocus his or her analysis on different dimensions of thinking, his/her ability to analyze the elements in some process of thought, puts the critical thinker in a position to understand his/her strengths and weaknesses.

According to Johnson (Paul(b), 1990: 529) all of "us think, but critical thinking has to do with becoming aware of how we think and finding ways to facilitate clear, reasoned, logical, and better informed thinking. Only when our thoughts are backed by reasons and logic, they become critical and lead us in the direction of finding out what is true."

Thinking critically gives Wiseman (Paul(b), 1990: 529) "an organized way of questioning what I hear and read in a manner that goes beyond the surface or literal thought. It assists me in structuring my own thoughts such that I gain greater insights into how I feel and appreciation for the thoughts of others, even those with which I disagree. It further enables me to be less judgmental in a negative way and more willing to take risks."

■ ***Critical thinking is principled thinking***

Critical thinking is by its very nature *principled* not procedural thinking. It is principled thinking because the thinking is impartial, consistent, and non-arbitrary. According to Scheffler (cited by Siegel, 1988: 33), "A rational man is one who is consistent in thought and action, abiding by impartial and generalizable principles freely chosen as binding upon himself." The critical thinker both thinks and acts in accordance with, and values, consistency, fairness, and impartiality of judgement and action. The critical thinker must have a good understanding of and the ability to use principles governing the assessment of reasons.

According to Siegel (1988: 32) there are two types of such principles: [1] subject-specific principles that govern the assessment of particular sorts of reasons in particular contexts; and [2] subject-neutral principles, which apply across a variety of contexts. Critical thinking manifest itself in both types of principles. There is no a priori reason for regarding either sort of principle as more basic to critical thinking than the other. Siegel (1985: 69) holds that critical thinking is "both subject specific and general."

■ ***Critical thinking is a process***

Critical thinking is viewed by Haines (Paul, 1990(b): 529) as "a process through which one solves problems and makes decisions. It is a process that can be improved through practice, though never perfected. It involves self-discipline and structure . . . for critical thinking to be its most successful, it must be intertwined with creative thinking."

The Delphi participants (American Philosophical Association, 1990: 3) identified the core of critical thinking cognitive skills as interpretation, analysis, inference, evaluation, and explanation. The experts characterized critical thinking, per se, as the process of purposeful, self-regulatory judgement; an interactive, reflective, reasoning process. In critical thinking, a person gives reasoned consideration to evidence, context, theories, methods, and criteria in order to form a purposeful judgement and, at the same time monitors, corrects, and improves the process through meta-cognitive self-regulation.

The critical thinking process comprises a complex set of cognitive domains, metacognitive strategies, and academic abilities:

- **Cognitive domains:** (1) Knowledge: recalling previously encountered or learned information; (2) Comprehension: grasping basic meaning; (3) Application: using learned material in new situations; (4) Analysis: breaking down wholes into parts; (5) Synthesis: combining elements into a coherent whole; (6) Evaluation: judging the adequacy of ideas and materials for a given purpose.
- **Metacognitive strategies:** Setting goals; Planning strategies to accomplish goals; Monitoring progress; Revising strategies to accomplish goals; Assessing accomplishment of goals.
- **Academic abilities:** Distinguishing between fact and opinion; bias and reason; primary and secondary sources; Recognizing provable statements, deceptive arguments, stereotypes, ethnocentrism; Evaluating primary and secondary sources of information.

These cognitive domains, metacognitive strategies, and academic abilities are seen as the major components of the critical thinking process. Although literature usually lists these elements (in particular the cognitive domain) in order of complexity and difficulty, instruction should parallel real life demands and be neither sequenced rigidly nor limited to one aspect before moving on to the next. Critical thinking is a complex process, a mode of systematic and self-directed inquiry, that requires students to take into account more than just content, more than just their own experience, more than just the wisdom of the world and the experience of others. It involves seeking alternatives, making inferences, posing questions, and solving problems in order to conceptualize one's own perspectives.

Critical thinking comprises two interrelated processes: (1) the experience of questioning and then replacing or reframing an assumption which is accepted as representing dominant common sense by a majority; and (2) the experience of taking an informed perspective on an issue, which may or may not be in conformity with that held by a majority. Critical thinking involves a "learned conversation" with *the self*, risk, surprise, spontaneity,

diversity and challenge (Brookfield, 1987: 238)

Critical thinking is "a process, not an outcome." Being a critical thinker entails a continual questioning of assumptions, as "one can never be in a state of complete critical development." (Brookfield, 1987: 5-7)

■ ***Critical thinking is characterized by active involvement with life***

Critical thinking is, according to Chaffe (1991: 37-39) not simply one way of thinking; it is a "total approach to understanding how we make sense of a world that includes many parts." Various activities make up thinking critically, namely: (1) thinking actively; (2) carefully exploring situations with questions; (3) thinking for yourself; (4) viewing situations from different perspectives; and (4) discussing ideas in an organized way. When people think critically, they are *actively* using their intelligence, knowledge, and abilities to deal effectively with life's situations. Thinking critically involves making a conscious effort to meet challenges and solve problems.

Brookfield (1987: 5-7) also underlines Chaffe's viewpoint, in that he sees critical thinking as a productive and positive activity. According to Brookfield, critical thinkers are actively engaged with life, and see themselves as creating and re-creating aspects of their personal, workplace, and political lives. They appreciate creativity, they are innovators, and they exude (display) a sense that life is full of possibilities. Critical thinkers see the future as open and malleable and not closed and fixed. They are self-confident about their potential for changing aspects of their worlds, both as individuals and through collective action. By being aware of the diversity of values, behaviour, social structures, and artistic forms in the world, critical thinkers have a sense of humility - an awareness that others have the same sense of uncertainty.

■ ***Manifestations of critical thinking vary***

Manifestations of critical thinking vary according to the contexts in which it occurs. For some people, the process appears to be almost internal; very few features of their lives appear to change. With these individuals evidence is reflected in their writing and talking. With others, critical thinking will manifest itself directly and vividly in their external actions (Brookfield, 1987: 6).

■ *Critical thinking mirrors' imagination*

Central to critical thinking is the capacity to "imagine and explore alternatives to existing ways of thinking, working, and living." Critical thinkers are continually exploring new ways of thinking about aspects of their lives. They admit the influence of context, and therefore, realize that in other contexts entirely different norms are considered normal (Broofield, 1987: 7).

■ *Critical thinking involves dialogical reasoning*

Critical thinking calls for dialogical reasoning, not technical reasoning. Dialogical reasoning is described by Paul (1990(b): 10) as: "... thinking critically and reciprocally within opposing points of view. This ability to move up and back between contradictory lines of reasoning, using each to critically cross-examine the other, is not characteristic of the technical mind. Technical knowledge is typically developed by restriction to one frame of reference, to one standpoint. Knowledge arrived at dialectically, in contrast, is like the verdict, with supporting reasoning, of a jury. There is no fail-safe path to it. There are at least two points of view to entertain. It is not, as problem-solving theorists tend to characterize all problems, a movement from an initial state through a series of transformations (or operations) to a final (answering) state."

Critical thinking is a dialectical process in which the thinker is guided by principles, not procedures, and the application of guiding principles is often subject to debate. What is called for is "liberating emancipatory reason, the ability to reason across, between, and beyond the neatly marshalled data of any given technical domain." (Paul, 1990(b): 11) Critical thinking cannot presuppose or restrict itself to any one system or technical language or procedure, it must be dialectical.

■ *Critical thinking is triggered by positive as well as negative events*

It is commonly believed that critical thinking is triggered by people having experienced trauma or tragedies in their lives. However, it is also triggered by fulfilling events - a "peak" experience such as being successful in some new role, or by finding that others place great store by abilities or accomplishments that the person exhibit almost without being aware of them. In such circumstances the person begins to reinterpret his or her past actions and ideas from the new vantage point (Brookfield, 1987: 6).

Following the discussion of various viewpoints, statements and definitions on critical thinking, the inquirer summarized the literature reviewed to mirror the *nature* of critical thinking. The summary also includes viewpoints discussed in the following chapter of this thesis.

3.3.1.3. The nature of the concept

Critical thinking is

1. **Reflective in nature.** It involves judgement and learning - a process of internal examination and exploration of issues of concern, which creates and clarifies meaning in terms of the self, and results in a changed conceptual perspective (Mezirow, 1990).
2. **Disciplined in nature.** It is thinking and acting following rational standards and specific criteria which is based on critical insight made explicit (Barell, 1995; Ford & Lipman, In Paul, 1990(b); Paul, 1990(a) & (b)).
3. **Responsible in nature.** It is self-corrective, objective thinking committed to meet epistemological demands regardless of vested interests or ideology (Barell, 1995; de Bono, 1974; Lipman, In Paul, 1990 (b); Paul, 1990(b)).
4. **Detached in nature.** The critical thinker "abstract" from the immediate experience, personal values and beliefs in order to entertain more abstract modes of perception (Meyers, 1987).
5. **Creative and generative in nature.** It involves the ability to visualize, to "play" around with ideas, to imagine alternatives in current thinking, living, and doing. Critical thinking is concerned with bringing about and solving problems, and takes action even if knowledge is incomplete (Clark, 1986; D'Angelo, 1971; de Bono, 1974; Garrison, 1991; Hester, 1994; Paul, 1990(b); Parnes, 1972; Torrance, 1979).
6. **Autonomous in nature.** It does not passively accept beliefs, opinions, theories or modes of doing, but determine independently when information is relevant, when to apply a concept, or when to make use of a skill. Critical thinkers strive to

incorporate all known relevant knowledge and insight into their thought, and are therefore not easily manipulated (Chaffe, 1991; McPeck, 1981; Passmore, 1972; Paul, 1990(b); Siegel, 1985).

7. **Insightful in nature.** In that it admits the close relationship between thoughts and feelings - the struggle to maintain a balance between subjective and objective elements. Therefore, the critical thinker recognizes and integrates subjective aspects in the task of critical appraisal (Brookfield, 1987; Clark, 1986; Garrison, 1991; Meyers, 1987; Mezirow, 1990; Parnes, 1972; Paul, 1990(b); Torrance, 1979).
8. **Dialogical in nature.** Critical thinkers are active, critical listeners, skilled in the art of silent dialogue and internal questioning. They selectively weigh, judge and reconsider all evidence presented. They compare perspectives, interpretations, theories, and contrast ideals with actual practices (Hester, 1994; Mezirow, 1990; Paul, 1990(b)).
9. **Analogical in nature.** It involves "bridge building," in that the critical thinker recalls past experiences or mental structures and recognize similarities and differences within the current situation. Critical thinkers apply previously gained insights to the new experience (Brookfield, 1987; Hester, 1994; Hunt, 1982; Meyers, 1987; Norman, 1980; Paul, 1990(b)).
10. **Moral in nature.** Critical thinkers model genuine moral integrity, courage, preserverance, empathy, fairmindedness - not confirmity (D'Angelo, 1971; Paul, 1990(b)).
11. **Flexible in nature.** It involves a multilogical orientation (framework), that enables the critical thinker to make interdisciplinary connections when considering issues formulating hypotheses or selecting options for action (D'Angelo, 1971; Hester, 1994; Mezirow, 1990; Paul, 1990(b)).
12. **Metacognitive in nature.** It is precise thinking about thinking; conscious thinking about thinking; ability to think about the nature of personal thinking, using critical/analytical vocabulary (Apps, 1985; Barell, 1995; Boyd & Fales, 1983; Hullfish & Smith, 1961; Paul, 1990(b)).

13. **Operational in nature.** It is abstract and propositional thinking (Apps, 1985; de Bono, 1974; Boyd & Fales, 1983; Hester, 1994).
14. **Intrinsic in nature.** It is internal to the character of the critical thinker. Therefore, the critical thinker is in command of the "elements" of his or her thinking (Govier, 1985; Mezirow, 1990; Paul, 1990(b)).
15. **Emancipative in nature.** It empowers the thinker in that it frees the person from personal, institutional, or environmental forces that prevent seeing new directions, or gaining control of his or her life (Apps, 1985; Collins, 1985; Hart, 1985).
16. **Dialectical in nature.** It focuses on understanding and resolution of contradictions; elements of relativistic thought is fused with elements of universalistic thought; change is regarded as a fundamental reality; forms and structures are perceived as temporary; openness is welcomed; and truth is seen as always emergent and never absolute (Daloz, 1986; Deshler, 1985).
17. **Analytical in nature.** It recognizes ambiguity in reasoning, identifies contradictions in arguments and asserts the empirical soundness of generalizations. Critical thinking involves both quantitative and qualitative analysis (Blair, 1985; Ennis, 1962; Govier, 1985; Hester, 1994).
18. **Confident in nature.** Critical thinkers, based on self-examination, have confidence in their subjective sense of "rightness" in the solution to a problem (Brookfield, 1987; Mezirow, 1990; Paul, 1990(b)).
19. **Humble in nature.** It recognizes the limits of personal knowledge. The critical thinker is willing to admit when wrong, or do not know; willing to rethink conclusions in the light of new knowledge; willing to consider personal behaviour from the perspective of others; recognize the need to struggle with confusion and unsettled questions over a period in time to achieve deeper insight and understanding (Brookfield, 1987; D'Angelo, 1971; Hester, 1994; Paul, 1990(b)).
20. **Intuitive in nature.** It involves intuitive thought processes. The critical thinker does not ignore his or her "gut" feeling about a situation, experience, or problem

(D'Angelo, 1971; Garrison, 1991; Hester, 1994).

21. **Focused & Purposeful in nature.** It is productive thinking in that it strives to understand a situation within its unique context, in order to solve the issue or problem successfully (Barell, 1995; Brookfield, 1987; Hester, 1994; Lipman, 1988(b); McPeck, 1981; Paul, 1990(b)).

3.3.1.4. Working definition

The following tentative working definition was selected after the intensive literature review.

- [1] The ideal critical thinker is "habitually inquisitive, well-informed, trustful of reason, openminded, flexible, fairminded in evaluation, honest in facing personal bias, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in selection of criteria, focused in inquiry, and persistent in seeking results that are as precise as the subject and the circumstances of inquiry permit." (American Philosophical Association, 1990: 3)

This definition was selected as it was developed after two years work by a panel of forty six theoreticians (representing several academic fields) from throughout the United States and Canada. This definition also captures what some theorists called "the critical spirit" - a style, a set of attitudes that define a personal disposition to prize and use critical thinking in one's personal and professional conduct.

- [2] The fairminded (ideal critical thinker) can be distinguished from weak critical thinkers, in that his or her thinking:
- meets epistemological demands regardless of personal interest or ideological commitments.
 - is characterized by empathy into diverse opposing points of view and devotion to truth against self-interest.
 - is consistent in the application of intellectual standards, holding *the self* to the same

- rigorous standards of evidence and prove to which one holds one's antagonistic.
- displays commitment to entertain all viewpoints sympathetically and to assess them with the same intellectual standards, without reference to personal feelings or vested interests, or the feeling or vested interests of others.

The viewpoint mirrored in this definition was selected from the work of Paul (1990(b): 32). To this definition the following is added: The fairminded critical thinker develops special traits of mind: "intellectual humility, intellectual courage, intellectual perseverance, intellectual integrity, and confidence in reason." A weak critical thinker develops these traits only in a restricted way, consistent with egocentric and sociocentric commitments.

3.3.1.5. Antecedents and consequences

Identifying the antecedents and consequences of a concept is seen as useful theoretically. The antecedents are useful in that it helps the theorist to identify underlying assumptions about the concept, and consequences in that it describes those events or incidents that occur as a result of the occurrence of the concept (Walker & Avant, 1995: 45).

Building on the literature reviewed the inquirer within the context of this inquiry identified the following, tentative, antecedents and consequences:

3.3.1.5.1. Antecedents

1. Awareness of the limits of personal knowledge.
2. Sensitivity to personal egocentrism, bias and prejudices.
3. Willingness to face and assess ideas, beliefs, and viewpoints fairly despite personal negative feelings toward them.
4. Recognizing the need to imaginatively put oneself in the place of others in order to understand them.
5. Recognizing the need to be true to one's own thinking, to be consistent in the

intellectual standards one applies, to hold oneself to the same rigorous standards of evidence and proof to which one holds one's antagonists.

6. Willingness to pursue intellectual insights and truths' despite difficulties, obstacles, and frustrations.
7. Dialectical (multilogical) reasoning ability.
8. Willingness to put personal assumptions and ideas to the test of the strongest objections that can be leveled against them.
9. Patience to wait for evidence and weigh evidence, without being influenced by the confidence with which assertions are made on one side or the other.
10. Ability to sense difficulties, problems, gaps in information, missing elements, something askew.
11. Ability to reflect - that is to internally examine and explore issues of concern.
12. A reflective environment. That is an environment that stimulates counter-thinking, opposition and challenge. A supporting environment.
13. A positive self-image.
14. Self-discipline.

3.3.1.5.2. Consequences

1. A change in assumptions about oneself and the world, corresponding with a change in personal behaviour and relationships.
2. Ability to give justifications for ideas and actions.
3. Ability to think through, to project, and anticipate the consequences of actions.
4. Insight into personal relationships.
5. Rational examination of controversial, social, ethical, political, economic, religious, and work related issues.
6. Understanding of and ability to formulate, analyze and assess the "elements of thought." (Paul, 1990(b): 34) The elements of thought are:
 - The problem of question at issue.

- The purpose or goal of thinking.
 - The frame of reference or points of view involved.
 - The assumptions made.
 - The central concepts and ideas involved.
 - The principles and theories used.
 - The evidence, data, or reasons advanced.
 - The interpretations and claims made.
7. Creative synthesis (Consistency in thought and action). Having decided the worth, accuracy, and validity of new ways of thinking, living or practicing, the person integrates these into the fabric of his or her life. For eg. renegotiate relationships, propose formal changes in the work situation.
 8. Ability to take a position and change a position when the evidence and reasons are sufficient to do so.
 9. Sensitivity to the feelings, levels of knowledge, and degree of sophistication of others.
 10. Ability to see similarities and analogies that are not superficially apparent.
 11. Understand the difference between winning an argument and being right.
 12. Recognize that most real-world problems have more than one possible solution.
 13. Looks for unusual approaches to complex problems.
 14. Can represent different viewpoints without distortion, exaggeration, or caricaturization.
 15. Can strip a verbal argument of irrelevancy and phrase it in terms of its essentials.
 16. Is sensitive to the difference between the validity of a belief and the intensity with which it is held.
 17. Habitually questions personal views and attempts to understand both the assumptions that are critical to those views and the implications of the views.

3.3.2. Concept: Reflection

3.3.2.1. Introductory remarks

The concept of reflection is not new. Philosophers, educationalists and practitioners have been developing views of reflection since Aristotle first introduced practical judgement and moral action (McKeon, 1974). Since then much has been written and researched regarding reflection. Some of the significant contributors to this school of thought include Benner (1984), Boud, Keogh & Walker (1985), Dewey (1933), Kemmis (1985), Kolb & Fry (1975), Schön (1983) and Zeichner (1983).

Reflection springs from Humanistic tradition, and offers access to tacit knowledge which is assumed to inform human activities. Reflection seems to allow examination of covert processes in professional life, in much the same way as psychoanalysis claimed to do for personal life during the early years of this century (Newell, 1994: 79). Reflection touches a need within the professional to make sense of a situation. 'Making sense' of complex situations is often described as precisely the expert ability which reflection promotes.

What constitute reflection? Atkins & Murphy (1993: 1188) have noted that the literature lacks precision in defining the process. As a result, it is often difficult to see what proponents of reflection really claim it will do. A second, related problem is the practical problem of evaluation. The literature reviewed, mostly have no accounts which describe the effect of reflection upon professional practice as it affects clients. Although, the literature concludes that reflection is necessary to professional education. However, according to Newell (1994: 81) a great deal of work on definition and operationalization of the art and science of reflection is still required. The conceptualization of reflective practice in health care remains problematic, and the skills required for reflective practice remain unclear. In order that reflection within health care (nursing) can be better understood there is a need for more debate and research (James & Clarke, 1994: 89).

The literature reviewed, within the context of this inquiry, indicated that two conceptions of reflection are found and are often used in ways which obfuscate rather than clarify the nature of reflection and the implications it has for the theory-practice debate. The first conceptualization of reflection views it as an epistemology of practice, whilst the second views reflection as one element in experiential learning (Schön, 1983; Kolb, 1984;

Cervero, 1988). Therefore, Lauder (1994: 97) suggests that the reflective practitioner movement has failed to bridge the theory-practice divide.

The concept reflection is defined by The Pocket Oxford Dictionary (Thompson, 1992: 759) as "reconsideration (*on reflection*)," an "idea arising in the mind," as "thoughtful; given to meditation." Reflect is defined by The Oxford Combined Dictionary of Current English and Modern English (Sykes, 1982: 243) as "show image of, reproduce to eye or mind; go back in thought, mediate, or consult with oneself, . . . remind oneself or consider (*that, how, etc.*)." Reflexive is " . . . concerned in reflection or thought (*of person, mood, etc.*), thoughtful, given to meditation." Reflection, according to Baron (1990: 11) "lies at the heart of scholarship, not just in philosophy but also in the social sciences and humanities." This is in agreement with Habermas (1977) who argued in his *Knowledge and Human Interests* that self-reflection is a form of science.

Reflection is not a single faceted concept, but a generic term which acts as a shorthand description for a number of important ideas and activities (Boud, Keogh & Walker, 1985: 8). Reflection in the context of learning " is a generic term for those intellectual and affective activities which individuals engage to explore their experiences in order to lead to new understandings and appreciations." It may take place in isolation or in association with others, it can be done well or badly, successfully or unsuccessfully. Three stages are apparent: preparation, engagement in an activity, and the processing of what has been experienced (Boud, et al., 1985: 9). Reflection is generally used as a synonym for higher-order mental processes (Boud & Pascoe, 1978: 19).

To reflect means to ruminate, cogitate, mediate, to think. It derives from the Latin word *reflectere*, meaning to *bend back* (Barell, 1995:246). Barell (1995:246) use reflect in his context to speak broadly about the process that is called *metacognition*. The word derives from the Greek *meta*, meaning *after, amid, and over and above*. In the case of our thinking processes, metacognition refers to thinking about thinking. Both terms suggest a turning back upon oneself to take stock, to question. However, Barell (1995; 246) indicates that he prefers "reflection" and "reflective thought."

3.3.2.2. Discussion of various definitions and viewpoints on reflection

■ *Reflection is an active process*

Reflection is "an active process of exploration and discovery that often leads to very unexpected outcomes." (Boud, et. al. , 1985: 7) Reflection is "far more than a thoughtful approach to nursing, it is more a way of being, a state of mind. Reflection is not passive contemplation, it is an active process and as such requires energy to flourish." [Palmer, Burns & Bulman , 1994:89]

■ *Reflection involves response*

Reflection is a form of response of the learner to experience. Experience consists of the total response of a person to a situation or event: what he or she thinks, feels, does and concludes at the time and immediately after that. The situation or event could be part of a formal course, eg. a workshop, field trip, a lecture; or it could be more informal: an event arising from a personal study project, or from the actions of a community group, or a totally unplanned occurrence in daily life. It could be provoked by an external agent or it could be an internal experience, arising out of some discomfort with one's present state (Boud & Pascoe, 1978: 18-19).

Reflection is "not an end in itself, but, preparation for new experiences." (Stockhausen, 1994: 364)

■ *Reflection involves recapturing of experience*

Reflection is an "important human activity in which people recapture their experience, think about it, mull it over and evaluate it." (Boud & Pascoe, 1978: 19) Reflection "involves exploration of a unique situation." (Palmer, et. al. , 1994: 13)

Reflection "is initiated by an awareness of uncomfortable feeling and thoughts which arise from a realization that the knowledge one was applying in a situation was not itself sufficient to explain what was happening in that unique situation." (Palmer, et. al. , 1994: 13)

Reflection "comprises of those intellectual and affective activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations." (Boud, et. al., 1985: 19) Without reflection, experiences would remain unexamined, with the full potential for learning not realised. Reflection is "the link between theory and practice." (Stockhausen, 1994: 363) "Reflection is an integral part of experiential learning and the development of practical knowledge." (James & Clarke, 1994: 86)

■ *Reflection involves rational examination*

Dewey (1933, quoted in Mezirow, 1990: 5) says that reflection refers to "assessing the grounds [justification] of one's beliefs," the process of rationally examining the assumptions by which we have been justifying our convictions.

■ *Reflection is an internal process*

Reflection is the process of "internally examining and exploring an issue of concern, triggered by an experience which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective." (Palmer, et. al. , 1994: 13)

■ *Reflection requires open-mindedness and commitment*

Reflection "does reveal aspects of personality or behaviour in particular situations of which an individual may not be proud of. Reflection is a willingness to learn, about yourself and your practice. This is analogous to Dewey's (1933) concept of **open-mindedness**" (Palmer, et.al. 1994: 89). Reflection requires an environment committed to professional practice, where every individual is consciously trying to develop their nursing practice, and the concept of teamwork is well established. Reflective practice requires ability to balance idealism and realism and requires a willingness to learn about yourself and your practice (Palmer, et.al. , 1994: 90).

Reflection "offers a powerful way to explore the interface between personal and professional experience in practice. It provides a process for understanding how our personal lives mediate our responses to the demands made in our professional lives." (Palmer, 1994: 107) Reflection " is a mirror to practice. Through reflection, practitioners

can come to see themselves in the context of their practices and develop the essential skills and values associated, which characterize therapeutic work." (Johns, 1993: 9-18)

■ ***Reflection can be arduous and painful***

Reflection " can be arduous and painful at times." Reflection is a "profoundly difficult thing to do without expert guidance and support." (Palmer, et.al. , 1994: 110) "Trigger" for reflection is some unexpected happening that prompts a sense of inner discomfort and perplexity (Brookfield, 1987:26; Palmer, et.al. , 1994:121). Reflection arises out of a situation of "doubt and perplexity and prompts action toward resolving the doubt." (Palmer, et.al. , 1994: 121 quoting Dewey, 1933)

■ ***Reflection corrects assumptive distortions***

Reflection "enables us to correct distortions in our beliefs and errors in problem solving." [Mezirow, 1990:1] By reflecting on interests implicit in behaviour, the thinker can more effectively construct the assumptions most favorable to those interests. Once formulated, the thinker begins to formulate alternate competing assumptions (Paul, 1990(b): 373).

"Reflection can be seen as a mirror imaging, or producing a likeness upon which to contemplate. Mirrors also reflect light, thus the mirror imagery may also be illuminatory and assist in viewing the images more clearly." (Garratt, 1992: 218)

■ ***Reflection involves thoughtful, deliberate action***

The practitioner who reflects, " . . . plans thoughtfully, acts deliberately, observes the consequences of action systematically, and reflects critically on the situational constraints and practical potential of strategic action being considered." (Carr & Kemmis, 1986: 40) Reflection is "konsentrasie en sorgvuldige oorweging en sluit die integrasie van kennis en handling deur denke in . . ." (Steyn, 1993: 119)

■ ***Reflection results in learning and perspective transformation***

The outcome of reflection, is seen by Atkins & Murphy (1993: 1188), as learning - it results in a perspective transformation. However, to reflect self-consciousness is

necessary (Atkins & Murphy, 1993: 1190). Reflection is "not a one-way, linear process; it is more comparable to alternating current, flowing back and forth between intense focusing on a particular form of experience and outer experience; often triggered by some external experience, yet seriously hampered by high levels of external or internal demand to react." (Boyd & Fales, 1983: 105)

The events or experiences that trigger reflection are as unique as the individuals who do the reflecting. The only clear characteristic of the initial discomfort experience appears to be that it in some way requires a response not yet available to conscious intent of the person reflecting. It is as if the trigger experience evoke an awareness that the self is not "quite in an adequate position to manage this experience or to perceive it fully." (Boyd & Fales, 1983: 107)

■ ***Reflection is not confined to personal actions***

According to Heller (1984: 199) reflection is not confined to personal actions. The learner or practioner can reflect on the actions of others as well, and observe the results. However, when reflecting on the actions of others, the experience acquired by doing it should finally be directed towards personal praxis.

■ ***Reflection is cognitive and affective in nature***

According to Barell (1995: 247-249), elements of reflection are cognitive and affective in nature:

• ***Cognitive***

Reflection or metacognition is usually considered in terms of our awareness of how we think about a certain task or problem. Thus, individuals have thoughts about the *nature* of the problematic situation. Second, there are thoughts about the *thinking process* itself. How should the individual proceed? Should he/she just go ahead, or should he/she attempt to reduce this problem to several parts and solve one at a time?

When these questions are posed before, during, and after the experience, the individual asking the questions may have achieved knowledge about, awareness of and control over

own mind and thinking. So metacognition focuses upon the mental processes used within a specific situation.

Awareness of own thinking can be classified as declarative knowledge, and conditional knowledge. Knowing that, knowing how, and knowing when are crucial to reflective, metacognitive thought. Knowledge about when to use strategies is a particularly critical form of metacognition.

- *Affective*

The affective aspect of reflective awareness and control is not always mentioned: knowledge of, awareness of, and control of the feelings that accompany certain situations. It is important to recognize feelings when confronting a problematic situation. The individual should acknowledge them, put them in the perspective of impediments to thoughtfulness, and thus take control of the situation.

- *Reflection is a nebulous quality indicator*

According to Hogston (1993: 169) reflection is nebulous quality indicator, in that it is not sufficient to simply record or cogitate over a problem, there has to be "a conscious belief that the process enables a practitioner to improve her skills and knowledge base." It should be seen as a cognitive strategy, which aids the practitioner and not as a definitive action upon which to demonstrate competence. This will ensure that practitioners do not simply attempt to analyse their own practice without the research and associated frameworks which are necessary to ensure that reflection equals competence maintained.

- *Reflection occurs when the retrospecting indicates that the probability factor is greater than anticipated*

Schutz (1972: 134) suggests that: 'Men [sic] stops and think only when the sequence of doing is interrupted, and the disjunction in the form of a problem forces them to stop and rehearse alternative ways - over, around or through - which their past experience, in collision with this problem suggest.' Reflection then, occurs when the monitoring or the retrospecting indicates that the probability factor had been greater than was anticipated. The anticipated outcome has not materialised. The practitioners, according to Jarvis (1992: 177) are

forced to inquire why this is so and a new potential learning situation has arisen from which they can learn new knowledge and new skills.

3.3.2.3. The nature of the concept

Reflection is

1. **Active in nature.** It involves a process of exploration, discovery, preparation and engagement in an activity (Boud, Keogh & Walker, 1985; Palmer, Burns & Bulman, 1994).
2. **Conscious & Voluntary in nature.** It is a conscious, voluntary decision to learn more about a unique situation/experience and about yourself (Dewey, 1933; Palmer, et.al., 1994).
3. **Responsive in nature.** It arises out of a situation of doubt and perplexity that prompts action toward solving the doubt; it arises out of a feeling of discomfort or disequilibrium (Boud & Pascoe, 1978; Dewey, 1933; Palmer, et.al., 1994).
4. **Intrinsic in nature.** It is a state of mind; internal to the character of the person engaged in the act of reflecting (Palmer, et.al., 1994).
5. **Metacognitive in nature.** It involves higher-order mental processes; recapturing of the experience (thinking about it; mulling over it; evaluating it); rational assessment of justification (of beliefs/convictions/assumptions); focusing on aspects taken for granted; recognizing and valuing different kinds of knowledge (Barell, 1995; Boud & Pascoe, 1978; Palmer, et.al., 1994).
6. **Insightful in nature.** It involves intellectual and affective activities: thoughts about the thinking process itself; awareness of one's own thinking - declarative knowledge, and conditional knowledge; recognition of knowledge, awareness of, and control of the feelings that accompany certain situations. Manifestation of a new understanding or appreciation, a changed perspective that enables correction of distortions in personal beliefs, convictions, assumptions, and errors in problem solving (Barell, 1995; Boud & Pascoe, 1978; Palmer, et.al., 1994).

7. **Emancipative in nature.** It involves self-questioning (posing questions to yourself during planning, monitoring, evaluation (thinking *before*, *during*, and *after* action); self-regulation (meta-cognitive awareness and control - turning back upon oneself, to take stock, to question). Results in informed action subsequent to reflection, and originating from or induced by reflection (Barell, 1995; Boyd & Fales, 1983).
8. **Revealing in nature.** Reflection reveals negative aspects of personality, or behaviour in specific situations and therefore, is arduous and painful at times. It mirrors practice, thus enables the practitioner to see themselves in the context of their practices (Johns, 1993; Palmer, et al., 1994).
9. **Analytical in nature.** New insights or perspectives are analyzed in terms of its operational feasibility (Boyd & Fales, 1983).
10. **Meaningful in nature.** Reflection corrects "over learning." Reflection enables the practitioner to surface and criticize the tacit understanding growing from repetitive experiences of a specialized practice. Thus, reflection helps to make new sense of the situation of uncertainty and uniqueness which is being experienced. A process of creating and clarifying the meaning of experience (present and past) in terms of the self (self in relation to self and self in relation to the world) (Mezirow, 1990; Palmer, et al., 1994; Schön, 1983).
11. **Detached/Withdrawn in nature.** Reflection requires withdrawal (distantiation) from the incident or experience (a conversation, a reading) from something heard or seen in order to reflect upon it. It requires rumination, cogitation, mediation, thinking (Barell, 1995; Lukinsky, 1990).

3.3.2.4. Working definition

The following tentative definition was conceptualised after the literature review:

The ideal reflective thinker is more than thoughtful in that his or her reflective skills are internalized

and involves a total response to a situation, event or internal feeling. In recapturing the experience the reflective thinker mulls over it, evaluates it, rationally examines it in an open-minded and insightful way, effectively formulates competing assumptions, thinks about his or her thinking process itself, admits the feelings that accompany the situation and takes control of the situation. Such reflection results in deliberate action.

3.3.2.5. Antecedents and Consequences

3.3.2.5.1. Antecedents

1. Conscious involvement.
2. Response to the situation, event or feeling.
3. Willingness to learn more about *the self*, the environment, the situation, and others (open-mindedness).
4. A reflective environment.
5. Self-discipline.
6. Withdrawal. Recognizing the need to step back from the incident or situation.

3.3.2.5.2. Consequences

1. Changed conceptual perspective.
2. Insight into how personal feelings mediate response.
3. Understanding of situational constraints.
4. Correction of distortions in personal beliefs, convictions, and errors in problem-solving.
5. Informed action.
6. Self-regulation.

3.3.3. Concept: Critical Reflection

3.3.3.1. Discussion of various definitions and viewpoints on critical reflection

The concept "Critical reflection" according to Mezirow (1990:12-13), should be reserved "to refer to challenging the validity of presuppositions in prior learning." Critical reflection addresses the question of justification for the premises on which problems are posed or defined in the first place. It is not concerned with the how or the how-to of action but with the why, the reason for and consequences of what we do." Critical reflection "involves a critique of the presuppositions on which our beliefs have been built." (Mezirow, 1990:1)

Critical reflection is demanding as it requires "an examination of the realities of practice as experienced." (Street, 1991:23) The type of critique involved in this process is "not concerned with known problems waiting to be solved; instead, it assumes that we may not yet understand the appropriate questions. It examines experiences and poses dilemmas under the acknowledged assumption that there is more than one equally acceptable response." (Street, 1991:24) Critical reflection is "essentially a political process because it is involved not only with understanding the world of nursing, but with changing it." (Street, 1991:25)

Critical reflection is emancipatory, as it "is concerned with empowerment of individuals as autonomous and responsible agents in the world." (Hedin, 1989:81) Critical reflective processes, seek to examine not only the problems of nursing practice, but also the ways in which "nurses unwittingly contribute to maintenance of the status quo even when they may think that they are instigating empowering practices." (Street, 1991:26) Critical reflective processes go beneath the surface structure of the situation, to reveal the underlying assumptions that constrain "open discourse and autonomous and responsible action." (Hedin, 1989:1) The action involves risk taking, as the individuals engage in a process that challenges and changes the status quo (Hedin, 1989:81).

In nursing, critical reflection is beginning to be seen as a positive process - often resulting in new knowledge, or a new perspective on existing knowledge, which is relevant to

improving standards of care and which when explained, might come to be appreciated by colleagues.

3.3.3.2. The nature of the concept

Critical Reflection is

1. **Challenging in nature.** Critical reflection challenges the validity of presuppositions in prior learning; questions the justification for premises (on which problems are posed or defined in the first place; and is concerned with the why, the reasons) (Mezirow, 1990).
2. **Evaluative in nature.** It examines the realities of practice as experienced, and examines the way in which people unwittingly contribute to the maintenance of the status quo. Evaluation in the context of critical reflection is "intense" examination, assumptions that constrain "open" discourse, and autonomous responsible action (Hedin, 1989; Street, 1991).
3. **Positive in nature.** Critical reflection results in new knowledge and new perspectives on existing knowledge. Thus, standards of care improve. It creates conditions for transformation as it allows people to see the situation within its context, and envision new possibilities. Critical reflection results in transformation of personal frames of reference based on self-reflection (Alexander, 1993; Ford & Profetto-McGarth; 1994; Mezirow, 1990).
4. **Political in nature.** Critical reflection is political in nature because it is involved not only with understanding the world or situation, but also changing it. It involves risk taking, as the critical thinker engages in a process of challenge and change of the status quo. Critical reflective thinking uncovers conflict in the system, thus develops a critical consciousness (Ford & Profetto-McGarth; Hedin, 1989; Street, 1991).
5. **Responsible in nature.** Critical reflection requires thorough self-evaluation of one's own practice, and the need for insight into the assumptions, values and purposes

implicit in the situation. Involvement and improvement is seen as necessary (involvement is a manifestation of commitment to action based on authentic, critical insights into the social construction of the situation - it implies responsibility, and acting with others to affect change; improvement is a consequence of taking the appropriate action in a specific context). Critical self-reflection vis-a-vis the situation is present (Ford & Profetto McGarth, 1994: 343; Mezirow, 1990).

3.3.3.3. Working definition

The thinker involved in critical reflection challenges the validity of previous learning, questions the premises on which problems are posed or defined, is not concerned with the *how* or the *how-to* of action but with the *why* (the reason for and consequences), examines the realities of practice as experienced while assuming that much is not known, accepts that there is more than one equally acceptable response or answer, and go beneath the surface structure of the situation in order to reveal the underlying assumptions that constrain open discourse, autonomous and responsible action. The critical, reflective thinker is willing to take risks and, to challenge the status quo in order to obtain a new perspective on existing knowledge.

3.3.3.4. Antecedents and Consequences

3.3.3.4.1. Antecedents

1. Sceptical attitude.
2. Willingness to become involved in risk taking by challenging the status quo.
3. Critical thinking ability in order to go beneath the surface structure of the situation.

3.3.3.4.2. Consequences

1. New perspective on existing knowledge.
2. Transformation of personal frame of reference.
3. Personal empowerment (emancipation).
4. Autonomous, responsible action.
5. Critical consciousness.

6. Positive or negative response from the environment.

3.3.4. Concept: Reflective Thought

3.3.4.1. Discussion of various definitions and viewpoints on reflective thought

Dewey (1933: 9, quoted by Zeichner, 1982: 1-22) defines reflective thought as: "Active, persistent, and careful consideration of any belief or supposed form of knowledge, in the light of the grounds that support it and further conclusions to which it leads . . . it includes a conscious and voluntary effort to establish beliefs on a firm basis of evidence and rationality." He considered reflection as involving an integration of attitudes and skills in methods of inquiry.

Reflective thinking requires suspending judgement, maintaining a health scepticism, and exercising an open mind. This requires a certain degree of maturity (Schank, 1990: 88). Boyd & Fales (1983: 101) define reflection as the *process* of creating and clarifying the meaning of experience (present or past) in terms of self (self in relation to self and self in relation to the world). The outcome of the process is a changed conceptual perspective. The experience explored and examined to create meaning focuses on or embodies a concern very important to the self. It involves a shift from one perceptual perspective to another, which is the outcome of reflection.

Reflection is not a one-way, linear process; it is more comparable to an alternating current flowing back and forth between "intense focusing" on a particular form of experience and outer experience; often triggered by some external experience, yet seriously hampered by high levels of external or internal demand to react. The nonlinear process involves "reflecting back what that has meant to you, externalizing it, and internalizing it." (Boyd & Fales, 1983: 105-106) The new insight or changed perspective, according to Boyd & Fales (1983: 1112), is analyzed in terms of its "operational feasibility."

Reflective thought, "emancipates us from merely impulsive and merely routine activity. Put in positive terms, thinking enables us to direct our activities with foresight and to plan according to, and view, our purposes of which we are aware. It enables us to act in deliberate and intentional fashion to attain future objects or to come into command of what is now distant and lacking." (Dewey, 1933, In: Zeichner, 1982: 17)

3.3.4.2. The nature of the concept

Reflective Thought is

1. **Voluntary & Conscious in nature.** It requires an integration of attitudes and skills in methods of inquiry. Reflective thought includes a conscious effort to establish beliefs on a firm basis of evidence and rationality (Dewey, 1933, In: Zeichner, 1982).
2. **Objective in nature.** It requires suspension of judgement, maintaining a healthy scepticism, and exercising an open mind. Thus, a certain degree of maturity (Schank, 1990).
3. **Focusing in nature.** Reflective thought is not a one-way linear process. It involves intense focusing on a particular form of experience (usually some external experience), and ability of *the self* to react to it (Boyd & Fales, 1983).
4. **Detached in nature.** It requires provisional or hypothetical detachment from one's own view to assess the efficacy of personal perceptions, thought, actions, and habits of doing things. Reflective thought involves "detachment" while practicing -thus increasing the level of conscious self-evaluation/criticism required (Palmer, et.al., 1994).
5. **Retrospective in nature.** Reflective thought can occur after the event. It then uncovers the knowledge, skills and attitudes used in a particular situation. Reflective

thought analyzes and interprets the information recalled (Palmer, et.al. , 1994).

3.3.4.3. Working definition

The thinker involved in reflective thought consciously suspends judgement, maintains a healthy scepticism, focuses on a concern of central importance to *the self*, clarifies the meaning of experience (present or past) in terms of *the self* (self in relation to self and self in relation to the world) in a rational manner. Reflective thought results in new insight and a changed perspective.

3.3.4.4. Antecedents and Consequences

3.3.4.4.1. Antecedents

1. Self-knowledge
2. Sceptic attitude.
3. Detachment from personal feelings, in order to think in a rational manner.
4. Conscious effort to establish beliefs on a firm basis of evidence and rationality.
5. Intense focusing on a particular experience.
6. Self-discipline.
7. Open-mindedness.

3.3.4.4.2. Consequences

1. Changed conceptual perspective.
2. Self-insight.
3. Emancipation from impulsive or routine activity.
4. Deliberate and intentional action.
5. Personal *meaning*.

3.3.5. Concept: Reflective learning

3.3.5.1. Discussion of various definitions and viewpoints on reflective learning

Reflective learning "may be defined as the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation and action." (Mezirow, 1990:1) Learning from reflection involves students critically analyzing and interpreting their own work, albeit with help in some cases from a mentor, preceptor or coach." (Palmer, et.al. , 1994:65)

Reflective learning is the "process of internally examining and exploring an issue of concern, triggered by an experience, which creates and clarifies meaning in terms of self, and which results in a changed conceptual perspective." (Boyd & Fales, 1983: 100) Boyd & Fales (1983: 100) suggest that this process is central to understanding the experiential learning process, as reflective learning is the key element in learning from experience.

The process of reflective learning is the core difference between whether a person repeats the same experience several times, becoming highly proficient in the same experience several times, becoming highly proficient at one behaviour, or learns from experience in such a way that he or she is cognitively or affectively changed. Such a change, involves essentially changing your meaning structure

Reflective learning is the "process of creating a resting place, a personal center between polarities and, as such, it involves uneven, "bumpy," movement between polarities from a connected but not entrenched position." (Boyd & Fales, 1983: 106) The reflective learning process according to these authors include: (1) a sense of inner discomfort; (2) identification or clarification of the concern; (3) openness to new information from internal and external resources, with ability to observe and take in from a variety of perspectives; (4) resolution, expressed as "integration", "coming together", "acceptance of self-reality," and "creative synthesis."; (5) establishing a continuity of self with past, present, and future; and (6) deciding whether to act on the outcome of the reflective

process.

The stages of the reflective learning process is described by Boyd & Fales (1983: 106-113) as follows:

(1) Inner Discomfort: The beginning of a reflective episode is an awareness that something does not fit, or does not sit right within the individual, or a feeling of an unfinished business. This sense of discomfort, "the itch that wants scratching," is not a willed or intended state of mind; it occurs. The sense of discomfort within self is attached in some way to an event or experience.

The events or experiences that trigger reflection are unique to every individual. The one clear characteristic of the initial discomfort is that it in some way requires a response not yet available to the "conscious intent" of the person reflecting. According to Boyd & Fales

(1983:107), it is as if the trigger experience evokes an awareness that the self is not quite in an adequate position to manage the experience or to perceive it fully.

This sense of inner discomfort may be a form of what Horowitz (1978: 66) called "determinants of conscious thought that operate outside the conscious awareness." The inner discomfort in reflective learning, is apparently, the first step in bringing these unconscious determinants to a conscious level where they then guide the next stage of the reflective learning process, the identification and clarification of the concern.

(2) Identification or Clarification of the Concern: Even when reflection is intentional and focused on a particular issue, the second stage of the reflective learning process seems to be a more complex identification or clarification of the problem as it is experienced by the self. The key characteristic which seems to differentiate reflective learning from other types of mental activity (thinking or problem solving) is that the problem is conceptualized

in relation to self. The individual is aware of and places self as the centerpoint reference for the problem or task.

This awareness takes the form of a significant shift in perspective; that is, the problem as defined initially is suddenly seen as not the real issue. At other times, it is more like a discovery of the self in relation to the issue. Thus it is the self-based or self-related concern that is identified and clarified at this stage.

(3) *Openness to new information:* The third phase of the reflective learning process is an openness to new information from internal and external sources, with the ability to observe and take in from a variety of perspectives. One of the hallmarks of reflection as described is a sense of openness. This sense of openness takes the forms of reviewing past experience, foregoing the need for immediate closure on the issue, intentionally structuring "lateral thinking", and allowing whatever "pops up" to be there; reading something apparently unrelated to the issue; talking with someone else; postponing decisions until they can be looked at from all sides; involving oneself in a different type of activity, such as shifting from mental to physical activity; asking oneself difficult questions (Boyd & Fales, 1983: 108).

It is this stage of the reflective learning process that is most available for intervention on the part of educators. Although individuals experience this openness and ability to perceive the problem from a variety of perspectives, students lose much information available at this stage due to inadequate means of "capturing" or fixing the new information.

The essence of this openness stage appears to be a trust of self to discover and recognize relevant information. The receptivity may be primarily to internal or introspectively discovered information; from long-forgotten memories, feelings rather than thoughts, or the unconscious. It is often described as being vaguely aware and bringing to consciousness information previously below consciousness. Or, it may be receptivity to

unexpectedly related information from outside the individual. The individual, at this stage of reflective learning, attends to the information in a "new" way - from a distance, collecting it so to speak - without actively trying to force it into a meaningful pattern.

In summary, the characteristics of this stage of reflective learning seem to be:

- (a) an openness or receptivity to information from within and/or outside the self;
- (b) a setting aside of an immediate need for closure in relation to the issue;
- (c) a conscious or unconscious laterality of perspective, that is, receptivity to a variety of sources of information (Boyd & Fales, 1983: 109).

(4) Resolution

This is the insight, "aha," or relief stage in the reflective learning process. It is, essentially, the stage of resolution of the problem or issue, the point at which people experience themselves as changed, having learned, or having come to a satisfactory point of closure in relation to the issue. It is similar to self-insight. The closure is often recognized as not the final answer, but a psychological place where the individual feels comfortable in relation to the issue. "The insight comes in spurts. It's a very spontaneous, creative thing . . . It's there all of a sudden." (Boyd & Fales, 1983: 109) The characteristics of this stage of the reflective learning process are:

- (a) The individual experiences a "coming together" or creative synthesis of various bits of information previously taken in, and the formation of a new "solution" or change in the self - what might be called a new gestalt. The new solution makes sense and feels meaningful.
- (b) The individual experiences a subjective sense of rightness, certainty, or adequacy of the solution or changed perspective.

- (c) The new solution or changed perspective incorporates an element of surprise, that is, it was not predictable from the original perspective. It appears to represent an unconscious selection of previously assimilated information which emerges in consciousness as a fully formulated integration.
- (d) The individual trusts himself or herself enough to accept the solution as representing his or her own reality - the individual may be aware that the solution is not perfect or that it is socially or professionally disapproved, but accepts it as meaningful and at least temporarily sufficient for him or herself.
- (e) The resolution comes to consciousness usually when the individual is alone and is psychologically receptive.
- (f) The changed perspective or resolution is self-affirming. The individual feels good about it, experiences a surge of positive energy, values and trusts him or herself, and may even perceive him or herself as brilliant. In this stage, the reflective learning process is seen by Boyd & Fales (1983: 110) as self-rewarding; the individual "pats himself on the back", so to speak, for having come up with such a satisfying resolution, for having resolved, to his or her own satisfaction, the internal confusion or restlessness.

This phase of the reflective process may be comparable to Maslow's (1968) *peak experiences* and Jung's (Hall & Nordby, 1973) *emergence of the Self* when the reflective issue is one of central importance to the self, or to the creative experience.

(5) *Establishing continuity of Self with past, present, and future self*

As a result of the internalization and acceptance of the changed perspective, the individual is faced with the challenge of relating his or her changed self to the past self, to other areas of his or her present life, and to future behaviour. The person is faced with a

"discontinuity in self" (Boyd & Fales, 1983: 111). This stage of the reflective learning process involves recognizing similar situations and solutions from past experience, reviewing past values in relation to the changed perspective, evaluating the change as better for the self, applying the new perspective to a variety of additional issues in the present self-structure, planning for future behaviour consistent with the changed perspective, examining the implications of the change for future behaviour and other meanings, or simply accepting it as "comfortable" without experiencing a present need to pursue the issue further.

(6) Deciding whether to take action

Closely linked with maintaining continuity of self is the decision whether to act from the changed self or to use the discovered solution directly. It is this stage that most closely parallels what is considered to be "thinking," or "problem-solving." Attempts are made to figure out how it will work in practice; the implications if its application is assessed. The change or resolution is evaluated in terms of the individual's own subjective criteria, the intensity of the subjective sense of the rightness of the resolution, its consistency with the individual's existing or aspired value structures, and with other desired goals of the self. It is also evaluated in relation to how it will be received by others.

A decision may be made to incorporate the change into behaviour immediately and completely, to test the public reaction, or merely to allow it to exist within the self without acting overtly on it. Negative evaluation by others may force the individual back into the cycle of reflection.

The key characteristic differentiating reflective learning from other types of mental activity (thinking or problem solving) seems to be that the problem is conceptualized in relation to self. "The individual is aware of and places self as the centerpoint reference for the problem or task." (Boyd & Fales, 1980: 10)

3.3.5.2. The nature of the concept

Reflective learning is

1. **Intentional in nature.** It involves intentional examination and exploration of issues of concern (Boyd & Fales, 1983).
2. **Challenging in nature.** Reflective learning is a reaction based on doubt about the truth, comprehensibility, appropriateness (in relation to social norms), or authenticity (in relation to feeling), or truthfulness (of the communicator). The person involved in reflection therefore challenges the validity of what is being communicated and interrupts dialogue until he or she is satisfied it is justifiable to question the situation (Mezirow, 1990; Boyd & Fales, 1983).
3. **Objective in nature.** The learner brackets prior judgement in an attempt to keep biases dormant to allow critical review of arguments and evidence expressed by those whose meaning is contested (Mezirow, 1990).
4. **Consensus seeking in nature.** The person involved in reflective learning turns to those he considers to be best informed, least biased, and most rational to critically assess the evidence and arguments. Consensual agreement is reached based on the best judgement (Mezirow, 1990).
5. **Tentative/Provisional in nature.** The person involved in reflective learning recognizes the tentativeness of informed consensus realizing that it may change with addition of new evidence or arguments based on a more inclusive paradigm or meaning perspective (Mezirow, 1990).
6. **Self-reliant in nature.** The person involved in reflective learning does not rely on experts to make decisions. The learner integrates personal intuitive thinking with both rationality and expert advice; tests available theories to combine it with the own

thinking; tests own assumptions publicly and reflects on the feedback (Mezirow, 1990).

7. **Meaningful in nature.** The reflective learning process results in understanding of the value of experiential learning, enabling cognitive and affective change within the learner. The reflective learning process is meaningful in that it is initiated by (1) a personal sense of inner discomfort and by (2) identification and clarification of a concern. It requires (3) openness to new information and ability to observe and take in from a variety of perspectives; (4) resolution (integration; acceptance of self-reality; creative synthesis); it (5) establishes a continuity of self with past, present, and future; and it (6) involves a conscious decision whether to act on the outcome of the reflective process (Boyd & Fales, 1983).

8. **Personal in nature.** The events or experiences triggering reflective learning are unique to every learner. The only clear characteristic of the initial discomfort is that it requires a response not yet available to the conscious intent of the person reflecting. The trigger event evokes an awareness that the self is not quite in an adequate position to manage the experience or to perceive it fully. Even when reflection is intentional and focused on a particular issue the problem is conceptualized in relation to the self (Boyd & Fales, 1983).

3.3.5.3. Working definition

Reflective learning is the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation and action. It involves critical analysis and interpretation of an experience, openness to new information, acceptance of self-reality, a change in personal meaning structure, resolution, review of past values in relation to the changed perspective, and examination of the implications for future behaviour and others.

3.3.5.4. Antecedents and Consequences

3.3.5.4.1. Antecedents

1. Self-discipline.
2. Self-awareness of feelings. Awareness of the experience.
3. Recognizing the need to reflect on the meaning of an experience.
4. Ability to observe and take in from a variety of perspectives.
5. Openness to new information from internal and external sources.
6. Self-confidence. A trust of *the self* to discover and recognize relevant information.
7. Ability to set aside the need for immediate closure in relation to the issue.
8. Reflective environment.

3.3.5.4.2. Consequences

1. Cognitive and affective change in the learner.
2. Change in personal meaning structure.
3. Creative synthesis.
4. Internal change and/or overt action. Decision to act or not to act.

The following concepts were included in this thesis as they are closely related to the main concepts (critical thinking and reflection) and, in addition enabled the inquirer to formulate a working definition for the concept critical reflective practice. Inclusion, however, was limited to a statement of definition and characteristics only.

3.3.6. Concept: Affective Reflectivity

Affective reflectivity is "becoming aware of how we feel about the way we are perceiving, thinking, or acting or about our habits of doing so."(Mezirow, 1981: 3-4)

3.3.7. Concept: Discriminant Reflectivity

Discriminant reflectivity is "assessing the efficacy of our perceptions, thoughts, actions and habits of doing things: Identifying immediate causes; recognizing reality contexts in which we are functioning and identifying our relationships in the situation." (Mezirow, 1981:3-4)

3.3.8. Concept: Judgmental Reflectivity

Judgmental reflectivity involves "becoming aware of our value judgements about perceptions, thoughts, actions, and habits" in terms of likes or dislikes, beauty or ugliness, positive or negative (Mezirow, 1981: 3-4).

3.3.9. Concept: Conceptual Reflectivity

Conceptual reflectivity is "becoming conscious of our awareness and critiquing it as, for example, when we question the constructs we are using when we evaluate another person." (Boud, et.al., 1985:25-26)

3.3.10. Concept: Psychic Reflectivity

Psychic reflectivity is "recognizing in oneself the habit of making precipitant judgements about people on the basis of limited information about them, and recognizing the interests and anticipations which influence the way we perceive, think or act." (Boud, et.al., 1985:25-26).

Conceptual reflectivity and psychic reflectivity pertain particularly to perspective transformation and to clinical consciousness. These two aspects may be differentiated from theoretical reflectivity:

3.3.11. Concept: Theoretical Reflectivity

Theoretical reflectivity is becoming aware that the reason for a habit of participant judgement or for conceptual inadequacy is a set of taken-for-granted cultural or psychological assumptions which explain personal experience less satisfactorily than other

perspectives with more functional criteria for seeing, thinking and acting (Boud, et.al., 1985: 25-26).

3.3.12. Concepts: Reflection-in-action/Reflection-on-action

Reflection-in-action occurs while practising, and influences the decisions made and the care given, whereas **reflection-on-action** occurs after the event and contributes to the development of practice skills (Palmer, et.al. , 1991:13).

Reflection-in-action is the process by which the practitioner recognizes a new situation or a problem and thinks about it while still acting (Palmer, et.al. , 1991:67). Reflection-in-action increases the level of consciousness required to perform any element of care and supports the unique nature of any interaction within the situation (Palmer, et.al. , 1991:86).

To reflect-in-action, is "the core of professional artistry. Professionals reflect in the midst of action without interruption; their thinking shapes what they are doing, whilst they are doing it." The goal of reflection-in-action is to "change indeterminate situations into determinate ones, and the key to successfully completing this problem-setting activity is to bring past experience to bear on current action." (Cervero, 1988: 44)

Reflection-on-action is the retrospective contemplation of practice undertaken in order to uncover the knowledge used in a particular situation, by analyzing and interpreting the information recalled (Palmer, et.al. , 1991:67). Reflection, according to Jarvis (1992: 177) can occur as a result of practitioners analysing experienced outcomes of action to see whether they could have been achieved more efficiently.

3.3.13. Concept: Reflective Self-Criticism

Reflective self-criticism involves thinking " about one's own thinking, to make one's own thinking object of one's thought, to discover its limitations and weaknesses." (Paul, 1990(b): 300) Reflective self-criticism requires provisional or hypothetical detachment from one's own view.

3.3.14. Concept: Critical Ability

To be critical is to "weigh-up, to evaluate and to decide upon the validity of something. It does not mean to criticize." (Burnard, 1989(b): 272) The characteristics of critical ability are as follows:

- Identifying and challenging assumptions are central to critical ability.
- Challenging the importance of context is crucial to critical ability.
- Imagining and exploring alternatives thus leading to reflective scepticism.
- Reflective scepticism occurs when the individual questions the belief that an idea or a social structure which has existed unchallenged or unchanged for a period of time must be both the right and also the best possible arrangement (Burnard, 1989(b):272-273).

3.3.15. Concept: Higher Order Thinking

According to Resnick (Paul, 1990: 237-238) the following characterizes higher order thinking:

- Higher order thinking is *nonalgorithmic*, in that the path of action is not fully specified in advance.
- Higher order thinking tends to be *complex*. The total path is not "visible" (mentally speaking) from any single vantage point.
- Higher order thinking yields *multiple solutions*, each with costs and benefits, rather than unique solutions.
- Higher order thinking involves the application of *multiple criteria*, which sometime conflict with one another.
- Higher order thinking often involves *uncertainty*. Not everything which has a bearing on the task is known.
- Higher order thinking involves *self-regulation* of the thinking process. Higher order thinking is not present if someone else "calls the plays" at every step.
- Higher order thinking involves *imposing meaning*, thus finding structure in apparent disorder.
- Higher order thinking requires great *effort*. There is considerable mental work

involved in the kinds of elaborations and judgements required.

- Higher order thinking involves previous knowledge - it involves the *imposition of meaning*.

3.3.16. Concept: Thoughtfulness

Barell (1995:6) focuses his attention on the concept of thoughtfulness. This word combines two aspects of human lives: intellectual or cognitive operations, and feelings, attitudes, and dispositions. Thoughtfulness integrates thinking and feeling, a union of heart and mind. Thinking is the essential component of thoughtfulness.

According to Barell (1995:14) there is no one correct definition of thought and human thinking process. Thinking involves confronting uncertainty. Thinking begins at a fork in the road, "a situation that is ambiguous, which presents a dilemma, that proposes alternatives." (Dewey, 1933:14, quoted by Barell, 1995:19)

Thoughtfulness is akin to embarking upon an expedition, an operation that is purposeful and deliberate. Students are bound to meet the unexpected, to be tested by challenges they could not precisely anticipate. Thinking, therefore, is a process involving exploration and experimentation with no guarantee of success. Thinking involves being tentative - like setting up multiple hypotheses and testing them.

Thinking involves "self-talk," a process of proceeding through the underbrush of the problem to find a solution or resolution. In thinking, the student is in control of the process. Being mindful and thoughtful means inherently, the student is taking personal control of the situation (Barell, 1990: 20). Thinking is self-regulation. Thinking involves responding to problems and perplexities, some of which will be thrust upon the individual unexpectedly and others will be consciously sought out (Barell, 1995:25).

Thinking, is defined by Chaffee (1991: 1) as an "active, purposeful, organized process that we use to make sense of the world." Thinking can be developed and improved by becoming aware of, carefully examining, and practising the thinking process. Thinking is

the "extraordinary process" people use every waking moment to make sense of the world and their lives. Successful thinking, enables people to solve the problems they are continually confronted with, to make intelligent decisions, and to achieve the goals that give their lives purpose and fulfillment. "It is an activity that is crucial for living in a meaningful way." Chaffee (1991:2)

Characteristics of thoughtful persons

The following characteristics of a thoughtful person are drawn by Barell (1995:47) from research on teaching and cognitive development:

- They have confidence in problem-solving abilities.
- They persist. Persistence is that quality of sticking to a process even though it appears at first glance that this might take some time.
- They control their own impulsiveness and deliberate appropriately.
- They are open to the ideas of others.
- They cooperate with others in solving problems. They can play a role of partner, watcher, evaluator, and proposer of alternative strategies.
- They listen.
- They are empathic.
- They tolerate ambiguity and work toward resolving complex issues.
- They approach problems from a variety of perspectives.
- They research problems thoroughly.
- They relate previous experience to current problems and evidence that may contradict favoured points of view.
- They pose what-if questions, challenging assumptions and play with variables.
- They can draw reasonable conclusions.
- They are reflective, they plan, monitor, and evaluate their thinking.
- They can transfer concepts and skills from one situation to another.
- They are curious and wonder about the world. They ask "good questions."

3.3.17. Concept: Metacognition

Metacognition is an imprecise term, usually regarded as an executive capacity with two

components: knowledge of cognition and regulation of cognition. Various sub-processes are thought to be involved in metacognition including what one knows, predicting the outcome of one's performance, planning ahead, efficiently scheduling time and cognitive resources, and monitoring and revising one's efforts to learn (Brown, 1978: 77).

There has been growing recognition that metacognition is an important factor in academic achievement including higher order intellectual behaviour such as problem solving, decision making and critical thinking (Resnick, 1987; Swanson, 1990).

Metacognitive awareness involves reflection on activities that are usually performed mindlessly, therefore, it enables students to learn from experience and to apply the learning in new situations (Cust, 1995: 282). Metacognitive awareness activities include activities such as the following: keeping journals, discussing work with a partner; group dialogue in which ideas are explained and views defended; reflective partnerships during clinical practice and teaching others (Boud, et al., 1985; Emden, 1991). As students articulate their thoughts through these metacognitive awareness activities, ideas and feelings are clarified, gaps and discrepancies in knowledge become evident and knowledge develops and changes.

The twin aspect of metacognition, control of cognition or self-regulation, is the ability to plan, organize, monitor, evaluate and modify one's own performance (Cust, 1995: 282).

3.3.18. Concept: Dialogical Thinking

Dialogical thinking is thinking that involves a dialogue or extended exchange between different points of view or frames of reference (Paul & Binker, In: Paul, 1990(b): 547).

3.3.19. Concept: Dialectical Thinking

Dialectical thinking refers to " dialogical thinking conducted in order to test the strengths and weaknesses of opposing points of view." (Paul, 1990(b): 254) Court trials and debates are dialectical in form and intention as they put idea against idea, reasoning against counter-reasoning to get at the truth of the matter.

Students need to develop dialectical reasoning skills, so that their thinking moves comfortably between divergent points of view or lines of thought, assessing the relative strengths and weaknesses of the evidence or reasoning presented. "Dialectical thinking can be practiced whenever two conflicting points of view, arguments, or conclusions are under discussion." (Paul, 1990(b): 254)

3.3.20. Concept: Imaginative Thinking

Bronowski (1978:109) saw imaginative thinking as the reason that humankind has progressed to such an extent over so many years. "Imagination is the opening of the system so that it shows new connections... All those who imagine take parts of the universe which have not been connected hitherto and enlarge the total connectivity of the universe by showing them to be connected." He further notes that people engaged in the exploration necessary to seek new relationships, take "the closed system and push its frontiers imaginatively into the open spaces where we shall make mistakes."

The deeper meaning of imagination is the "fashioning, designing, shaping ability" of the human mind (Barell, 1995:194). Berthoff (1981:28) also speaks of imagination as a "name for the form-finding and form-creating power." All understanding is a primary act of imagination because students take what they perceive as information and redesign it into their own patterns of meaning.

Imaginative thinking derived from Ryle (1979), cited by Barell (1995: 193) involves pathfinding: "Pathfinding is trying to better one's instructions . . . [it is] trying out promising tracts which will exist, if they ever do exist, only after one has stumbled exploring over ground where they are not." A key to imaginativeness and adventurous thinking, is therefore, to explore new territory in order to get yourself out of the ruts of conventionality and tradition.

3.3.21. Concept: Adventurous Thinking

Adventurous thinking helps individuals to go beyond boundaries and constraints placed upon themselves. In thinking adventurously, individuals may exercise more personal control than in other aspects of searching for meaning and reasonableness. It involves

moving away from the ruts of conventional thinking. It involves several distinct pathways: problem identification, playing with variables, visualization, personal projection, metaphoric thinking, and story creation (Barell, 1995: 191).

3.3.22. Concept: Multilogical Thinking

"Thinking that sympathetically enters, considers, and reasons within multiple points of view." (Paul & Binker, In: Paul, 1990(b): 562).

3.3.23. Concept: Theory-in-use

Argyris & Schön (1974 & 1978) propose that practitioners choose their actions with due consideration for the particular situation and use theories generated from their repertoire which is made up of experience, education, values, beliefs and past strategies. Often these theories are implicit in spontaneous behaviour and surface only upon reflection on performance, or when the person is confronted with a problem in practice and has to think deliberately which course of action to take (Palmer, et.al. , 1991:67).

3.3.24. Concept: Habits of expectation

"What we perceive and fail to perceive and what we think and fail to think are powerfully influenced by habits of expectation that constitute our frame of reference", that is, "a set of assumptions that structure the way we interpret our experiences." (Mezirow, 1990:1)

3.3.25. Concept: Meaning schemes

Meaning schemes are "sets of related and habitual expectations governing if-then, cause-effect, and category relationships as well as event sequences. Meaning schemes are habitual, implicit rules for interpreting." (Mezirow, 1990:2)

3.3.26. Concept: Meaning perspectives

Meaning perspectives "are made up of higher-order schemata, theories, propositions, beliefs, prototypes, goal orientations and evaluations, and, what linguists call "networks of arguments." Meaning perspectives refer to the structure of assumptions within which new experience is assimilated and transformed by one's past experience during the process of interpretation." They involve the application of habits of expectation to objects or events to form an interpretation." (Mezirow, 1990: .2)

3.3.27. Concept: Meaningfulness

Langer (1989) quoted in Barell (1995:6), uses the concept of meaningfulness as implying conscious, deliberate thought about goals, strategies, and options. The mindful person is open to new ideas and willing to move beyond stereotypes, thereby becoming liberated from routine and asserting more control over the thought processes.

Johnson (1975:425) has defined meaningfulness as creating a network of "referential associations." Things become more meaningful when people take control and search themselves for the ever-widening sets of relationships among facts, ideas, concepts, and similar situations. To think is to be in control of meaning. Greene (1973: 163) notes that the search for meaning is liberating. "To make sense is to liberate [oneself] . . ." She talks about calling all of life into question and, by this act, reflect upon it's very nature, purpose, and consequences. When people think, they are very likely to uncover and reveal preconceptions, assumptions, and myths that may no longer hold true.

3.3.28. Concept: Praxis

"Praxis is a form of action and reflection; action is informed by reflection, and reflection is informed by reflection, and reflection is informed by action. Praxis is not action that maintains the status quo, but rather action that changes 'both the world and our understanding of it.'" (Grundy, 1989: 113)

The curriculum as a praxis is about the development of a critical consciousness and "freedom from the dogmatism of tradition . . . to 'freedom to' in the guise of autonomy."

(Grundy, 1989: 187) Critical thinking within this praxis involves a shift away from critical thinking as problem solving to critical thinking as a process "in which knowledge and action are dialectically related through the mediation of critical reflection." (Grundy, 1989: 191)

Critical thinking in the curriculum as praxis, is based on emancipatory action research that mediates between theory and practice through the process of enlightenment (Grundy, 1989: 154). Critical thinking within this praxis mediates between authentic knowledge and autonomous action through a process of critical reflection.

Chinn (1989: 74) defines praxis within nursing as "thoughtful reflection and action that occurs in synchrony, in the direction of transforming the world." Nursing ideas according to this author are an integral component of nursing praxis, and are defined as an "implicit set of beliefs underlying the explicit ethical/political statements of a nursing group." Praxis and ideas are grounded in nursing theories which "give philosophic explanations or frameworks for health." (Chinn, 1989:74)

According to Heller (1984: 129), "Repetitive thinking and praxis can be seen as disengagement in that our capabilities are thus liberated so that they can be applied to the solution of tasks which can only be tackled via inventive praxis (or thinking)."

3.3.29. Concept: *The Self*

Aspects of *the self*:

- *"I" self* is an active agent or process - the observer.
- The *"me" self* is the object of one's knowledge and evaluation - the observed.
- The *"existential self"* is distinct from others and the world, and is involved in thinking, remembering, and perceiving (in mature beings).
- The *"categorical self"* blends the attitudes, abilities, and values that makes up the individual's concept of self.
- The *"dynamic self"* has power, control, and a sense of personal agency.
- The *"self as object"* is the object of one's knowledge and evaluation.
- The *"self as knower"* is an already existing entity to be discovered through self-reflection.

- The "*self as integrated whole*" comprises all aspects of the individual's nature and potential and is achieved through a lifetime of struggle.
- The "*selfless self*" is considered to be a progression of change and an arbitrariness of self, rather than a self to be integrated - a state deliberately achieved through introspection and characterized by intense self-awareness.
- The "*self as enjoyer or sufferer*" comprises the affective aspect.
- The "*self as agent*" comprises conation.

Most theorists now view the self as being multidimensional and multifaceted rather than as a "stable, generalized, or average view of the self." (Markus & Wurf, 1987: 310) The role of *the self* can be explicated as the source of our perceptions, affect, and behaviour. They suggest that the metacognitive, cognitive, and affective aspects of *self* are systems that actually would more appropriately be considered subsystems of *the self*, operating in support of the self and under the control of *the self* as agent. *The self* directs and/or oversees information processing, formulates intentions, makes choices, and generates motivation or will to engage in activities.

The concept of self is deeply rooted in the person's history of social interactions, expectations, successes and failures. Self-concept is a function of personal and social feedback and of attitudes, values, beliefs and opinions. A person with a positive self-concept will be more likely to engage in exploration of ideas, that may conflict with their own views.

3.3.31. Concept: Consciousness

"Consciousness is awareness. It is the understanding and experience of how thought, consciousness, and mind work together. It is also the degree to which we see our ability to step outside our conditioned thought system." (Whisler, 1991: 21). Whisler (1991:21) distinguishes between two levels of consciousness:

- *Higher level of consciousness*: When in higher levels of consciousness or awareness (reflected in higher, more positive mood states and emotions and/or a sense of calm or serenity within), the individual has a higher degree of understanding of and sees more

clearly the degree to which he or she is functioning. When in higher level of consciousness, the individual has access to his or her mental health and a more objective perspective - allowing the individual to see and hear more clearly rather than from a conditioned point of view. The individual also has spontaneous insights and realizations when at this level.

- *Lower level of insight:* When in the lower level of insight or awareness, the individual is more troubled and negative, caught unaware in the contents of his or her insecure, conditioned thought systems and therefore, unable to see beyond his or her own separate reality.

Educators - specially educator relationships and interactions- can according to Whisler (1991: 22), have a major impact on the degree to which students operate from higher level of consciousness or from insecure, conditioned thought systems.

3.3.32. Concept: Critique

"An objective judging, analysis, or evaluation of something." The purpose of critique is the same as the purpose of critical thinking: "to appreciate strengths as well as weaknesses, virtues as well as failings." Critical thinkers "critique in order to redesign, remodel, and make better." (Paul & Brinker, 1990. In: Paul, 1990(b): 546)

Following the conceptual analysis phase, the inquirer within the context of this inquiry, decided to construct a new concept, namely that of critical reflective practice. This was seen as necessary in that the literature reviewed lacked a proper definition. During the construction phase the inquirer viewed concepts such as critical thinking, reflection, critical reflection, reflective thought, and related concepts as part of (intrinsic to) critical reflective practice.

3.4. Conceptual construct: Critical reflective practice

3.4.1. Working definition

The following tentative, working definition for critical reflective practice was constructed:

Critical reflective practice requires ability to consciously and purposefully withdraw (internally) from the situation, experience, or issue at stake in order to reflect and critically think about what has happened or what is or will be happening. Critical reflective practice is characterized by habitual inquisitiveness; well-informed and multilogical (dialectical) reasoning; open-mindedness; proactive thought; fairminded evaluation; honest self-evaluation; focused inquiry; persistence; empathy into diverse opposing points of view; devotion to truth against self-interest; willingness to take risks; deliberate and principled thinking about the thinking processes; insight into the social construction of the situation; creative synthesis; autonomous, responsible and informed action; and reflective learning. Critical reflective practice mirrors self-regulation, imagination, innovation, insight, moral integrity, courage, and perseverance.

3.4.2. Working statements

Taking the literature reviewed and the above stated definition into account the inquirer constructed the following tentative, working statements:

- [1] Critical reflective practice is characterized by the ability of the practitioner to reason dialectically, thus to reason across, between, and beyond the neatly marshalled data of the given technical domain.
- [2] Critical reflective practice involves a level of thought that incorporates the consideration of moral and ethical criteria in addition to reflective thinking procedures.
- [3] Critical reflective practice requires that unexamined practices and beliefs (personal,

professional, institutional, social, and political) be subjected to scrutiny and a continual process of revision. Expert knowledge, as well as taken-for-granted beliefs or common sense, is also subjected to critical examination.

- [4] Critical reflective practitioners expose their thinking to others and open themselves to criticism from peers as well as from authority.
- [5] Critical reflective practitioners direct their activities with foresight and plan according to end-in-view, or purposes of which they are aware.
- [6] Critical reflective practitioners are continuously and consciously involved in reflective learning, a process of internal examination and exploration of issues of concern. This enables them to create and clarify meaning in terms of *the self*, and results in a changed conceptual perspective.
- [7] Critical reflective practitioners display self-awareness, which enables them to analyze feelings in an honest way. This results in knowledge of how the situation has affected the practitioner and how the practitioner has affected the situation.
- [8] Critical reflective practitioners display ability to integrate new knowledge with previous knowledge, and use this knowledge in a creative way to solve problems and to predict likely consequences of actions.
- [9] Critical reflective practitioners display ability to make explicit the knowledge that is implicit in their actions.
- [10] Critical reflective practitioners suspend judgement in the absence of sufficient evidence to support a decision.
- [11] Critical reflective practitioners see similarities and analogies that are not superficially apparent.
- [12] Critical reflective practitioners have a sense of the value and cost of information, know how to seek information, and does so when it makes sense.
- [13] Critical reflective practitioners represent different viewpoints, without distortion, exaggeration, or caricaturization.
- [14] Critical reflective practitioners look for unusual approaches to complex problems.
- [15] Critical reflective practitioners value feedback, but do not defer to convention and social pressures.
- [16] Critical reflective practitioners display a sceptical attitude. As a result they approach the practice situation thoughtfully.
- [17] Critical reflective practitioners are aware of the values on which they base their

- judgements. They have clarified them and understand why they are values.
- [18] Critical reflective practitioners recognize when more than one reasonable position can be taken on an issue.
 - [19] Critical reflective practitioners use everything available to them to find the best possible solution, and therefore, evaluates solutions not independently of, but in relation to one another.
 - [20] Critical reflective practitioners consider the interest of everyone affected by the problem and proposed solutions, and are committed to finding the best solution for everybody involved.
 - [21] Critical reflective practitioners clarify before they judge.
 - [22] Critical reflective practitioners do not allow the somewhat arbitrary distinctions between academic subjects to control their thinking when considering issues that transcend subjects.
 - [23] Critical reflective practitioners are comfortable with being questioned, and do not become offended or intimidated. They welcome questions as an opportunity to develop a line of thought.
 - [24] Critical reflective practitioners display ability to think about their own thinking, to engage in metacognition.
 - [25] Critical reflective practitioners do not ignore their gut feelings about a situation, experience or problem, but consciously recognize and use intuitive thought processes.
 - [26] Critical reflective practitioners, based on self-examination and self-knowledge have confidence in their subjective sense of "rightness" in the solution to a problem.
 - [27] Critical reflective practitioners, recognize the need to "abstract" or "withdraw" from the immediate experience, personal values and beliefs in order to entertain more abstract modes of perception and to expand their thinking and observing abilities.
 - [28] Critical reflective practitioners strive to understand a situation within its unique context.

Critical reflective practice is thus more than thoughtful practice. It is that form of practice which seeks to problematise many situations of professional performance so that they can become potential learning situations and so that the practitioner can continue to learn, grow, and develop in and through their practice. Critical reflective practice is the

utilization of good theory in practice in what must always be a situation of probability. The reflective practitioner is continuously trying to ensure that the outcome of any action is close to what is anticipated by the theory and the previous experience combined. Reflective thinking as praxis, requires action, involvement and risk taking.

3.4.3. Antecedents & Consequences

3.4.3.1. Antecedents

1. Withdraw (abstracting) from the experience, situation or issue (practice situation).
2. Open-mindedness.
3. Willingness to take risks.
4. Habitual inquisitiveness.
5. Self-knowledge.
6. Devotion to truth.
7. Dialectical and dialogical reasoning ability.
8. Willingness to suspend judgement.
9. A sense of the value and cost of information.
10. Self-questioning ability and comfortability with being questioned by others.
11. A sceptical attitude.
12. Knowledge of personal values. Values clarification.
13. Creative synthesis ability.
14. Knowledge and respect for personal intuitive skills.
15. Self-confidence (emotional security).
16. Intellectual humility.

3.4.3.2. Consequences

1. Insight into the uniqueness of a specific situation.
2. Informed, moral, ethical and autonomous action.
3. Reflective learning.
4. Meaning in terms of *the self*.

5. Integration of new and previous knowledge, and creative use of this combined knowledge in future actions.
6. Confidence in the personal sense of "rightness" in the solution to a problem.
7. Explicit knowledge.
8. Deliberate use of theories generated from experience, education and past strategies.
9. Authentic caring (based on self-knowledge - knowing *the self* so well that you understand how you affect others).

3.5. Conclusive remarks

In this chapter the inquirer argued and justified the necessity for creating conceptual meaning through the process of conceptual analysis. The chapter includes a detailed analysis of the concepts closely related to critical reflective practice. As a result of the conceptual analysis, the inquirer constructed a tentative, working definition and statements for the concept critical reflective practice.

The literature reviewed highlighted the fact that critical reflective practice is more than mere reflection. It includes according to Steyn (1993: 119) careful consideration of a persons actions, and more specific it represents a persons professional actions. Critical reflective practice is a "professionele ontwikkelingsmetode wat die individuele praktisyns in staat stel om vaardiger en effektiewer te word. Dit lei tot groter selfbewuswording, tot 'n ontwikkeling van nuwe kennis en 'n breër begrip van die probleme wat praktisyns konfronteer." Critical reflective practice enables systematic analysis and intervention that challenges conventional practices, and facilitates the pursuit towards new perspectives and solutions (Hart, 1990: 154; Oesterman, 1990: 145-150).

Through critical reflective practice, the practitioner builds various models ("a repertoire modelle") about practice (Duigan, 1988: 5). As practitioners improve their ability to survey the knowledge they accumulate (or to which they have quick access) and to apply it to new dilemmas, an increasingly broad repertoire of action alternatives develop (Hart, 1990: 164).

In the following chapter (chapter four) phase one of the study is continued. Chapter four includes a review of current viewpoints, theories and models regarding critical thinking, reflection, creativity, higher-order learning, and the role that experiential learning plays in it. The review also discusses the importance of applying critical, reflective thinking to the domain of moral practice and highlights possible negative emotional implications.

Chapter 4: Review of viewpoints, models, theories and strategies

4.1. Introductory remarks

The previous chapter, chapter three, displayed the lack of consensus on a definition of critical, and reflective thinking. However, this lack of a discrete definition has not prevented educators from regarding these skills as an essential educational component. Teaching critical thinking, reflection and creative skills has been a long-term aspiration, but a difficult one, characterized by cumulative growth over a lengthy period in time. The background information on psychological knowledge of learning and thinking (4.2.) seems to confirm this.

In spite of recognizing these skills as important, the evidence available according to Glaser (1984: 93), indicates an apparently improved capability of educational institutions to teach knowledge of the "basics" without encouraging thinking and mindfulness. Robert Glaser thinks abilities to think and reason will be learned only when these activities are taught not as subsequent add-ons but are rather developed explicitly while acquiring the knowledge and skills considered as the objectives of education. The task is to produce a changed environment for learning - an environment in which there is a new relationship between learners and their subject matter, and practitioners and their work situation - in which knowledge and skill become objects of interrogation, inquiry and reason. Such an environment provides the information needed by people to effect positive change in performance; it respects the right of individuals to exercise self-direction and, in fact, enhances their ability to exercise control over their actions. Finally, it engages people in a collaborative process of professional development that responds to their needs and increases their sense of efficacy.

Edelson (1996), highlighted the importance of modifying the corporate culture through collective individual behaviour so that the environment could become more receptive to critical thinking, reflection, and creative behaviour. Currently within nursing the provision of care, the doing, is given greater significance than consideration of what is being done.

The pressure to action, according to Hughes (1985: 18) tends to result in the perpetuation of traditional ways of giving nursing care, and because of this pressure there is little opportunity for nurses to reflect on what they are doing. However, only through critical reflection on practice can the nurse practitioner become a "knowledgeable doer." (Marsick, 1987) The bringing to consciousness of what is done naturally is a significant aid to the use of reflective learning. Once aware of their own process, practitioners gain conscious control over it and seek guidance for even more effective use of it (Boyd & Fales, 1983: 113).

Benner (1984: 26) defines a competent nurse practitioner as one who sees actions in terms of long range goals or plans of which she is consciously aware. This idea is underlined by Toliver (1988:1174) who sees clinical competence demonstrated through inductive reasoning and critical thinking. Boss (1985: 8-12) integrates both ideas by suggesting that competence incorporates values, critical thinking, clinical judgement, formulation of attitudes and integration of theory. A similar viewpoint is held by Kataoka-Yahiro & Saylor (1994: 355), who underscores the view that a problem-solving process (such as the nursing process) alone is not adequate conceptualization of critical thinking. Other processes, skills and attitudes are needed for nursing judgement.

Routine actions, or other forms of bureaucratic procedure are potentially dangerous. Taking an example from medicine, for instance, it is easy for general practitioners who, upon hearing the first symptoms described by a patient, begin to write out the prescription. The point is that they may have heard the same symptoms a dozen times previously, hence they act repetitively, presumptively or even ritualistically. This is an understandable response, but in so doing they may miss something slightly different in the description, which may have proven important to their final diagnosis. It is, likewise, easy for nurse practitioners to practice some aspects of their work in the same manner and fail to learn from practice.

There is a fundamental weakness about the conception of skill transfer in that it is assumed that the learning process lies in the training, and when the skill is practised in the workplace no learning occurs. This is a fundamental mistake, for when a practitioner is seeking to put a skill into practice he or she is in an experimental, creative situation - a learning situation.

Jarvis (1992:5) demonstrated the complexity of the learning process when he highlighted twelve different responses to experience (see text box 4.1.). Jarvis suggests that any of these types of non-learning or learning can occur in either classroom or practice

Text box 4.1. A typology of learning

Non-Learning	Presumption Non-Consideration Rejection
Non-Reflective Learning	Pre-Conscious Skills Memorisation
Reflective Learning	Contemplation Reflective Skills Experimental Knowledge

(Jarvis, 1992: 5)

situations, and that the non-learning situations are potentially dangerous to practice, rather than the desired end-products of training as previously thought. Therefore, nursing practice itself should be regarded as a location for learning and the knowledge learned in practice might be called practical knowledge. In experimental and creative actions there are, according to

Jarvis (1992: 6) three thought processes accompanying the action - planning, monitoring and retrospecting (reflecting). He suggests that the ideal form of action contains four very simple stages (see figure 4.1.).

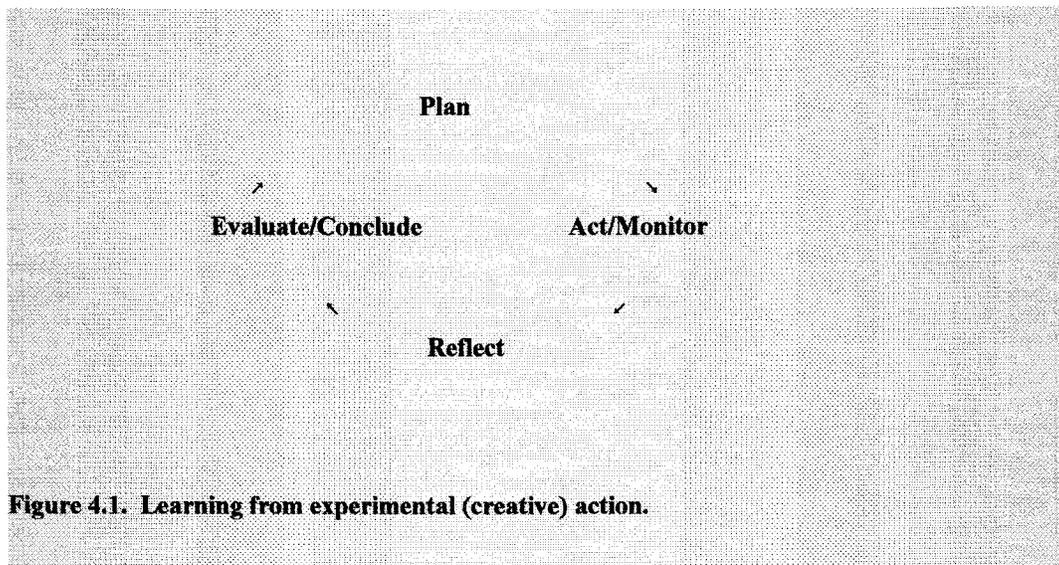


Figure 4.1. Learning from experimental (creative) action.

It is the opinion of Jarvis (1992) that one becomes an expert in practice by experimental (creative) action and considerable thought (reflection) about it. Quality practice is a

continuing outcome of learning, in that as long as the nursing practice situation constitutes an experimental (creative) performance the quality will keep on improving. Once learning is hindered, inhibited or stops because the action becomes presumptive or prescribed, the quality of practice cannot improve. This is in agreement with Berger & Luckmann's (1967) predetermined order through which actors move:

1. creative/experimental actions (which are new and being worked out in practice),
2. repetitive acts (which are acts that are thoughtfully repeated during the normal process of living,
3. presumption (where actors presume upon the situation and act almost unthinkingly),
4. ritualism (where actors merely go through the motions mindlessly) and,
5. alienation (where the mindless repetition of actions becomes self-destructive).

The level of attention, or consciousness, given to an action can vary from almost zero to a very high level of concentration. Professional practice requires meaningful conscious action, and seeking to learn from practice and so improve it constantly. Therefore, not all practitioners are or should be regarded as experts just because they are members of a profession. In agreement with Jarvis, the inquirer within the context of this study included a discussion on expert problem solving (4.3.).

At present, education of health professionals is partly determined by goals outlined in the 'Health for All by the year 2000' initiative (WHO, 1985). Explicit is the emphasis on preventive health measures and an increase in research and learning opportunities for health care professionals. Following publication of this initiative, the World Health Organization (WHO) issued a document entitled '*Learning to work together for health*' (WHO, 1988). In it competence is defined as:

"the ability to carry out a certain professional function (e.g. nursing), which is made up of a repertoire of professional practices. Competence requires knowledge, appropriate attitudes and observable mechanical or intellectual skills, which together account for the ability to deliver a specified professional service." (Ibid., p 68)

A critical, reflective and creative environment opens challenges for the learner and practitioner as they must *consciously notice* what they think, feel, and do. To learn experientially is to learn more about yourself: your skills, values, beliefs and attitudes. Critical reflective practice is directly related to metacognition, as it helps the learner or practitioner to monitor and regulate his or her thinking processes and behaviour (Woolfolk, 1990: 252). The critical reflective practitioner (learner) is an intuitive, logical, and creative person who is interested in the possibilities *behind* the facts, rather than just the facts themselves. The critical reflective practitioner has a growing awareness of *self* and a readiness to make existential choices (Brookfield, 1991: 91). The concept of *existential* includes individual involvement, individual commitment, individual openness, and individual valuing.

The view that nurse practitioners, as responsible professional practitioners, accountable for their actions, and bearing a moral as well as an organizational responsibility for their practice, is one highlighted by various authors. Holden (1991[a]) explores the requirements on the individual nurse in terms of personal strengths and insights, Raatikainen (1989) considers the value base for nursing practice, Mustapha & Seybert (1989) investigated the kind of moral reasoning needed for responsible practice, and Schröck (1990) and van Hooft (1990) the challenge that it presents to nurse education. Holden (1991[a]: 398-403) identifies, among other things, self-restraint (as a prerequisite to the exercise of personal freedom) and the use of critical conscience (as a prerequisite to acting upon conviction) as strengths necessary for the professional practitioner. Schrock (1990: 3-9) identifies such characteristics as altruism, autonomy, rationality, conscience and courage as necessary for professional practice.

Van Hooft (1990: 210) identifies commitment and strength of will. Wilmot (1993: 190) offers a concept that he labels '*agency*'. This concept is drawn partly from Harré (1983) who says that 'to be an agent is to conceive oneself as (hold a theory that one is) a being in possession of an ultimate power of decision and action'. However, in his discussion, Wilmot, extends the concept to include the moral dimension as proposed by Kant (Patton, 1978: 108): 'A free will and a will under moral laws are one and the same thing'. In other words, the practitioner's free acts as agents have moral significance, and having control over those actions involves responsibility for them. A sense of *agency* requires a view of oneself as having that control, and the moral responsibility.

This chapter (4.8 & 4.9), therefore, also includes discussion of the need to adapt the principles of critical thinking, and reflection to the domain of ethical judgement and reasoning. However, in day-to-day living there is clearly a good deal of variation in the degree to which different individuals experience a sense of *agency*. It depends in part on the objective situation that individuals find themselves in (for instance, in terms of social and political dimensions) and in part on cultural and psychological construction. But, whatever the individual's experience of the personal sphere, a move into the organizational and professional context brings them into contact with processes that are likely to diminish their sense of *agency*.

Such processes have been described by Edleson, 1996; Brookfield (b), 1993; Hearn, Sheppard, Tancred-Sherriff & Burrell, 1989; Mackay, 1989; Salvage, 1985; Argyris & Schön, 1978. Overall, the individual's experience in organizations is mostly characterized by a sense of being reactive and manipulated, and often of being helpless. There is evidence that many nurse practitioners experience their organizations in this way. Nurse practitioners experience a hierarchical situation where moral responsibility and organizational accountability become detached from one another. For many nurse practitioners a sense of *agency* is, according to Wilmot (1993: 190) replaced by a sense of inadequacy and guilt, in which the shortcomings of the organization and of the individual become confused.

The inquirer, - within the context of this study- in agreement with the authors indicated in the previous paragraph, included a discussion (4.6.) on the risks involved in being a critical, reflective, and creative practitioner in a corporate, professional or learning culture that does not encourage questioning, risk-taking, and purposeful experimentation.

Recognizing that health care demands critical-reflective thinking and creative ability, the inquirer reviewed available literature in an attempt to unravel the important aspects, processes, and possible learning tools available to develop these thinking processes and skills. This chapter seeks to show that there are important roles for education in practice in order to achieve quality performance. 'One becomes an expert not simply by absorbing explicit knowledge of the type found in textbooks, but through experience, that

is, through repeated trials, "failing, succeeding, wasting time and effort . . . getting the feel of the problem, learning to go by the book and when to break the rules." (Nyiri, 1988: 20) One becomes an expert in practice by experimental/creative action and considerable critical and reflective thought about it. Research and viewpoints, regarding expert problem-solving are therefore included in this chapter (4.3.).

The literature reviewed suggest that, although curricula endorse critical thinking, inquiry and reflection, educators are often still entrenched in their own particular image of health care. The hidden curriculum therefore, ensures that the values, beliefs and skills transmitted remain largely conservative and critical to any kind of educational reform (Taylor, 1993: 70). This results in "subversive" teaching, as learners should be taught to question the intrinsic value of something, rather than submit automatically to the dominant notion. According to Paul & Binker (1990: 379) many educators cannot teach critical thinking, because their own critical and reflective thinking skills were not developed when they were studying. Thus, this chapter (4.12.) includes a discussion of the need to infuse critical, reflective thinking into in-service design for educators.

4.2. Background information on psychological knowledge of learning and thinking

Early in this century, uneasiness with the failure to address the thinking and reasoning potential of learners was evident in the reaction to Thorndike's (McDonald, 1964: 1-26) work. He faced the charge that his psychology was mechanistic and explained adequately only the most rote kinds of learning. Nonetheless, his work appealed strongly to a generation of educators eager for pedagogical theory. Thorndike, as a theorist, did not ignore higher-level processes, but he reduced them to connectionistic conceptions. His work fostered the development of curricula that emphasized the specificity of learning and direct experience with the skills and knowledge to be learned, because he had concluded that transfer effects were minimal. His views on the specificity of learning supported forms of instruction that failed to encourage the development of higher level thinking (Glaser, 1984: 93).

In contrast, Dewey's (1896) less empirical and more philosophical approach attempted to maintain the focus on mental process. The central psychological events of significance in learning were "mediated experiences" and events in relation to their adaptive functions.

Dewey spoke of learning in terms of aims, purposes and goals, and problem solving or intelligent action. In 1940, Katona, in *Organizing and Memorizing*, emphasized the distinction between "senseless" and "meaningful" learning. Katona's thesis was that the prototypes of learning are not associationist connections, as Thorndike advocated, but the development of cognitive organization. In 1945, Wertheimer, in his book on *Productive Thinking*, described an insightful series of studies on problem solving in mathematics and science. He analyzed the structural understanding that could facilitate transfer to new problems.

Thus, in the 1930s and 1940s, the polarities of drill and practice on the one hand, and the development of understanding on the other, were apparent. This dichotomy, according to Glaser (1984: 94) still challenges theory and practice today. In the late 1950s and early 1960s, behaviouristic psychology strongly influenced instructional theory. Theories contributing to the teaching of reasoning and understanding began to emerge. Glaser (1965) described the design of programmed instruction lessons, based on the principles of Skinner's operant analysis (Taber, Glaser & Schaefer, 1965). Bruner (1964) spoke about the sequence of instruction, the form of pacing, reinforcement, and feedback as well as about the structure and form of knowledge, the representation of knowledge, and the influence of representation on the economy and generative power of acquired performance. This mirrored the changes occurring in psychological theory.

In spite of changes, the use of older theories was widespread and their impact and limitations are still manifest. Champagne & Klopfer (1977) point out that, despite the continuing philosophical commitment of science educators to scientific thinking, little of current practice adequately reflects the philosophy. Although much has been done in the area of defining objectives of science instruction that specify problem-solving criteria, instruction that fosters and tests problem-solving ability is far from satisfactory.

Over the past fifteen to seventeen years, school programs and textbooks have however been designed to encourage thinking, problem solving and the abilities for learning (Chipman, Segal & Glaser, 1985; Tuma & Reif, 1980). These programs, can be categorized as follows: (a) process-oriented programs, (b) programs that use generally familiar knowledge, (c) problem-solving heuristics in well-structured domains, and (d) logical thinking in the context of the acquisition of basic skills.

The goal of the first two programs (a and b) is to develop habits of reasoning and skills of learning to improve performance of a general metacognitive, self-monitoring character. One example of such a program was developed by Whimbey & Lochhead (1980) entitled, *Problem Solving and Comprehension: A short course in Analytical Reasoning*. The next two programs (c and d) differ from the first two in teaching thinking in the context of generally familiar knowledge. Covington, Crutchfield, Davies, & Olton (1974) published a program entitled, *The Productive Thinking Program: A Course in Learning to Think*. Each lesson in the program is based on an illustrated story that presents a challenging problem that the learners attempt to solve. The learners are led through a problem-solving process and are required to state the problem in their own words, formulate questions, analyze information, generate new ideas, test hypotheses, and evaluate possible courses of action. Another example is the program developed by de Bono(1974), *The CoRT Thinking Program*. The thinking strategies in this program are metacognitive and self-monitoring in nature but include topics of interest in everyday life. The program emphasizes skills that are not dependent on the prior acquisition of curriculum subject matter.

Another category of programs, identified during the literature review aims at teaching skill in problem solving, particularly in formal, well-structured domains like mathematics, physics, and engineering. In Rubenstein's (1975) *Patterns of Problem Solving* learners are introduced to a wide range of specific problem-solving techniques applicable to problems encountered in their various specializations. Another program in a book of Hayes (1981), entitled *The complete problem solver*, teaches a college course on general problem-solving skills. This program is designed to promote problem solving skills and to provide information on the psychology of problem solving.

Finally, the literature reviewed identified a program to foster thinking skills in the specific context of school curricula, namely a program by Lipman, Sharp & Oscanyan (1979, 1980) entitled *Philosophy for Children*. These authors' contention is that the hierarchy from basic skills to complex processes is so ingrained in educational philosophy and educational research that it is difficult to conceive the interdependence between basic, reasoning skills and thinking skills. Although thinking skills are considered complex and basic skills more rudimentary, the reverse may actually be the case. According to

Lipman, et.al. , a discipline stressing formal inquiry might be considered in the very beginning of a curriculum rather than later in the educational process. The program designers believe that thinking is de-emphasized in education which gives either knowledge acquisition or problem-solving techniques a primary status. The pragmatic nature of inquiry must be made apparent while acquiring knowledge and skill.

The above description samples practices that are evident in published programs and texts used in various educational settings. Most of these programs emphasise the teaching of general processes - general heuristics and rules for reasoning and problem solving - which might be acquired as transferable habits of thinking. In large, abstract tasks, puzzle-like problems, and informal life situations are used as content and complex subject-matter is avoided. The practical reasons offered are that educators and learners would find it difficult to manage the thinking processes that need to be practiced and acquired.

In the context of acquired knowledge and specific task structures, the programs mentioned before may, according to Newell (1980: 175-179), be less powerful, as they lack the focus of domain specificity due to their wide applicability and generality. Although the general heuristic process that humans use to solve problems has been described by Newell & Simon (1972) and Greeno (1978), their research also offered some insight into learning and thinking which require domain-specific knowledge. In contrast, work by Chi & Koeske's (1983), Chi, Glaser & Rees (1983), Larkin, McDermott, Simon & Simon (1980), Lesgold, Feltovich, Glaser & Wang (1981), and Voss, Greene, Post & Penner (1985) focuses on knowledge that forces educators to also consider the teaching of thinking in terms of knowledge structure-process interactions and not only in terms of general processes.

The feasibility of a more integrated approach is increased by studies in developmental psychology and cognitive sciences which turns the attention to cognitive process in the context of acquisition of structures of knowledge and skill. The acquisition of specific content knowledge as a factor in acquiring increasingly sophisticated, problem-solving ability is also apparent in Siegler's "rule assessment" approach to developmental change (Siegler & Klahr, 1982; Siegler & Richards, 1982). In Siegler's work, problem representation based upon appropriate information of a specific domain appears to influence task performance in a way that enables changes in inference processes. Thinking

is also strongly influenced by experience with new information, because change occurs when theories are challenged and an individual's knowledge is contradicted.. Siegler & Richards (1982: 930) stated:

"Developmental psychologists until recently devoted almost no attention to changes in children's knowledge of specific content . . . Recently, however, researchers have suggested that knowledge of specific content domains is a crucial dimension of development in its own right and that changes in such knowledge may underlie other changes previously attributed to the growth of capabilities and strategies."

Minsky & Papert (1974: 59) wrote: *"It is by no means obvious that very smart people are that way directly because of the superior power of their general methods - as compared with average people . . . A very intelligent person might be that way because of specific local features of his knowledge - organizing knowledge rather than because of global qualities of this 'thinking.'"*

Effective thinking is the result of "conditionalized" knowledge - knowledge that becomes associated with the conditions and constraints of its use. As this knowledge is used and transferred to domain of related knowledge, the skills involved become more generalizable so that intelligent performance is displayed in the context of novel ("nonentrenched") situations (Sternberg, 1981: 1-16).

The literature reviewed reveals a strong assumption that problem solving, comprehension, and learning are based on knowledge, and that people continually try to understand and think about the new in terms of what they already know (Hester, 1994; Barell, 1995). If this is the case, then it seems best to teach such skills as critical thinking, reflection, problem solving and correction of understanding in terms of knowledge domains with which learners are familiar. Abilities to make inferences and to generate new information can, according to Norman, Gentner & Stevens (1976), be fostered by insuring maximum contact with prior knowledge that can be restructured and further developed. Schematic knowledge, viewed as a set of theories, when interrogated, instantiated, or falsified, help organize new knowledge and offer a basis for critical thinking, reflection, and problem-solving leading to the formation of more complete and expert schemata. The process of knowledge acquisition is then seen as the successive development of structures tested and modified or replaced in ways that facilitate learning and thinking.

Johnson (1975: 425) for example defined *meaningfulness* as creating a network of "referential associations." Issues, things, problems and situations become more meaningful when individuals take control and search for themselves for the ever-widening sets of relationships among facts, ideas, concepts and similar situations. To think, according to this theorist is to be in control of meaning. This search for meaning is, according to Greene (1973:163) liberating, as learners or practitioners who think are likely to uncover and disclose preconceptions, assumptions, and myths that may no longer hold true.

Along similar lines, diSessa (1982: 63) introduced the notion of "genetic task analysis." It is different from the usual forms of task analysis in that it attempts to identify components of preexisting theories of knowledge that can be involved in the development of more sophisticated theories. Preexisting theories can be thought about and debugged in the course of the development of further understanding. The educational implication that follows from this is that an effective strategy for teaching involves a kind of interrogation and confrontation. Therefore, teaching methods such as case method approaches, discovery method, and various forms of Socratic inquiry dialogue, should be employed.

The literature (Chipman, Segal & Glaser, 1985; Tuma & Reif, 1980) poses a dilemma between instructional emphasis on general domain-independent skills or domain-specific skills. It is evident by the emphasis of most school programs on domain-free methods and by research on problem-solving in the context of specific knowledge structures. The dilemma posed is that general methods are weak because they apply to almost any situation and will not alone provide an evaluation of specific task features that enable a problem to be solved. In contrast, skills learned in specific contexts are powerful enough when they are used as part of a knowledge schema, but the problem of general transfer remains. A third possibility is that both levels of thinking can be taught as subject-matter knowledge and skill are acquired.

Specific declarative knowledge and associated procedural knowledge would be learned, as well as general processes involved in using one's knowledge and skill. The inquirer within the context of this inquiry, suggests a combined approach. The relative emphasis on general and specific knowledge in teaching should vary as a function of both the competence of the learner and the characteristics of the domain. A learner's strengths and

weaknesses in learning in a particular domain or situation should be assessed. If the learner has acquired much of the specific knowledge needed for subject-matter mastery, education aimed primarily at general self-regulatory skills might be indicated. However, if the learner shows competence in general problem-solving and self-regulatory strategies, and is likely to use them to guide new learning, then an emphasis on knowledge and skill specific to a domain is called for. The inquirer within this study is of the personal opinion that rather than switching between general and specific thinking skills, a third option should be followed: that is, specific knowledge domains should be taught in interactive, interrogative ways. Thus, general self-regulatory skills are exercised and taught in the course of acquiring domain-related knowledge.

The stated background information on psychological knowledge of learning and thinking mirrors cumulative development through S-R formulations, Gestalt concepts, information-processing models, and knowledge-based conceptions. Current research studies suggest the likelihood that educators can move to a new level of application at which a wide spectrum of thinking skills is sharpened in the course of education. The task is to produce a changed environment for learning - an environment in which there is a new relationship between learners and their subject matter and practitioners and their work situation - in which knowledge and skill become objects of interrogation, inquiry, and extrapolation. "As individuals acquire knowledge, they should be empowered to think and reason." (Glaser, 1984: 103). As future health care practitioners acquire knowledge, they should be empowered to think critically, reflectively and creatively.

4.3. Research on expert problem-solving

With some exceptions, most educational programs place emphasis on the teaching of general processes - general heuristics and rules for reasoning and problem-solving - that might be acquired as transferable habits of thinking. This, according to Glaser (1984: 96-99) offers limited insight into learning and thinking that require domain-specific knowledge. Expert problem-solving is organized around principles and abstractions. These principles are not apparent in the problem but derive from knowledge of the subject matter. In addition, the knowledge of experts includes knowledge about the application of what they know. For the expert, these aspects of knowledge comprise tightly connected schema. The novice's schema, on the other hand, may contain sufficient information about

a problem situation but lack of knowledge of related principles and their application. Novices show effective heuristics; the limitations of their thinking however, derive from their inability to infer further knowledge from the literal cues in the problem situation or statement. In contrast, the experts will be able to generate inferences in the context of their acquired knowledge structures.

Learning and reasoning skills do not develop as abstract mechanisms of heuristic search and memory processing but, as the content and concepts of a knowledge domain obtained in a learning situation which "constrains this knowledge to serve certain purposes and goals." (Glaser, 1984: 99). Effective thinking is the result of "conditionalized" knowledge - i.e. knowledge that becomes associated with the conditions and constraints of its use. As this knowledge is used and transferred to domains of related knowledge, the skills involved become more generalizable so that their intelligent performance is displayed in the context of novel ("nonentrenched") situations (Sternberg, 1981: 1-16).

Self-regulatory or meta-cognitive abilities are present in mature learners (expert learners). These abilities include knowing what one knows and does not know, predicting the outcome of one's performance, planning ahead, efficiently apportioning time and cognitive resources, and monitoring and editing one's efforts to solve a problem or to learn (Brown, 1978: 77). These skills, however, vary widely.

The experience, of an expert practitioner should not be viewed as merely a passage of time or longevity. It is, the "transformation of preconceived notions and expectations by means of encounters with actual practice situations." Experience implies that there is a "dialogue between what is found in practice," and what "is expected." It is the transformation or refinement of preconceived notions or theory (Benner & Wrubel, 1982: 11). Expert practitioners possess skills that are irreducible to objective measurement strategies. They are, according to Polanyi (1967) connoisseurs. Connoisseurs possess the ability to make qualitative, critical, and discriminating judgements. The skills of connoisseurs always fall in the realm of expert human judgement because perceptual and holistic qualitative judgements, rather than objective measurable judgements, are involved. Expert nurse practitioners, according to Benner & Wrubel (1982: 12) become connoisseurs of "physiognomic appreciations" - that is, they become skilled in recognizing and discriminating among aspects of outward appearances.

Skilled knowledge affords the expert nurse practitioner a perceptual grasp of a situation because of prior experience with similar situations. This perceptual aspect of skilled knowledge means that the expert practitioner does not have to reflect consciously in order to identify the relevant elements of the situation. Experts have highly specialized knowledge and skills pertaining to their own field. This knowledge is well organized into clusters that permit them to recognize meaningful patterns and principles (Cust, 1995: 286).

Although conscious reflection is not necessary to understand the situation, it may be required to reach a decision for action. It is likely that the expert practitioner will consciously reflect on past experience in attempting to reach a decision, instead of relying on an experientially acquired perceptual grasp of the situation. The beginner, must rely on a deliberative analytical method to build the clinical picture from isolated bits and pieces of information. The expert has the skill and the option to grasp the situation rapidly, to see the whole, or the gestalt (Benner & Wrubel, 1982: 13).

Perceptual awareness can only be developed in the course of exposure to various new and problematic situations. The novice begins with theory as a guide while the expert refines theory through practice and proceeds to use past concrete experiences as paradigms. Experience is necessary for moving from one level of expertise to another, but experience is not equivalent to longevity, seniority, or the simple passage of time. Experience means living through actual situations in such a way that it informs the practitioner's (learner's) perception and understanding of all subsequent situations. It is, necessary to increase learners' understanding of the learning process by focusing on their own experiences in the practice situation. Learners require to exercise their metacognitive thinking. The main task of the educator is to help students *value* what they are experiencing and doing (Biggs, 1990).

The following summary (changed and adapted from Benner, 1984) reflects the characteristic differences of different levels of practice:

- **Beginners**

Level of practice:

- No experience of situations in which they are expected to perform in
- No experience of assessment, planning and evaluation of care in the practical situation
- Require to be taught about the situation in terms of objective attributes
- Require a protocol to guide action
- Require direct supervision

- **Advanced beginners**

Level of practice:

- Demonstrate acceptable performance
- Recognize whether or not an event is significant
- Require support in assessment, planning, implementation and evaluation of care
- Require help in setting priorities
- Require supervision of practice
- Understand the principles of care but do not have relevant clinical experience
- Have clinical experience in care but minimal understanding of relevant theoretical knowledge

- **Competent practitioners**

Level of practice:

- Participate in assessment, planning, implementation and evaluation of care with direct or indirect supervision
- Apply knowledge from previous experience
- Demonstrate knowledge of the principles of care and develop an understanding of the rationale for care

- Recognize when relevant research could contribute to care
- Determine appropriate and safe interventions
- Seek advice concerning the total care required
- Manage time effectively
- Plan own work consciously
- Recognize the meaning of situations and respond appropriately

● **Proficient practitioners**

Level of practice:

- Provide holistic care as accountable practitioners
- Critically evaluate the provision of client care within the framework of a problem solving approach
- Demonstrate the ability to reflect upon and evaluate one's own performance
- Provide a professional role model
- Educate clients and colleagues
- Take responsibility for own continuous learning and encourage others to do likewise
- Alert to and perceptive of the needs of clients and workload demands
- Recognize early signs of deterioration, problems or situations prior to explicit changes

● **Practitioners with enhanced proficiency**

Level of practice:

- Perceive a situation as a whole
- Identify any problem, issue or situation accurately and make appropriate decisions
- Demonstrate a deep understanding of the significance of an issue
- Anticipate and respond appropriately in a given situation
- Recognize and audit good practice
- *Work towards expanding the boundaries of current practice*

- **Experts**

Level of practice:

- Have intuitive understanding of a situation resulting in appropriate action
- Recognize the important element of a problem, issue or situation
- Have a deep understanding of the total situation
- Perceptive in recognizing the significance of behaviour, problems or symptoms
- Able to solve problems enabling them to act appropriately in new situations
- Set and audit guidelines for good practice
- Use analytical ability to identify and prevent future problems'
- Promote innovation through a critical, reflective and research oriented approach

The above practice levels can help educators, clinical facilitators, learners and practitioners to determine level in relation to the competencies needed. An understanding of the processes involved in critical, reflective thinking and creativity is necessary to learn from practice (gain experience). Resulting in the learner or practitioner to become what Benner (1984) calls a "competent practitioner." Currently health care demands the type of practitioner called an "expert." Knowledge of what the various disciplines say is not in itself sufficient.

The health care practitioner must be empowered to use personal experience and the experience off others, carefully to assess the extent to which each theory helps in understanding the problems of those being cared for.

The nursing profession, according to Pearson (Robinson & Vaughan, 1992: 214) has not always wanted to know nursing in its fullest sense, nor did it encourage those who do want to know. Historically, the nursing profession has often underrated those who really want to *know nursing* and has overrated those who wish to be proficient in the *tasks of nursing* while they regard nursing knowledge as static. Overconcentration on the subjects that support nursing (such as physical sciences, sociology and psychology) hinders the ability to really understand its totality.

Theorizing and thinking (critically, reflectively and creatively) about nursing itself, are necessary if nurses want to articulate nursing knowledge. Theorizing in action is necessary to uncover nursing knowledge. Practice is the "*raison d'etre*" of nursing and is grounded in action. Nurse practitioners could, according to Pearson (Robinson & Vaughan, 1992: 220) "no more nurse without reflecting upon (and, hence, theorizing about) what they are doing than theorists could produce theories without engaging in the sort of practice distinctive of their activity." Theorizing is not limited to those termed 'theorists.' Practice is not a second class activity for those too stupid to think at a theoretical level. Nurse practitioners theorize through the process of critical thinking and reflection, and thus develop theories.

Although problem-solving is a very important concept within cognitive theories of learning (it suggests transfer of learning), ordinary problem-solving does not necessarily require critical and creative thinking. Theorizing, and thinking (critically, reflectively and creatively) about health care requires at least: (1) time to pause and reflect on the situation; (2) time to consider alternate solutions; (3) suspended judgment in order to look at all possibilities; (4) analyses; (5) generating various and new ideas; and (6) action [opportunity to practice in various situations] (Frederiksen, In: Slavin, 1991: 187-188). The need for reflection, flexibility, thorough analysis, psychological freedom, and freedom of perception during critical and creative problem-solving is emphasized.

Critical-reflective practice is directly related to metacognition, as it helps the practitioner to monitor and regulate his or her thinking processes and behaviour (Woolfolk, 1990: 252). Metacognition involves two components: (1) an awareness of the skills and strategies necessary to perform a task effectively [knowing what to do], and (2) the ability to use self-regulatory mechanisms to ascertain effective completion of a task [knowing how and when to do what]. The strategies of the first component include identification of the main idea, forming associations and images, organizing new information, and note taking. The second component additionally includes predicting outcomes, evaluating effectiveness, and selecting new strategies if necessary. Metacognition is thus similar to creativity. Pesut (1985: 5) defines creativity as a metacognitive process which " generates novel and useful associations, attributes, elements, images, abstract relations, or sets of operations and better solves a problem, produces a plan, or results in a pattern, structure of product not clearly present before."

Developing a personal theory about health care is a creative process that requires meta-cognitive flexibility that facilitates the process of reflection, analysis, synthesis, induction, deduction and reproduction. This is essential to the critical creation and verification of concepts describing the phenomenon of concern in health care practice. The practitioner with meta-cognitive skills can regulate their creative thought and thus, practice more effectively.

4.4. Implications for education

Effective education involves a kind of interrogation and confrontation. Case method approaches, discovery methods, and various forms of Socratic inquiry dialogue may be employed. A major goal in addition to teaching the facts and concepts of a domain, is to teach a particular rule or theory for the domain. This is done by helping the learner make predictions from and "debug" his or her current theory. A second goal is to teach ways of deriving a rule or theory for related knowledge (see 4.12.). The learner learns *what* questions to ask to construct a theory, *how* to test a theory, and *what* its properties are. Repetitive strategies should be used for selecting cases and asking questions confronting the learner with counter examples, possibilities for correct and incorrect generalization and other ways of applying and testing their knowledge.

Such interactive inquiry methods are powerful tools for teaching critical, reflective and creative thinking in the context of subject matter. The educator however needs to understand the learner's current state of knowledge in the domain of the subject matter to be learned, and within which critical, reflective, and creative thinking skills are to be exercised. Although, inquiry methods are ideal for teaching theories and encouraging conceptual understanding, inquiry approach used with inadequate skill, can become an inquisition that leaves many learners behind in dread of having their ignorance exposed (Collins & Stevens, 1982: 65-119).

Self-regulatory activities are important skills for educational instruction, and their presence can predict learner abilities to solve problems and learn successfully. It is the opinion, of the inquirer in this study, that self-monitoring skills can become abstracted competencies when learners or practitioners use them in a variety of literary tasks and various fields of knowledge. An environment in which there is a new relationship between learners and

their subject matter, in which knowledge and skills become objects of interrogation, inquiry, and extrapolation are required. As individuals acquire knowledge, they should be empowered to think critically, reflectively, and creatively.

An educational environment oriented toward empowerment of the learner liberates learners from modes of thinking and learning which limit their potential and narrows their perspective. Such an environment, according to Paul (1990(b): 157-161) provides a "critical education." A critical education:

- **appeals to reason and evidence;**
- **encourages learners to:**
 - ▶ use their own thinking to come to conclusions and solutions,
 - ▶ defend positions and issues,
 - ▶ consider a wide variety of points of view,
 - ▶ analyze concepts, theories, and explanations,
 - ▶ clarify issues and conclusions,
 - ▶ evaluate the credibility of sources,
 - ▶ raise and pursue root questions,
 - ▶ solve non-routine problems,
 - ▶ transfer ideas to new contexts,
 - ▶ make interdisciplinary connections,
 - ▶ evaluate arguments, interpretations and beliefs,
 - ▶ generate novel ideas,
 - ▶ question and discuss each other's views,
 - ▶ compare perspectives and theories,
 - ▶ compare ideals with actual practice,
 - ▶ examine assumptions,
 - ▶ distinguish relevant from irrelevant facts,
 - ▶ explore implications and consequences,
 - ▶ come to terms with contradictions and inconsistencies.

Paul's (1990[b]) model on critical theory stresses the importance of modeling positive traits of mind and modes of learning. Learners cannot be expected to develop positive

modes of thinking if these traits are not modeled in an environment favorable to their development. Learners must experience dialogical thinking because it is essential for a rational approach to problems and recognition of weaknesses in current held theories and viewpoints.

Educators must lead learners:

- to the point at which they are intellectually comfortable with dialogical issues and
- reflective, critical, and philosophical discussions.

Text box 4.2. Assumptions encouraging higher order learning

- Learners learn *what* to think only as they learn how to think.
- Learners gain knowledge *only* through thinking.
- The process of education is the process of each learner gathering, analyzing, synthesizing, applying, and assessing information for him or herself.
- Classes with much learner talk, focused on issues, are a better sign of learning than quite classes focused on passive acceptance of what the educator says.
- Learners gain significant knowledge only when they value it.
- Information should be present so as to be understandable from the point of view of the learner, therefore continually related to the learner's experience and point of view.
- Superficial learning is often mis-leading and stands as an obstacle to deeper understanding.
- Depth is more important than coverage.
- Learners often provide correct answers, repeat definitions, and apply formulas while not understanding those answers, definitions, or formulas.
- Learners learn best by working with other learners, actively debating and exchanging ideas.

Educators who understand the importance of dialogical thinking, interrogation and confrontation, value higher order learning. They hold, according to Paul (1990 (b): 323) a specific set of assumptions (see text box 4.2.).

The literature reviewed suggested, in general, that learners learn best:

- ▶ in a dialogical situation,
- ▶ in circumstances requiring continual expression of personal views, and
- ▶ continual adjustment of personal views in relation to the views of others.

Dialogical and dialectical thinking involve dialogue or extended exchange between different points of view or frames of reference. Both dialogical and dialectical thinking are multilogical rather than monological. Didactic teaching encourages monological thinking. Didactic instruction, according to Paul (1990 (b): 247) flourishes, when it appears that life's problems can be solved by one-dimensional answers and that knowledge is ready-made for passive absorption. Since dialogical and dialectical activities focus on the process rather than the product of thinking it is essential for both students and educators to learn to assess the thought processes. Definite standards for thinking needs to be established.

Educators need to learn how to distinguish between (and explain) the difference between clear and unclear, precise and imprecise, specific and vague, relevant and irrelevant, consistent and inconsistent, logical and illogical, deep and superficial, complete and incomplete, significant and trivial, open-minded and biased, adequate and inadequate reasoning and expression. Students, in turn need to recognize their responsibility to express themselves in reasoning that is clear, precise, specific, accurate, relevant, consistent, logical, deep, complete and open-minded, irrespective of subject matter.

To quote Scheffler (1973: 7), the learner (knower) must "earn the right to confidence in his beliefs," or theory, by "acquiring the capacity to make a reasonable case for the belief," or theory in question. Learners should learn that reflective self-criticism is possible and necessary.

A limiting factor to the use of critical, reflective and creative skills is the dependency on consensual (similar) thinking in most cultures. A leap into the personal data bank is therefore seen as risky. Essential conditions for the utilization of these skills require attempt by the learner or practitioner to stand on his or her own feet mentally and emotionally. According to Sarosi & Taylor (1994: 2223) conditions for critical, reflective and creative learning are that learners or practitioner's should:

- Identify a situation in which they have real experience which interests them enough to develop a question about it.

- Suspend problem-solving and methodological thinking [during the critical, reflective and creative listening phase].
- Accept personal interest in a topic that may not be valued by others and respect it as important to *the self*.
- Observe and respect personal thinking processes - "being in touch with how one's own mind is working."
- Trust *the self* and where it is in the process of listening. The learner or practitioner may feel fragile or tentative about this.

Critical, reflective and creative questioning based on "nonverbal inner listening," can, according to Sarosi & Taylor (1994: 225) lead to new insights, discoveries, and perspectives. Though very challenging, the methodology of reaching this "listening hole," can help the learner or practitioner develop respect for the rich lode of experiences from which further insight can be developed. Critical, reflective, and creative thinkers are committed to risk.

In agreement with Sarosi & Taylor, it is the opinion of the inquirer in this study, that what practitioners learn about the world of health practice is not based only on an encyclopedia of modern science. Emphasis needs to be replaced on creating an environment that is respectful and allows questions to develop from the learner's or practitioner's own experience. The demand for success (action) at the expense of the demand for understanding may kill the growth of open curiosity and critical, reflective thinking that leads to a creative research question.

It is necessary to teach learners to sift through huge amounts of information, make connections to prior knowledge and transform data to knowledge in an informed and critical way. Learners need to become information literate. The term information literacy is defined by Farah (1995-6: 128-129) as a subset of critical thinking skills. Attributes of a

person who is information literate include the ability to:

- recognize when there is an information need
- recognize that accurate and complete information is the foundation of problem solving
- define the problem
- generate questions or hypotheses about the problems
- determine parameters for investigation
- develop search strategies
- identify information resources that help solve the problem
- evaluate the information found
- integrate new information with prior research
- organize information to solve the problem
- apply the information in a practical way

Health care institutions, are finding that in order to become competitive and maintain their edge in an ever-changing market place they must place a premium on flexibility and responsiveness . Institutions must, therefore, have workers who can think creatively and make reasonable decisions quickly in order to meet demands. Workers must possess a *nimbleness* of mind, a willingness to take risks. If educators contend that curriculum cores must provide learners with abilities to meet real life challenges in a practical way, ensuring that learners are skillful at using information is essential. Learners must be taught the importance of "self-talk," which comprises a process of proceeding through the underbrush of uncertainty, the uniqueness of the situation, the problem to find a solution or resolution (Barell, 1995: 20).

4.5. The limitations of a "task" and "subject" orientated education

Task and subject orientated education do not address the needs of the patient. When the patient's needs are not met, dissatisfaction and discontent result. A rigid approach to health care will not suffice in a consumer-focused health care system. Nurse practitioners will need to develop skill in assessing a consumer's needs from the consumer's vantage point (Snyders, 1994: 100). They need to be skilled in the art of nonverbal, inner listening and risk taking.

Rapid advances in science and technology, the growing bodies of knowledge and diseases, as well as the economic impetus changing health care delivery, require a practitioner who can reflect and think critically and creatively. The health care practitioner must be able to use a broad knowledge base to mobilize resources, coordinate actions and evaluate outcomes in complex new situations where there are no precedents. "Failure to consider all possible descriptions of a problem or situation dooms many problem-solving or decision-making efforts before they even begin." (Case, 1994: 102)

Models of care delivery, such as patient-focused care and organizational models such as shared governance require nurse practitioners and other health care practitioners to collaborate. To collaborate means to consider and evaluate a variety of perspectives. One must also contribute to generating new ideas, solutions, and means of evaluating solutions. The process of collaborating shares characteristics with critical thinking, and therefore, can be viewed as an interpersonal form of critical thinking. As managers and executives, nurse practitioners operationalize the organizational mission, and direct and contribute to strategic planning. They lead and participate in collaborative practice models and restructuring initiatives. They guide quality improvement and monitor, evaluate, and enhance the critical thinking, reflective and creative skills of subordinates. Managers and executives cannot perform these activities effectively without critical, reflective thinking and creative skills.

Metacognition has many applications in nursing and health care. Particularly in the present and future environments of exponential increases in available knowledge and information. Safe, effective care will therefore, require the use of algorithms and schema rather than a multitude of specific, stepwise procedures. To strengthen nurse

practitioners' critical thinking, reflective and creative skills, they need to learn to live comfortably, not complacently, with the ambiguous (doubtful) question mark. They need to develop the habits of challenge and to accept challenge to their own ideas. They need to remain open to different views and embrace the ambiguity and complexity characterizing the practice environment. These attitudes will enable practitioners to actively engage with change and assume leadership roles in designing their future practice environment. "When we embrace uncertainty and let it stimulate us, we harness the power of critical thinking." (Case, 1994: 109)

Educators must keep abreast of contemporary learning theory so that their teaching reflects current ideas of best practice. The projected technological advances and expanded roles of nurse practitioners of the future will make critical, reflective and creative ability an important asset for nurses. The vision for the future is not in the past. Nurse practitioners continue to move toward a transformation of who they are and what they do in the business of health care. They will need to work more cohesively with each other and with other professional consultant groups - statisticians, accountants, lawyers (Lyons, 1995: 8-9).

The nursing profession and the government of the day in South Africa, endorse the development of strategies for the understanding of critical-reflective thinking of both learners and educators. The need for development of these skills and abilities is, according to the inquirer, emphasized by the current act on termination of abortion: Act No. 92 of 1996: Choice on Termination of Pregnancy Act, 1996. This act mirrors the increasing responsibilities of health care professionals (such as nurses) and the need to make conscious, thoughtful, and moral decisions.

From a study completed by Gendrop (1989: 176) it would appear that professional nurses receiving instruction in a creative problem-solving strategy use a more fluent, flexible, original, novel and efficacious method of thinking. These findings support the use of a creative problem-solving strategy, specifically synectics, in educating the professional nurse.

Critical, reflective and creative thinking is a process and cognitive skill which functions in identifying and defining problems and opportunities for improvement; generating,

examining and evaluating options; reaching conclusions and decisions and creating and using criteria to evaluate decisions. The literature reviewed suggested that the skills mentioned also contribute to the effectiveness of group decisions and it (the literature) present evidence of the crucial nature of critical, reflective and creative thinking in nursing practice, management, and executive roles and in the practice of continuing education and staff development (Case, 1994; Betchel, Smith, Printz & Groseth, 1993; Benner, 1984; Covey, 1990; Wilson, 1992; Sarosi & Taylor, 1994).

Critical-reflective practice however, is not without risks. Educators, facilitators, nurse practitioners and learners should consciously take note thereof, in order to manage it realistically.

4.6. Implications for the health care practitioner: Risks involved in being critical, reflective, and creative

Thinking and speaking critically about health care practices carry considerable risks of which health care practitioners, including nurses themselves, are only too aware. Nurse practitioners, as reported in the introduction to this chapter, experience a hierarchical situation where moral responsibility and organizational accountability become detached from one another (Edleson, 1996; Brookfield, 1993; Hearn, Sheppard, Tancred-Sherriff & Burrell, 1989; Salvage, 1985; Argyris & Schön, 1978; Mackay, 1989).

Being a critical-reflective and creative nurse practitioner involves a number of personal, professional and political risks. Personal, critical reflection on habitual ways of thinking about and performing nursing, carries the risk of discovering that one is not the omniscient paragon of clinical virtue that one ought to be. This is humbling and sometimes humiliating, as long-held ideas and long-performed activities might be grounded in rash (uncritically assimilated and unchecked) assumptions that turn out to be distorted or oppressive. Professionally, going public with stories about critical moments in personal practice - especially if these highlight wrong assumptions, bad judgements, and missed opportunities - can damage the practitioner's reputation. Politically, being critically reflective entails asking awkward questions about the nature of power and control, and calling people to account for their ideas and actions. Such activities inevitably bring the critical, reflective questioner face-to-face with power structures whose representative and

beneficiaries are often eager to quell dissension and divergent thinking. In micro-political terms, becoming known as a raiser of awkward questions can give the practitioner a reputation as a troublemaking subversive, causing the practitioner to become isolated from peers (Brookfield, 1993(a): 198).

According to Brookfield (1993(a): 198) nurse practitioners must foresee the risks that they are in for, if they are to manage it. Being aware of the personal, professional, and political risks involved in critical reflection means that the practitioner can take steps to ensure that their actions have the intended effect while minimizing the personal threat. Brookfield reports that four themes emerge when nurse practitioners talk about their engagement in questioning, risk-taking, and purposeful experimentation with their practice: (1) impostorship, (2) cultural suicide, (3) lost innocence, and (4) roadrunning.

Following is a short discussion of each theme:

- **Impostorship:** Impostorship is the awareness in many nurse practitioners that at some level they know they don't really deserve to be regarded as competent professionals. Impostorship is often spoken about as the public presentation of what is known to be the false self. Even the most experienced nurse practitioners verbalize feelings of impostorship. Given the distance between the positive image of nursing and most nurse practitioners' private experience of their practice, it is not surprising according to Brookfield (1993(a): 198), that a sense of impostorship is so widespread.

Impostorship is however not a wholly negative phenomenon. A degree of impostorship is productively troubling, in that it stops the nurse practitioner from becoming complacent and it ensures that practice is seen as being in constant flux and evolution. Practitioners who remain completely free of feelings of impostorship may have an unrealistically developed confidence in their own perfection.

Impostership is seen as a necessary accompaniment of experimentation, in that any time the nurse practitioners depart from comfortable ways of acting or thinking to experiment with a new way of working, they are almost bound to have their sense of being in control challenged. The further practitioners travels from habitual

practices, the higher is the risk of feeling that they are engaged in a public demonstration of personal incompetence.

- **Cultural Suicide:** Practitioners publicly engaged in critical reflective thinking and experimentation are an affront to peers who have settled for the illusion of control and predictability. Consequently, nurse practitioners who expect their efforts to be met with enthusiasm for critical reflection and democratic experimentation may be sorely disappointed when they find themselves regarded as uncooperative subversives, whistle-blowers who make public the uncomfortable reality that practitioners should see themselves as being in evolutionary experimentation.

Cultural suicide describes the process by which, in talking about this experience of change and critical reflection, the practitioner runs the risk of being cut off from colleagues and from the organizations culture. In taking a critical stance toward conventional assumptions and accepted procedures, the practitioner faces the prospect of being excluded from the culture that has defined and sustained him/her up to that point in time. This means that the practitioner may find him- or herself in a position of relative isolation within the institution.

According to Brookfield (1993(a): 202), those on a journey of critical reflection can be viewed by colleagues with a hostility born of incomprehension. Nurse practitioners in critical reflective process are sometimes seen as turning into subversive troublemakers whose professional *raison d'être* seems to make life as difficult as possible for those around them.

- **Lost Innocence:** Epistemological risks accompany the journey into critical reflection and can be just as important in their impact. In contrast to the optimistic rhetoric and inspirational tone infusing much writing on empowerment, liberation, emancipation, and transformation, nurse practitioners' feedback on their critical reflection quite often "echo with sadness." According to Brookfield (1993(a): 203) these reports have a quality of lost innocence. He describes the concept of lost innocence as follow:

Lost innocence is *"the gradual realization that the more clinical practice we put behind us, the more we become aware of its essentially inchoate (underdeveloped) nature, of the fact that learning nursing is an unformed, unfinished project."*

However, lost innocence, also signifies the beginning of wisdom (Sternberg, 1990). Alongside the emotional craving for revealed truth there develops an appreciation of the contextual ambiguity of practice.

In terms of the schema drawn from developmental psychology (Levine, 1989; Sinnott & Cavanaugh, 1991), practitioners experiencing a loss of innocence are caught in the relativistic freeze between concrete and dialectical thinking (Basseches, 1984), or between dualism and multiplism (Perry, 1981).

■ **Roadrunning**

Brookfield (1987, 1991) and Mezirow (1990), acknowledge that critical-reflective process is slow and incremental rather than sudden and apocalyptic (a revelation). It is a difficult and tiring process. It is a rhythm of learning that is distinguished by an increased ability to take alternative perspectives on familiar situations, a developing readiness to challenge assumptions, and a growing tolerance for ambiguity. But it is also a rhythm marked by fluctuating moments of falling back, of apparent regression (such as in road runners), that, when they are experienced, are felt as devastating final. Instead of being viewed as the inconvenient interlude of the moment, these moments are viewed as the end point and practitioners feel like returning to tried and trusted ideas.

Road running, is characterized by moments in critical, reflective thinking that mirrors boundless energy and optimism, but also frightening uncertainty. As the practitioner begins struggling to reformulate assumptions that seem not to explain the world adequately, there is a sense of forward movement, of progress toward true clarity of perception. But as the practitioner looks at the situation it also seems as if nothing is supporting him or her. In this moment in time it may happen that the practitioner decides to abandon the quest for critical-reflective insight. Sooner or

later however, the practitioner is again confronted by the anomaly or discrepancy in the work situation (Brookfields, 1993 (b): 203).

■ **Loss of *agency***

Wilmot (1993: 190) offered the concept of 'agency'. This concept is drawn partly from Harré (1983) who states that "to be an agent is to conceive oneself as (hold a theory that one is) a being in possession of an ultimate power of decision and action'. A sense of *agency* requires a view of oneself as having control and moral responsibility. However, being part of an organizational and professional context brings practitioners into contact with processes that are likely to diminish their sense of *agency*.

Impostorship, cultural suicide, loss innocence, lost of *agency* - depressing themes that cause nurse practitioners to think twice about the value of critical reflection. However, a more positive theme also emerges from reports of nurses practising critical reflection, the theme of community. Time and time again nurse practitioners, according to Brookfield (1993(b): 203), voice the importance of belonging to emotionally sustaining, peer learning communities.

- **Community:** Nurse practitioners using the process of critical reflection form an emotionally sustaining, peer learning community. This small community reassures its members that their private anxieties are publicly experienced. They know that experience dissonance, challenging assumptions, taking new perspectives, and falling foul of conservative administrators are generic aspects of critical, reflective process, not idiosyncratic events.

Such community helps individual nurse practitioners to see their private experiences coalesce (combine/fuse) into shared, publicly recognized truth. This insight help them to tolerate periods of confusion and apparent regression. According to Brookfield (1993(a): 205), it is important that individual critical, reflective nurse practitioners see that they are not alone in their thoughts and feelings if they are to take their personal experience seriously, particularly when the insights from that experience stand in opposition to main stream ideas and practices. By using a peer

learning community as the forum in which private reports of critical process can be compared, nurse practitioners understand that what they thought were context-specific barriers to change are often paralleled in the lives of their colleagues.

Part of the purpose of professional education, is to counteract the risks involved in being a critical, reflective and creative practitioner. According to Wilmot (1993: 190), educators and facilitators need to counteract this helplessness and empower workers in the health bureaucracies through the content and process of the learning experience. The 'empowering' agenda of professional nurse education is stated strongly by Hawks (1992: 609-618), with an emphasis on the process of learning. However, the contents of learning can also have an empowering function, as experiences are put in the context of various explanatory frameworks - social, political, psychological and biological. "To understand what is happening can itself be freeing." (Wilmot, 1993: 190).

The practitioner or learner should be helped to look beneath the surface of events and attitudes. By doing this, the practitioner is freed from the guilt of personal inadequacy and the anguish of arbitrary fate. Through its explanatory power it frees the practitioner or learner from the "false consciousness of believing that they are subject to the vagaries (notions/whimsies) either of fate or of their own personal inadequacies." (Wilmot, 1993: 191) A determinist viewpoint should be rejected. A sense of *agency* is necessary for ethical professional conduct.

4.7. Employing "deep" learning approaches: A relational and holistic approach

There are several key educational, psychological, and other theorists who have adopted and proposed a relational and holistic approach to learning (Cust, 1995; Beaty, Dall'Alba & Morton, 1990; Biggs, 1978, 1979, 1987, 1992; Bihl-Hulme, 1985; Boud & Felletti, 1991; Bowden, 1990; Chinn & Brewer, 1993; Coles, 1990; Dart & Clarke, 1991; Nuy, 1991).

"Deep" learning approaches, such as critical thinking (thoughtful/ meaningful/ higher-order thinking) and reflection, and the processes involved have been analyzed by Perry (1970), McPeck (1981), Kitchener (1981 & 1986), Meyers (1986), Sternberg (1986),

Brookfield (1987), Kurfiss (1988), Siegel (1988), Paul (1990(b)), Mezirow (1990) and Garrison 1991). Some of their writings have been strongly influenced by the work of the philosophers (Dewey, 1933; Habermas, 1974/6/7/9 & 1984). Jarvis (1992) examines the nature of reflective practice in nursing, but differentiates between thoughtful practice and reflection. There have been relatively few research studies focusing on reflection and those undertaken focus only on the processes of reflective learning or examines the extent to which reflection is used by professionals (Boyd & Fales, 1983; Goodman, 1984).

Powell's (1989) study is the only one identified which focuses in a limited manner on reflective practice in nursing. Jarvis (1992) acknowledges the lack of definition and attempts to define reflective practice. His definition however does not include *the self*, and while he says that reflective practice is a potential learning situation he does not suggest that it necessarily results in a changed conceptual perspective.

What all the authors reviewed have in common, is that they discuss the processes involved in critical thinking and reflection. In discussing these processes stages or levels of reflection are identified by most authors (Van Maanen, 1977; Mezirow, 1981; Boyd & Fales, 1983; Goodman, 1984; Boud, et.al. , 1985; Schön, 1991). From the initial review of the literature it appeared that the accounts of critical thinking and reflective processes are different. An analysis of the literature however, revealed that the differences between theorists' accounts are largely those of terminology, detail and the extent to which the processes are arranged in hierarchy. The literature reviewed also clearly suggest that stages of critical or reflective thought must be seen as "abstractions which cannot be fixed." (Schön, 1987: 29).

4.7.1. Key stages in critical-reflective process, critical thinking, creative thinking and problem-solving

To distinguishing between the different phases/stages of critical-reflective thought is useful in attempting to understand educational transaction and knowledge development. It was possible to identify three key stages in critical reflective process shared by theorists from the literature:

- The first stage of the reflective processes is triggered by an **awareness** of

uncomfortable feelings and thoughts. This arises from the realization that the knowledge the practitioner was applying, in a situation, was not sufficient in itself to explain what was happening in that unique situation. Boud, et.al. (1985) indicate that the first stage involves 'returning to the experience'. Here the learner or practitioner recollects the events that have occurred and reexamines the reactions to those events. The chronological sequence of events is recalled in a descriptive rather than judgmental manner (Stockhausen, 1994; 364).

It is the personal opinion of the inquirer, of this study, that the reflective process can also be triggered by a conscious decision to reflect or by a positive experience or situation.

- The second stage involves a **critical analysis** of the situation, which is constructive in that it involves an examination of feelings and knowledge. Boud, et.al. , (1985) describe in detail the analysis of feelings and knowledge, emphasizing the importance of utilizing positive feelings and removing obstructive feelings. They use four terms to describe the critical thought processes: association, integration, validation, and appreciation.

The focus on feelings in this stage, according to Stockhausen (1994; 364), heightens the learner's or practitioner's self awareness and enables them to enhance and retain positive emotions and discard negative feelings. The key characteristic, according to Boyd & Fales (1983: 107) which seems to differentiate reflective learning from other types of mental activity (problem-solving) is that the problem is conceptualized in relation to self. The individual is aware of, and places the self at the centerpoint reference for the problem or task.

- The third stage, involves the development of a new perspective on the situation. The outcome of critical reflection, therefore, is learning. This stage is known as **perspective transformation**. Boud, et.al. , (1985) suggest that the outcomes of critical reflection are both affective and cognitive in nature, which may lead or may not lead to behavioural changes.

This phase, requires in-depth reflection and introspection (Stockhausen (1994: 365). Re-evaluation occurs (Boud, et.al. , 1985). During the activity learners and

practitioners link new data to what is already known (association), seek relationships among data (integration), determine the authenticity of ideas and feelings (validation) and create a personal understanding or knowledge about the event (appropriation).

Boyd & Fales (1983: 108) report an openness to new information at this stage. This sense of openness takes the form of reviewing past experiences, foregoing the need for immediate closure on the issue, intentionally structuring "lateral thinking," and allowing whatever comes up to be there; talking with someone else; positioning decisions until they can be looked at from all sides; asking oneself difficult questions. The essence of the openness stage appears to be trust of the self to discover and recognize relevant information. The receptivity may be primarily to internal or introspectively discovered information; from long-forgotten memories, feelings rather than thoughts, the unconscious, or it may be receptivity to unexpectedly related information from outside the individual.

In the openness stage, the individual attends to all this information in a new way - from a distance, collecting it so to speak - without actively trying to force it into a meaningful pattern. Resolution incorporates an element of surprise, in that it represents an unconscious selection of assimilated information (creative synthesis) - a new gestalt (Boyd & Fales, 1983: 109).

The new gestalt is evaluated in terms of the individual's own subjective criteria, and also in relation to others. A decision may be made to incorporate the change into behaviour immediately and completely, to test the public reaction, or merely to allow it to exist within the self without acting overtly on it. Negative evaluation by others may force the individual back into the cycle of critical reflection.

Through the use of critical-reflective process learners and practitioners are able to actively construct and arrange their knowledge of the world and the world of health care thus, developing their own interpretational schema (Stockhausen, 1994: 366). Metacognitive awareness involving critical reflective process enables learners and practitioners to learn from experience and to apply the learning in new situations (Cust, 1995: 282).

This process relates closely to Steiner & Bell's (1979) categories that they identified in their experiential taxonomy: **exposure, participation, identification, internalization, and dissemination** (see 4.7.2., for a more detailed discussion), and Mezirow's (1981, 1990), terms: **conceptual, psychic and theoretical reflectivity** to describe the processes of analysis. The cyclic phases identified above are in agreement with more current viewpoints, as to what the critical thinking process involves. Garrison (1991: 293-299) for example, in his critical thinking model identifies and describes five similar phases:

- **Phase 1: Problem identification.** This phase is concerned with recognizing a problem, or the existence of some personal dissonance. The learner or practitioner enters this phase with an existing body of knowledge and perspective on the world. Due to a triggering event (disorienting event) the individual recognizes the existence of an issue or problem. The triggering event prompts a sense of inner discomfort and perplexity. It may be a positive or negative trigger.

Practically every theorist of critical awareness and reflective change emphasizes negative, disruptive triggers, rather than positive, affirming ones. Hopson & Adams (1977), for example, write of this transitional stage as one of shock and immobilization. However, it is the opinion of the inquirer in this study that it is a mistake to regard critical thinking as occasioned only by trauma. Moments of sudden insight and self-awareness can be triggered by events that are fulfilling rather than distressing. "Peak" experiences with an undeniable sense of rightness can prompt a critical evaluation of aspects (Brookfield, 1987:31).

- **Phase 2: Problem definition.** During the second phase thinking becomes directed and purposeful. Following the recognition of an issue or dilemma is the process of appraising and understanding the exact nature of the problem. According to Garrison (1991: 294) one of the most important activities in the process of critical thinking is to understand or to redefine the issue or dilemma, To do this requires some deliberation and information gathering (i.e., appraisal). At this point the individual begins to question basic assumptions which may have directed and constrained his or her thinking. This may be done individually or, through collaboration or interaction with others. Through this preliminary questioning process the individual gains a better understanding of the problem and is ready to consider alternative courses of action and possible explanations.

- Phase 3: **Exploration.** This phase takes the learner or practitioner "from the world of facts to the world of ideas." (Garrison, 1991: 294) The individual searches for an explanation by exploring alternative ideas to resolve the issue or dilemma. At this stage, there must be some exploration of the issue to explain sufficiently the original triggering event. This, according to Garrison, is where the creative thinking process dominates. At this point the individual is uncertain as to where his or her insights and ideas originate.

The learner or practitioner at this stage, also needs to have a set of facts or a good understanding of the context in which the event took place. Benderly (1989), quoted by Garrison (1991: 294), believes that mastery of a field makes intuitive thought possible. The ability to see the heart of a problem (insight) is based on a deeper understanding of the situation. The more the information is critically analyzed and integrated, the greater the chance of insight. As such, expertise and intuition appear to be aspects of the same thing. In order not to block the creative exploration of alternative ideas, "scepticism" and the questioning of assumptions must temporarily be suspended. The learner or practitioner must suspend prior judgement and must attempt to hold own biases in abeyance by critical review of the evidence and arguments (Habermas, 1984: 276).

Hopson & Adams (1977), Boyd & Fales (1983) and Mezirow (1990) report that the person involved may initially alternate between minimization and denial in this phase.

- Phase 4: **Applicability.** Ideas are explored through abstract thought to, more positively, determine the applicability of an idea for resolve of the dilemma. At this point scepticism and the questioning of assumptions re-emerge strongly from critically analyzing the possible alternative resolutions. The selected and explicated ideas (i.e., explanations) is considered hypotheses. At this stage greater reliance is placed upon logical reasoning, and the individual returns repeatedly to the exploration phase to generate a more satisfactory explanation, or to reconsider before proceeding to confirm and integrate the idea. During this phase the individual not only searches for an appropriate idea but searches for personal meaning and a new perspective or

understanding of the problem or dilemma.

- **Phase 5: Integration.** This final phase represents a "test of the applicability of the idea and a return to the concrete world." (Garrison, 1991: 294) Confirming and adopting an idea may not always be observable (Brookfield, 1987; Boyd & Fales, 1983; Mezirow, 1987). Dewey (1933:67) considers, testing to be "overt or imaginative action." This stage, in a social context, is seen as the integration of a new perspective. Integration is sometimes satisfactory but at other times it simply triggers a renewed search for a more satisfactory resolution to the dilemma. There is however, a real chance for the individual to proceed to the application phase having generated promising alternative ideas.

From a knowledge perspective the integration phase is very important. As the purpose of critical thinking is knowledge development, confirmation and integration of the knowledge is crucial. This stage presents a "creative synthesis" of various bits of previously gathered information and, following thereon, transformation to a new solution or change in the self (Boyd & Fales, 1983: 109). The person experiences the new solutions as sensible and meaningful (Mezirow, 1990; Brookfield, 1987).

Jarvis (1988: 167) describes knowledge as opposed to ideology and belief as verifiable and meaningful. He suggests that when a learner receives information, it must be treated critically to determine its validity. Meaningful information is not necessarily knowledge. Jarvis (1988:1640 states, "it is much more difficult to argue that critical self-reflection in itself is always a method of verifying knowledge. While verification emphasizes the collaborative and interactive aspects of critical thinking, it is important to realize that throughout the critical thinking cycle there is "an alternation of collaboration and reflection." This process is essential to the development of knowledge in the best sense of an educational experience.

Problems in the real world are not well defined and structured and cannot simply be resolved by applying professional knowledge and technical rationality. Through the concepts of knowing-in-action (tacit knowledge) and reflection-in-action (rethinking tacit knowledge) the individual develops competence. Reflection-in-action questions the

assumptional(or surmising) structure of knowing-in-action (i.e., exploration phase) and gives rise to on-the-spot experiment from which new actions are developed and tested (i.e, applicability and integration phase).

All the models reviewed, indicate that the critical-reflective process is not simply indiscriminately sceptical or critiquing levels of achievement. It exhibits what Passmore (1972:40) refers to as a critical spirit, "one must be alert to the possibility that the established norms themselves ought to be changed, the criteria used in judging performance modified." Through a critical spirit and a process of experience, facts and information are interpreted into existing cognitive structures leading to comprehension and understanding. Learners, moving from highly concrete to early formal reasoning, should be encouraged to more flexibility with their facts, values and methods of knowing. Abstract and propositional skills do not occur naturally. It must be taught, practiced, refined and reinforced (Hester, 1994: 43).

Critical thinking in addition, is seen as not clearly generalizable but specific to the context in which the process is exercised. "There is no universal skill properly to be called critical thinking." (McPeck, 1981, quoted in Garrison, 1991: 299). This is in agreement with Ford & Profetto-McGrath (1994: 343) who suggest that there are two "moments" to critical-reflective process: The first relates to a critical examination of the practitioner's or learner's own practice. The second relates to the need for critical understanding of the situation and of the way the system works to maintain the status quo. Individuals who understand this are able to elucidate underlying assumptions as well as values and purposes embedded in organizational knowledge. Critical-reflective process and self-reflection permit an understanding of personal perception of the situation as well as an examination of the assumptions guiding practice. Hence, according to Ford & Profetto-McGrath (1994: 343) the "two moments of critical reflection illuminate the whole, allowing one to make explicit the implicit."

The Ford & Profetto-McGrath model, *The Visual Model of Critical Thinking*, within a *Curriculum-as-Praxis Perspective* (1994), is based on critical thinking as mediating between authentic knowledge and autonomous action through a process of critical reflection. This model, similar to that of Garrison (1991), underline the importance of *action* based on knowledge. Knowledge and action are dialectically related through the

mediation of critical reflection. Action is informed by critical reflection, and is therefore emancipatory (freeing/liberating). This is in agreement with Perry's (1970) "position," that *the self* has the ability to detach, analyze, and examine alternatives systematically, and can commit itself to the necessity of personal choice in a relativistic world after the relative merits of the alternatives have been examined.

Yet, Ford & Profetto-McGrath (1994: 343), even so, admit that action involves risk taking as the individual engages in a challenging process that may change the status quo. As with action research, they are of the opinion that action resulting from critical reflection should mirror two essential features, *improvement* and involvement:

- **Improvement** is seen as a consequence of taking the appropriate action in a specific context.
- **Involvement** is a manifestation of a commitment to action based on authentic, critical insight into the social construction of the situation. Involvement implies responsibility, and means acting *with* others to affect change.

There is also, implicit in the literature an assumption that certain cognitive and affective skills are necessary to engage in critical-reflective practice. These skills are, for example: self-awareness, open-mindedness, a multi-logical orientation, imagination, proactive thought, dialogical reasoning, metacognition; critical analysis; synthesis; evaluation; and so on. The literature proposes that development of these skills should be emphasized in professional courses to facilitate the use of critical thinking and reflection as a learning tool.

In chapter three of this inquiry, there seems to be a considerable overlap between critical thinking, reflection and creativity. When problem-solving, critical thinking and reflection are used effectively, they can, according to Hester (1994: 147) and Perkins (1986: 15), be seen as creative processes. Perkins states "if you're talking about really good critical thinking, you're talking about thinking that is insightful. It is not just nitpicking; it cuts to the heart of the matter - which, rather plainly, is creative thinking. Creativity, meaning and understanding (insight) enhance practice. They account for power and analogical reasoning, the use of the familiar to understand the unfamiliar and to compare and contrast at a metaphorical level. It is through metaphor that individuals are able to connect

disparate clusters of information to form new illuminating concepts and meanings. Analogy and metaphor are creative processes that deepen understanding, analytical abilities, and the skills of "seeing" new patterns and relationships.

It is therefore, also necessary to explore theories and models of creativity, and the classic stages of creativity. Siske (1989: 1-15) analyzed definitions of creativity, theories and models of creativity, and the classic stages of creativity. She felt that creativity is best defined in terms of an interactive process, which in adults, often results in creative and useful products. Four sequential stages critical to the development of creativity are identified by this author:

- **Preparation** (Stage 1): getting ready for an investigation or gathering new knowledge
- **Incubation** (Stage 2): when the brain sorts things out unconsciously
- **Illumination, inspiration, or insight** (Stage 3): the "light bulb moment"
- **Verification** (Stage 4): a disciplined period of negotiating the image into a logical verbal mode.

According to Siske, creativity is a mix of many talents, attitudes, and abilities. Therefore, no single method is sufficient to enhance creative behaviour in the classroom and practice situation. Treffinger, Isaksen & Firestien (Parnes 1972: 93) suggest that educators who wish to develop learners' creativity should focus more on challenging activities that stimulate thinking on the analysis, synthesis and evaluation level of Bloom's (1974) cognitive domain.

The affective domain in creative thinking, according to Siske (1989) involves three levels:

- **Receiving** (Level 1): Receiving is the lowest level of the affective domain. It involves becoming aware of stimuli and a willingness to receive and give selected awareness. The concept of increasing emotional awareness to facilitate creative learning has been addressed by Parnes (1972), Steyn (1991) and Torrance (1979).
- **Responding** (Level 2): Responding refers to the active participation of the learner in the situation. Responding may be voluntary or involuntary depending on the

particular values a learner holds.

- **Valuing (Level 3):** Valuing involves the recognition of the importance of a situation, problem, behaviour or object, and the ability to assess it. As learners come to accept the value of something they display a preference for it (shows a willingness to commitment).

Educators however, should avoid only stressing cognitive techniques. Currently there is wide- spread acceptance of the important role of affect in creative thinking. Emotional factors must be understood and utilized (Klein, 1973: 122). Psychologists regard affect as an essential part of a critical, reflective thinker and creative person. Development of the affective domain depends on the simultaneous acquisition of knowledge (cognitive domain). According to Barell (1995) and Paul (1990[b]), elements of critical reflection are cognitive and affective in nature as metacognition focuses upon all the mental processes used within a specific situation.

Although the affective aspect of critical, reflective awareness and control is not always mentioned, knowledge, awareness and control of feelings is required when confronting a problematic situation. The learner or practitioner should acknowledge feelings, put them in perspective (a impediment of critical thought) in order to take control of the situation. This would raise individuals' consciousness and therefore improve their control in approaching problems, issues, tasks and situations.

Barell (1995: 1995-221) identifies and describes six processes used for productive and creative thinking:

- **Problem finding.** Redefining, relocating the problem. The creative person has the ability to look at a problem from one frame of reference or schema, and then consciously shift to another frame of reference. This results in a completely new perspective. The process continues until the person has viewed the problem from many different perspectives. The flexibility of thinking results from reframing the problem, looking at it from a different vantage point.
- **Playing with variables.** The creative process involves recognizing the elements by

what-if questions.

- **Visualization.** The creative process involves representing the situation in pictures (for example diagrams), internally or on paper and modifying it as more information is obtained.
- **Personal projection.** Through personal projection the creative person invests *the self* personally in the situation.
- **Metaphoric thinking.** The creative process involves analyzing and creating metaphors, analogies, and models. Seeing "as if." Critically examining metaphors and analogies may uncover problematic situations.
- **Story creation.** Creative process involves placing facts, ideas, and situations within a story context. According to Smith (1993), quoted in Barell (1995: 212), the human mind seems to operate as story-creator. Humans fashion, design, and create narratives with information. In story-telling learners are inventing, but they are also figuring out how people, actions, motivations, objects, and effects are interrelated.

The *Effective Thinking Skills Model*, constructed by Hester (1994), is different from the models and viewpoints discussed, in that it is built from a conceptual base that defines "thinking" as "problem-solving." According to this theorist all thinking is an effort to arrive at some goal; hence thinking is problem-solving (Hester, 1994: 10-12). Hester (1994: 149-153) identifies, and describes three fundamental steps in the problem-solving process:

- **Analysis of problems (Step 1).** This step involves:
 1. Recognizing that a problem exists. It requires breaking away from routine thinking and willingness to tackle the issue. According to Hester (1994: 149), this is the beginning of critical thinking.
 2. Identifying the problem (*What kind of problem is it?*).

Is it a problem of:

- identification? The learner needs to characterize the problem more explicitly. That is, distinguish it from other ideas, concepts, situations, events, or things.
- causation? The learner needs to discover a pattern in events so that it can be traced back to its cause or forward to its conceived logical implication. This is necessary, as the learner's ability to control the environment is dependent on perception of such patterns and the ability to link a succession of events.
- means? The learner needs to identify the necessary means to reach the conceived and desirable state of affairs. The concern is how to get from where one is to some preconceived point in the future.
- ends?/outcome? Uncertainty about the outcome may arise because the individual may feel that his or her experience of attaining a goal is not what it is expected to be.

3. Stating the problem clearly. The problem solver must present a clear statement of the problem under investigation, to assist communication during the problem-solving process.

4. Stating the problem usefully. The problem must be formulated in accordance with the problem solver's abilities and the resources available for a solution. The problem-statement must indicate the direction in which the solution might be found.

- **The formation of hypotheses** (Step 2). The formation of hypotheses, and other steps involved in critical thinking, are not chronological or logical. According to Hester (1994: 151) the following processes are involved in the formation of hypotheses:

1. Collecting information and choosing relevant information. This requires reasoning and

careful attention to the nuances of the problem. Research is necessary for effective problem-solving.

2. Making information manageable. The information upon which the problem solver bases solutions must be related to the problem logically, causally, or categorically. Being able to quote facts and proposed authorities do not result in critical thinking.
 3. Writing the hypothesis. In this model the hypothesis functions as a proto-conclusion. That is a possible conclusion which, if it survives examination and testing, becomes the conclusion to the problem.
- **Examining and testing hypotheses** (Step 3). Hester (1994: 153-154) identifies five steps:
 1. Recognizing assumptions. Clarity demands that the problem solver identifies hidden assumptions as assumptions brought into the open, can be controlled.
 2. Developing implications. A hypothesis should be plausible; it should not be a conjectural explanation of the phenomenon in question. It must be possible to prove or disprove a hypothesis. It should not involve contradiction and should be as simple as possible. The problem solver should consider the logical implications of a hypothesis before it is accepted as final.
 3. Examining implications. Implications of a hypothesis must be examined deductively and inductively. An unwanted conclusion should tell the problem solver that the proposed hypothesis does not suit the purposes. Should conceptual errors be found it may require the problem solver to completely reformulate the hypothesis or to re-examine the desired outcomes.
 4. Interpreting observations. Hypotheses can be tested by making observations and conducting experiments. During observation, the problem solver must continually reason to what is seen, because past experiences and common sense beliefs may influence the situation. Assumptions, hypotheses, observations, and interpretation must be checked and rechecked for accuracy and logical consistency.

5. Drawing conclusions. The conclusions of the problem solver's research is the hypothesis that survives examination and testing. At the time it is the best but not the final answer to the problem which instigated the inquiry. New information may appear.

Hester (1994) views problem-solving as a process or combination of critical thinking skills arranged to solve a problem or reach a conclusion. Hester (1994: 153), thinks learners need to be taught critical thinking strategies such as: analysis, comparative approach, descriptive method, causal-explanatory method and evaluative standpoint. These strategies would enable the individual to maximize their problem-solving efforts. Hester's model is in agreement with Barell (1995: 175) who suggested an overall problem-solving heuristic. A heuristic is a way of doing things but, unlike an algorithm, there is no guarantee that, if the problem solver follows some or all of these steps, he or she will come up with a good answer.

According to Barell (1995: 20) thinking during problem-solving involves being tentative - like setting up multiple hypotheses and testing them. Thinking involves "self-talk," a process of proceeding through the underbrush of the problem to find a solution or resolution. In thinking the learner however, takes personal control of the situation. By asking learners to think about their own thinking, the educator raises their consciousness and therefore improves their control over their approach to problems or tasks. The following figure (Figure 4.2., following page) depicts, an overall problem-solving heuristic which can be utilized for teaching critical thinking to learners.

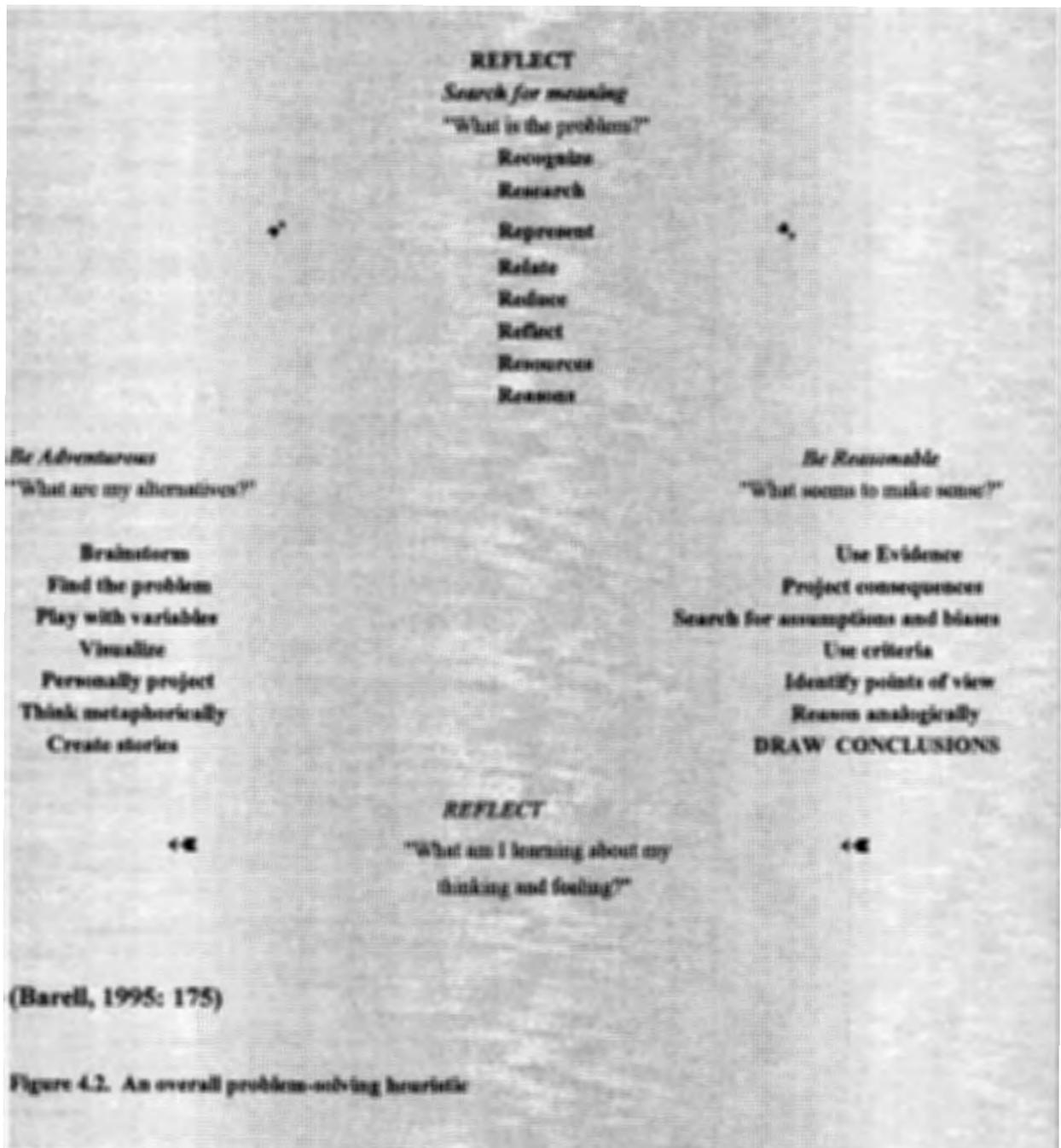


Figure 4.2. represents some of the questions the problem solver should ask before generating further possibilities. According to Barell (1995: 179-189) the eight questions - "Eight-R Strategy" - can help the problem solver delve into the situation in detail before setting an objective and generating alternate solutions. The strategy can help the individual make reasonable decisions and be reflective. The following is a short description of the

strategy:

- **Recognize.** *What feelings do I have about the situation?* Recognizing -not hiding or repressing - feelings is a principle of positive problem-solving.
- **Research.** *What information do I need to solve this?* The learner should be taught not to act impulsively in complex situations, but to gather information before defining the problem.
- **Represent.** *Can I draw a picture or make a diagram?* Representing the problem or situation internally through visual thinking and/or by drawing a picture, chart or diagram, can help the problem solver to picture what they know. It is a positive way to foster deeper understanding of concepts and transfer of previous learning.
- **Relate.** *How is this related to other problems? What ideas or concepts do I recall from other problems? What patterns are evident?* Learners are often "episodic" in their thinking, in that they do not spontaneously relate one situation to another already known to them or studied. It is when learners recall one problem type to another that they might recall vital concepts, principles, or ideas they encountered in an earlier situation.
- **Reduce.** *Can I reduce this problem to several parts? Can I identify reasons why this problem exists?* A powerful way to simplify the search for a solution is to break the problem into parts.
- **Reflect.** *What assumptions/biases/definitions should I question? Have I identified all significant information?* Most problems require that the learner questions underlying assumptions about the problem's nature.
- **Resources.** *Are there persons and other resources that can help?* Identifying different resources enables learners to view the problem or situation from various perspectives or

theoretical frameworks.

- **Reasons.** *Are there causes to identify?* By doing this the learner learns to "play" with variables, and develops his or her creative thinking abilities.

The literature reviewed suggests a strong relationship between experiential learning, critical-reflective practice and creativity. A short, summative discussion of experiential learning theory follows.

4.7.2. Experiential learning theory: Bases for all "deep" learning approaches

According to Burnard (1989[a] & [b]) experiential learning is learning that results from experience. It encompasses personal experience, reflection on the experience, and the transformation of knowledge and meaning as a result of the experience and action. The "living through" of an experience involves the learner's total personality (Steinaker & Bell, 1979: 2). An experience cannot be understood by fragmentation or isolation: it has identity, continuity, and a broad base. It involves all human senses and activities.

Experiential knowledge is knowledge gained through direct encounter with a subject, person or thing. It is the subjective and affective nature of that encounter that contributes to this sort of knowledge. Experiential knowledge is knowledge through relationship. Experiential knowledge is necessarily personal and idiosyncratic. When this type of knowledge is however, classified and verbalized, it becomes propositional knowledge. In this way the learner modifies his views or practices in the light of personal and others' experiences.

Experiential knowledge cannot be taught. When it comes to personal experience, the learner is the expert who needs to restructure his or her experience into propositional knowledge. The learner needs to build up a personal bank of facts, theories and ideas about a subject, person or thing.

Experiential learning is characterized by five basic categories and several subcategories. The basic categories are: [1] Exposure; [2] Participation; [3] Identification; [4]

Internalization; and [5] Dissemination (Steinaker & Bell, 1979: 3). The role of reflection and metacognitive approaches in experiential learning is emphasized by Ellison (1993: 15) and Caine & Caine (1990: 67).

The experiential learning approach has its roots in Gestalt psychology, Phenomenology, Humanistic psychology and Pragmatism. Experiential learning from the phenomenological perspective of Gestalt psychology, involves "direct encounter with the phenomenon being studied rather than merely thinking about the encounter or only considering the possibility of doing something with it." (Lewin, quoted in Kolb, 1984: 5) According to Dewey (Kolb, 1984: 5) influenced by his philosophical perspective of pragmatism remarked: "I take it that the fundamental unity of the newer philosophy is found in the idea that there is an intimate and necessary relation between the processes of actual experience and education." Piaget (Kolb, 1984: 12) believes intelligence is shaped by experience where action is the key. Abstract reasoning and the power to manipulate symbols arise, according to him from actions in exploring and coping with the immediate concrete environment.

Experiential learning however, does not occur through accidental, casual encounters with the experience, situation or issue at stake. It requires critical, purposeful and reflective thinking about the experience. Therefore, experiential learning methods emphasize the uniqueness of human experience, the influence of the specific context, and the affective aspects of the individual's experience. It reflects the humanistic philosophy of student-centeredness, personal learning and development of *the self*. Experiential learning is holistic in nature as it combines experience, perception, cognition and behaviour. One vital element of human activity which experiential taxonomy encompasses within its construct and which is not considered in other taxonomies is the *dissemination* of experience. Steinaker & Bell (1979: 14-15), believe dissemination is what should be done with an experience, as it is the living out of an internalized activity.

Experiential learning involves five stages (Steinaker & Bell, 1979: 10-11):

- **Exposure:** Exposure comprises consciousness of an experience, situation or issue.

It requires involvement of one or more mental processes. According to Caine & Caine (1990: 68-69) the brain's spatial memory does not need rehearsal but allows instant recall of experiences. The system is motivated by novelty and it drives (motivates) the search for meaning. Spatial memory is best evoked through experiential learning and promotes the transfer of learning and the development of understanding.

Exposure level learning activities could include: presenting examples and/or experiments to illustrate a new principle, concept, or skill; locating resources in one area to arouse interest in another; initial viewing of scenes, objects, and roles; unstructured interviewing; asking fundamental and often naive questions; and, lastly eliciting reaction through a novel, difficult, or unusual occurrence.

- **Participation:** Participation involves the decision to physically become a part of the experience. Two levels of interaction with experience are possible: (1) covert interaction (a private, personal "walk through" rehearsal) by imagination or analogy, or (2) overtly through group interaction. By reflecting on past experience, the learner now actively modifies the current experience.

Examples of participation level learning activities could be: discussing the data presented; structured data-gathering activities; role play; group discussions; opportunities to imitate an observed event; hands-on activities; visualizing and then verbalizing or brainstorming the consequences of ideas; modeling behaviour; and generating data through recall and/or book searches.

- **Identification:** Identification suggests the union of the learner with what is to be learned. This encompasses cognitive and emotional involvement. The learner emotionally identifies with the experience and then takes a rational decision to

identify with it. Once this process of identification is accomplished, the learner expresses the need to share the experience with others.

Examples of identification level learning activities could include: the use of learning and/or reinforcement centers or packages to implement prescriptions or to practice skills or content retention; discussions during which learners exchange points of view and back up statements with accurate data; field trips where learners can directly study the content of instruction in its functional setting; and data selection, retrieval and organizing activities.

- **Internalization:** The experience continues to influence the learner's lifestyle, and results in changing attitudes and activities. Effective learning is present when these changes become permanent (intrinsic).

Examples of internalization learning activities could include: discussions or questions which bring learners to think at higher levels; work experiences which provide learners with opportunities to use data acquired in one or more practical situations; creative situations which provide learners with opportunities to develop their own styles; seminar activities in which a group of learners bring together research or advanced study findings to resolve problems of mutual interest; activities designed to stimulate real life situations rather than interpret roles; situations requiring originality or synthesizing; and role play activities which provide opportunity for displaying and expressing new behaviour.

- **Dissemination:** The influence of the experience moves beyond internalization, so that the learner starts influencing and motivating others to have an equivalent experience. The learner shows a total cognitive and emotional involvement and sees the experience as imperative for others.

Examples of dissemination level learning activities could be: simulations during which learners present their cases to a jury of listeners; debates on philosophies; seminars

structured to bring learners to defend their views; peer teaching and counseling; and writing with the purpose to influence (letters to editors, editorials).

47.3. Experiential taxonomy, critical thinking, creativity and problem-solving

Following is a brief summary of the taxonomic sequences for critical thinking, creativity, and problem-solving (see text box 4.3.). Critical thinking within the experiential taxonomy is a logical process of interaction and of making choices with given sets of variables.

Text box 4.3. Experiential taxonomy, creativity, and problem-solving

Critical thinking

Exposure: recognizing variables
 Participation: collecting data and defining variables
 Identification: organizing, structuring
 Internalization: generalizing
 Dissemination: sharing, influencing

Creativity

Exposure: motive to produce
 Participation: visualization of production
 Identification: experimenting with data
 Internalization: feels a sense of accomplishment
 Dissemination: admiring, showing, sharing

Problem-solving

Exposure: problem identification
 Participation: exploring the data base
 Identification: trying optional solutions
 Internalization: selecting a particular solution
 Dissemination: implementing and influencing

(Steinaker & Bell, 1979: 91)

Critical thinking manifest itself taxonomically as a process of interaction and of generating choices.

Creativity within the experimental taxonomy is seen as a "personal interaction with an idea, with material, or with a problem."

(Steinaker & Bell, 1979: 91) It is a process that requires sequence and activities resulting in a product, an acquired skill, or a modified behaviour (unique to the learner). In the process of creativity the learner begins to enhance the self-image and feels a sense of accomplishment.

Creativity is a "gestalt experience." Therefore, the taxonomy provides a framework for deepening levels of creativity in a logical and recognizable way.

4.7.4. The experiential learning cycle

By reflecting on past experience an activity through which learning may take place is set up. In learning from experience, learners are encouraged to reflect on past personal experience as a means of discovering solutions to present problems. This reflective quality is described by Freire (1972) who writes about praxis. Praxis involves the two concepts of action and reflection. If we reflect on what we do, we may modify our actions in the future. Action without reflection does not lead to informed, intentional behaviour: action by reflection can ensure that anything learned from the action can be carried to the next situation.

The following cycle, figure 4.3., shows this process:

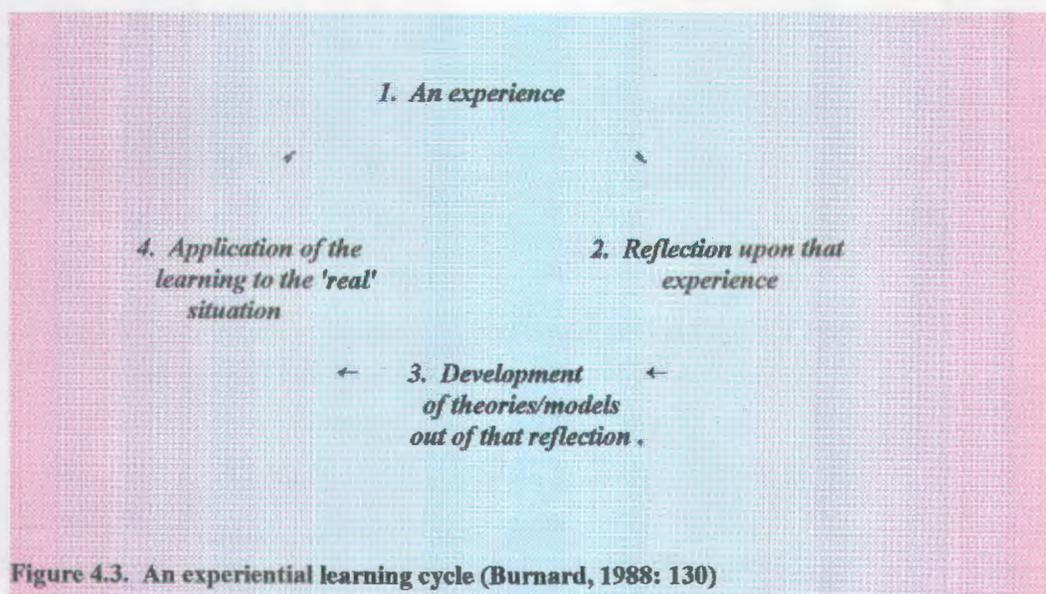


Figure 4.3. An experiential learning cycle (Burnard, 1988: 130)

This cycle has been further developed by Burnard (1988: 131) to show how learners develop practical experience in working situations. When they come into the theoretical block, they reflect on that experience; and then, in stage four of the cycle, they decide upon their learning needs based on the reflection of stage three. At stage five, learning is evaluated and preparation made to apply the new learning

in new situations. Learners then return to the practice situation to use the new learning and the cycle begins again. Figure 4.4. (following page) shows the altered cycle.

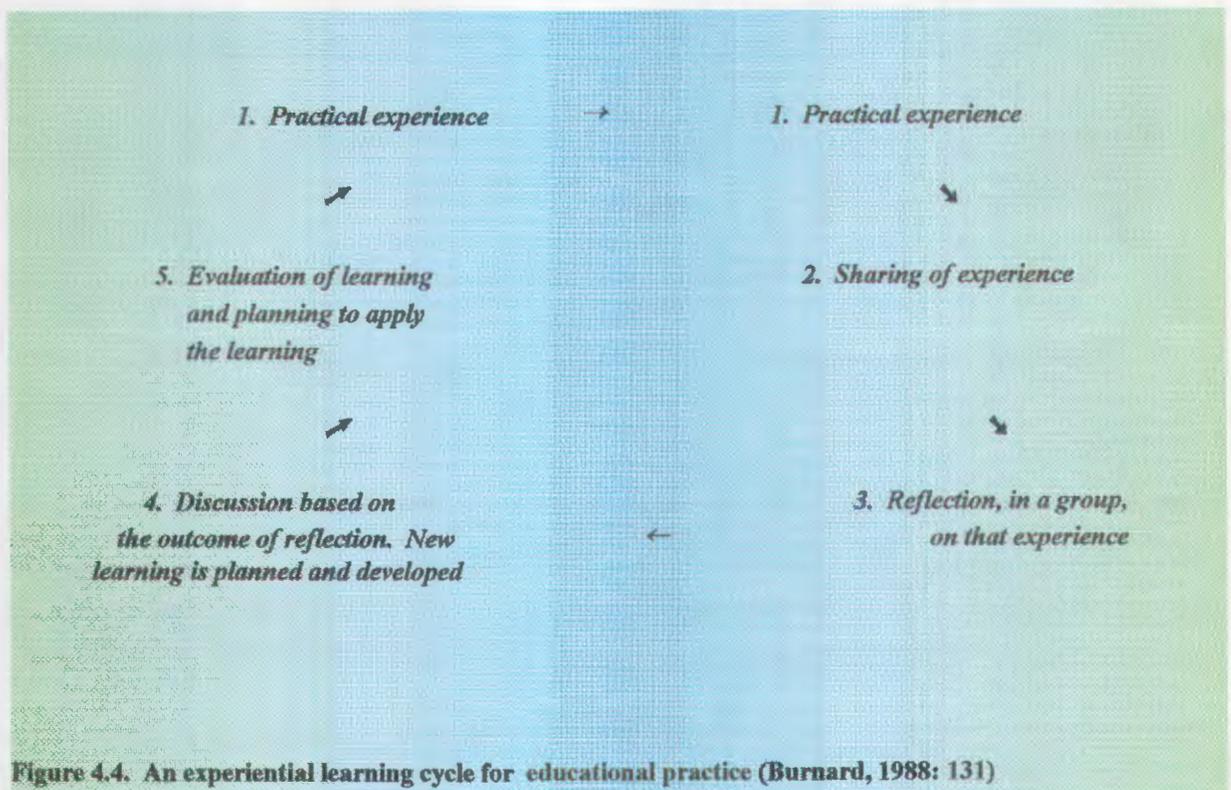


Figure 4.4. An experiential learning cycle for educational practice (Burnard, 1988: 131)

The cycles combine the concepts of both propositional and experiential knowledge, with the possible addition of practical knowledge when required. The first stage (experience) and the second stage (reflection) are both in the domain of experiential knowledge. When learners get together at stage three to develop models and theories and plan their learning, they develop experiential knowledge. This stage can also involve "publishing", when learners take turns to explain the thoughts and feelings behind the models and theories they have chosen. In the final stage, both experiential and propositional knowledge are used pragmatically to plan future action.

During experiential learning, learners are encouraged to explore, question, doubt and criticize their own perceptions and those of others and to draw out their own meanings

from these experiences. If the concept of experiential knowledge is accepted, then 'multiple realities' are seen to be possible. Learners, therefore, learn to value their own feelings, ideas and perceptions (a characteristic of a critical-reflective practitioner). Kolb (1984) cited in Smith & Russell (1991: 284), proposes that learners need four main abilities:

- **Concrete experience** - gained through becoming involved openly and without bias in new experiences.
- **Reflective observation** - gained through and observing and reflecting on experiences from many perspectives.
- **Abstract conceptualization** - gained through creating concepts that integrate observations into logically sound theories.
- **Active experimentation** - gained by using the theories to make decisions and solve problems.

A combination of experiential, propositional and practical knowledge offers, according to Burnard (1988: 132), a "particularly comprehensive and useful basis for the development of sound educational practice" resulting in critical, reflective and creative approaches to the working situation. Within health care professional practice, there is room for generalizable 'facts' (drawn from the domains of propositional and practical knowledge) and for the reporting of unique human perceptions and experience (drawn from the domain of experiential knowledge).

Stockhausen (1991), based on experiential learning models, developed what she calls *The Clinical Learning Spiral*. The model was developed to emphasise the importance of reflective practice to the professional growth of a beginning nurse practitioner.

4.7.5. The Clinical Learning Spiral

This model is represented in four phases: preparative, constructive, reflective and reconstructive (Stockhausen, 1994: 367):

- **The preparative phase:** This phase begins as the individual considers the demands of the experience ahead, the resources required, the environment (sight, sounds, smells), the people (roles, relations, reactions and conflicts), the climate (social, political) and their role as learners in the clinical setting (reflector, participant, observer, facilitator).
- **The constructive phase:** This phase allows learners to undertake actual nursing skill development. It incorporates the experience or actual practice of nursing which takes place during the practicum. The clinical experience is viewed from a perspective of 'completeness' (beginning, middle and end). Observation of the learners at this stage is seen as crucial as reflections between the observer and the observed can heighten and reveal different perspectives of the same experience. The constructive phase is the actual experience that the learner and educator share in the clinical environment. It takes into consideration the dimensions of practice such as care planning, psychomotor skills, attitude and interpersonal communication, as well as development, implementation and evaluation of care.
- **The Reflective Phase:** Time is allocated for purposeful inquiry so that learners can deliberate on aspects of their development as a nurse. The reflective phase is facilitated by a debriefing process. This allows learners the opportunity to 'return to the experiences' of the constructive phase and highlight significant exemplars and events from the day. The reflective phase can be initiated at any time on a one to one basis between a student and educator, peer or registered nurse.

During a group reflective phase, learners have the opportunity to share personal reflections from their previous one-to-one reflection or share extracts from their

journals. As learners share each others' challenges, achievements and experiences, learning takes place. This phase also sets the scene to examine complexities, differences and subtleties not found in text books but learned, or made explicit, as a direct result of living through the experience.

- **The Reconstructive Phase:** The final phase provides the learner and the educator nursing strategies or interventions, changes in behaviour or of personal and professional development. There is a commitment to action as a result of the constructive and reflective phase which is similar to the Action Research Cycle (Carr & Kemmis, 1986).

The Reconstructive Phase ideally develops into a set of negotiated, mutual goals set by the group as a consequence of reflection on experiences, journal entries and discussions during debriefings. Hedin (1989: 82), notes that 'the development of meaning to the learner and the avoidance of imposing an other meaning on the learner' is at the heart of clinical practice. It is the participants in the clinical experience, who decide if reflection develops into action. A commitment to action as a consequence of reflection is however, imperative. Reflection prior and subsequent to action ensures that mutual goals are carried forward to the next situation or spiral.

A discussion of the connection between critical, reflective thinking and moral conduct and the adaptation of the principles of critical, reflective thinking to the domain of ethical judgement and reasoning follows. Specific strategies, tools or methods are included, which may be utilized to develop these skills.

4.8. The connection between critical-reflective thinking and moral conduct

With the continued professionalization of nurse practitioners, both in terms of education and responsibility, questions about key moral issues and professional conduct have emerged at the intra- and inter-professional levels. While all professionals share in the care of clients, the definition of nursing care, according to Cook (Robinson & Vaughan,

1992: 110), has become wider, in terms of relationships as well as in terms of acting as advocate on the client's behalf when the client is unable or even unwilling to speak out. To be able to intervene on the patient's behalf the nurse practitioner should have the necessary understanding of what is happening.

There is an increasing interest, in what is known, as *virtue ethics* which focus on the question of which virtues a good nurse practitioner should hold. Virtues do not merely include professional skills or nursing knowledge but, also ethical qualities, critical thinking, and reflective practice which are indispensable in nursing practice. Although many people believe nurse practitioners, instinctively know what they ought to do (know from the *principle*), morality based on principles and deontology may create more, rather than solve any problems.

Even moral theory which rests on the *consequences* of actions and decisions complicates nursing practice. If morality is nothing more than the results of actions and decisions, the activities of individual nurse practitioners will be wide open to error as circumstances and consequences change. Such stress on consequences leads, according to Cook (Robinson & Vaughan, 1992: 115), to a morality in which the end justifies the means.

What is right and what is wrong varies from time to time, place to place, and person to person within a *relativistic* perspective of morality. At times it seems that society lives by this creed, but it also has its problems. It offers a comfortable moral position but, does not help nurse practitioners to resolve moral conflicts. Even *existentialism* which focuses on the individual, *prescriptivism* which emphasises choice, and *emotivism* which concentrates on role and feeling in moral decision making, do not provide safe guidelines for effective nursing decisions and practice (Robinson & Vaughan, 1992: 115-122).

Morality within nursing practice is extremely complex. A variety of ethical stances complicate matters for the nurse practitioner who tries to understand moral decision making. There are crucial differences between personal morality and professional ethics

and between social and legal standards of what is right and wrong. Nurse practitioners can only come to terms with such differences and decide about priorities through the use of personal critical-reflective ability. It is by examining morality in its complexity and in terms of each variable involved that nurse practitioners are best able to make moral choices and to cope with clients, colleagues and institutions which make different choices.

Nurse practitioners need to be creative, critical, reflective and sure enough of themselves to adjust their understanding of morality and theory. They have to use knowledge in a way unique to a particular setting. Knowledge of subject areas is not enough when facing the unpredictable variety of everyday life. A process of moving from "certainty to doubt, and then perhaps to a more limited certainty, is an essential part of becoming an effective member of a practical profession" such as nursing (Teasdale, In Robinson & Vaughan, 1992: 127). Nurse practitioner must use their personal experience critically and reflectively to test the extent to which theory helps in understanding the problems of those being nursed, and in planing effective care.

Schön (1983) describes a person who pursues the process of questioning and testing theories as a reflective practitioner. This, however does not mean that the reflective practitioner operates on a day to day basis, with no consistency. While remaining open to experience in the explanation of human behaviour the practitioner "needs a fixed belief in her own role, and the therapeutic benefits and limitations" of the working environment (Teasdale, In Robinson & Vaughan, 1992: 141). It demands forging a link between general theoretical knowledge and the uniqueness of the specific situation.

Moral principles only mean something when manifested in behaviour (action). The world and nursing practice do not present themselves to individuals or groups in morally transparent terms. The moral thing to be done is often a matter of disagreement even among nurse practitioners. One and the same act is often morally praised by some and condemned by others. It is therefore, necessary for nurse practitioners to learn the art of self-critique and of moral self-examination through critical thinking and reflection, in

order to become attuned to pervasive everyday pitfalls of moral judgement; moral intolerance, self-deception and uncritical conformity. These human shortcomings, according to Paul (1990(b): 173) cause "pseudo-morality," the systematic misuse of moral terms and principles in the "guise of moral action and righteousness."

Without scrupulous care the role models in nursing practice merely pass on to learners their own moral blindness, moral distortions and close-mindedness. Many educators who advocate ethics and morality, merely want learners to adopt their ethical beliefs and ethical perspectives. They fail to see that they are blinded by their own assumptions which is considered self-evident truths. As long as they refuse to recognize the conditioned associations operating at the base of their thinking, they cannot develop the traits of mind and character necessary to significantly transcend prejudice. Their skills of logic will be used to maintain rather than critique their practice and prejudice. Their thinking will remain primarily associational and impressionistic, influenced by desire, egocentricity, and sociocentricity - typically self-serving, resistant to criticism and characterized by a lack of intellectual and moral character (Paul, 1990 (b): 159-160).

Prejudice protects personal viewpoints, interests, actions, and institutions from unsettling criticism. Individuals and groups often find it psychologically painful to think that they might be wrong. Prejudice gives peace of mind and protects people and institutions from the possibility of having to admit to fundamental error. It allows pursuit of vested interests, enabling those involved to continue with a clear conscience. No one political or social system has all the truths, neither does it contain all falsehoods - but a dichotomous world view, acquired and preserved through prejudice, prevents recognition of whatever merit there might be in opposing systems. Prejudice is fundamentally uncritical, or narrow-mindedly critical, governed by egocentricity and sociocentricity, it reflects double standards and inconsistencies.

Individuals and groups embody their prejudices in cultural practices, easily say one thing and do another, compartmentalize their contradictions, believe what their experience denies, ignore evidence, misuse language, value in themselves what they criticize in others, ignore and repeat their mistakes, project their faults onto others and undermine the conditions of their own survival. This "weak form of critical thinking is the

predominant mode of critical thinking developed in schools and social life." (Paul, 1990(b): 168)

4.9. Adapting the principles of critical, reflective thinking to the domain of ethical judgement and reasoning

As human beings, nurse practitioners have a right to develop their own moral perspective - whether conservative, liberal, theistic, or non-theistic - but they should be able to analyze the perspective they choose, compare it accurately with other perspectives, scrutinize the facts they conceptualize and judge critically and reflectively. Role models in nursing (such as nurse educators) need to adapt the principles of critical, reflective thinking to the domain of ethical judgement and reasoning in order to help nurse practitioners acquire the skills as reflected in table 4.1. (following page).

Table 4.1. Moral reasoning skills.**MORAL REASONING SKILLS****A. Moral Affective Strategies**

- S-1 exercising independent moral thought and judgement
- S-2 developing insight into moral egocentrism and sociocentrism
- S-3 exercising moral reciprocity
- S-4 exploring thought underlying moral reactions
- S-5 suspending moral judgement

B. Cognitive Strategies: Moral Macro-Abilities

- S-6 avoiding oversimplification of moral issues
- S-7 developing one's moral issues and claims
- S-8 clarifying moral issues and claims
- S-9 clarifying moral ideas
- S-10 developing criteria for moral evaluation
- S-11 evaluating moral authorities
- S-12 raising and pursuing fundamental moral questions
- S-13 evaluating moral arguments
- S-14 generating and assessing solutions to moral problems
- S-15 identifying and verifying moral points of view
- S-16 engaging in Socratic discussion on moral issues
- S-17 practicing dialogical thinking on moral issues
- S-18 practicing dialectical thinking on moral issues

C. Cognitive Strategies: Moral Micro-Skills

- S-19 distinguishing facts from moral principles, values, and ideals
- S-20 using critical vocabulary in discussing moral issues
- S-21 distinguishing moral principles from moral ideas
- S-22 examining moral assumptions
- S-23 distinguishing morally relevant from morally irrelevant facts
- S-24 making plausible moral inferences
- S-25 supplying evidence for a moral conclusion
- S-26 recognizing moral contradictions
- S-27 exploring moral implication and consequences
- S-28 refining moral generalizations

(Paul, 1990(b): 188)

Role models in nursing practice -such as experienced nurse practitioners and educators also need insight into the intimate interconnections of intellectual and moral virtues. They need to see that being moral is something more than abstract good-heartedness, that our basic way of knowing is inseparable from our basic way of being, and that our daily way of thinking and judging daily lives and work situations reflect who we are, morally and intellectually. To cultivate the kind of moral independence implied in being an educated moral person, role models must foster moral humility, moral courage, moral integrity, moral perseverance, moral empathy, and moral fairmindedness in others. Paul (1990(b):189) explains the concepts as set out in table 4.2.(following page).

Table 4.2: ESSENTIAL MORAL VIRTUES

Moral Humility: Awareness of the limits of one's moral knowledge, including sensitivity to circumstances in which one's native egocentrism is likely to function self-deceptively; sensitivity to bias and prejudice in, and limitations of, one's viewpoint. Moral Humility is based on the recognition that one should not claim to know more than one actually knows. It does not imply spinelessness or submissiveness. It implies the lack of moral pretentiousness, boastfulness or conceit combined with insight into the strengths and weaknesses of the logical functions of one's beliefs.

Moral Courage: The willingness to face and assess moral ideas, beliefs or viewpoints fairly which we have not seriously listened to, regardless of strong negative reactions to them. The courage for fair assessment arises from the recognition that ideas considered to be dangerous or absurd are sometimes rationally justified (in whole or in part), and that moral conclusions or beliefs exposed by those around us or inculcated in us, are sometimes false or misleading.

Moral Empathy: Being conscious of the need to imaginatively put oneself in the place of others in order to genuinely understand them. We must recognize our egocentric tendency to identify truth with our immediate perceptions of longstanding beliefs. This trait correlates with the ability to accurately reconstruct the moral viewpoints and reasoning of others and to reason from other moral premises, assumptions, and ideas than our own. This trait also requires that we recall occasions when we were morally wrong, despite an intense conviction that we were right, and consider that we might be similarly deceived in a case at hand.

Moral Integrity: Recognition of the need to be true to one's own moral thinking, to be consistent in the moral standard one applies, to hold oneself to the same rigorous standards of evidence and proof to which one hold one's antagonists, to practice what one morally advocates for others and to honestly admit discrepancies and moral inconsistencies in one's own thought and action.

Moral Perseverance: Willingness and consciousness of the need to pursue moral insights and truths despite difficulties, obstacles, and frustrations; firm adherence to moral principles despite irrational opposition of others; a sense of the need to struggle with confusion and unsettled questions over an extended period of time in order to achieve deeper moral understanding or insight.

Moral Fairmindedness: Willingness and consciousness of the need to entertain all moral viewpoints sympathetically and to assess them with the same intellectual standards without reference to one's own feelings or vested interests, or the feelings or vested interests of one's friends, community, or nation; imply adherence to moral standards without reference to one's own advantage or the advantage of one's group.

The moral traits reflected in table 4.2. are compatible with all moral perspectives (whether conservative, liberal, theistic, non-theistic, etc.). Individuals who learn to think critically and reflectively about moral issues and their practice situation, can develop their moral thinking within any tradition they choose. Critical, reflective thinking does not compel or coerce individuals to come to substantive moral points of view, neither does it imply relativism. It emphasizes the need for the same intellectual standards in moral reasoning and judgement fundamental to any domain of knowledge.

A major obstacle to development of these intellectual and moral virtues is according to Paul (1990(b): 194-202), the presence of defense mechanisms in the egocentric human mind. Each mechanism represents a way to distort, misconceive, or deny reality. Individuals according to this theorist need to become explicitly aware of the logic of experience - their own experiences and experiences of others. All experience, according to Paul, have three elements, each of which require to be analysed and scrutinised: 1] the actual situation to be experienced; 2] a subject (person) with a point of view, a framework of beliefs, attitudes, desires, and values; and 3] the interpretation or conceptualization of the situation. To analyse any the person/learner/ practitioner involved must be sensitive to three distinctive questions:

- 1) *What are the raw facts, what is the most neutral description of the situation? If one describes the experience in a particular way and others disagree with the description, on what will they agree?*
- 2) *What interest, attitudes, desires, or concerns do I bring to the situation? Am I always aware of the attitudes, desires or concerns? Why or why not?*
- 3) *How am I conceptualizing or interpreting the situation in the light of my personal point of view? How else can it be interpreted?*

According to Paul (1990(b): 202) the interrelationships of the following parts of the main questions above need to be explored:

How did my point of view, values and desires affect what I noticed about the situation? How did they prevent me from noticing other things? How did my point of view, desires and attitudes affect my interpretation? How should I interpret the situation?

According to Paul (1990(b): 208) most individuals think of the world in terms of monological definitions of reality. Learners must experience dialogical thinking as such thinking is essential for a rational approach to the most pervasive and to every day human problems. Since the instinctive drive of most human are initially egocentric and then later ethnocentric they must learn to bring their implicit ideas and reasoning into open dialogical conflict with opposing ones. Only critical thinkers or believers can sympathetically consider opposing points of view because their own critical disposition enables them to recognize weaknesses in their personal points of view.

Experienced role models in nursing must guide or lead the developing nurse practitioner into reflective, critical philosophical discussions, and must provide them with challenging ethical questions and dilemmas to think about. The role model must guide or lead the others to a point of being comfortable with and rational about dialogical issues. The crucial point is that - experienced role models in nursing practice must become aware of the variety of strategies available for cultivating affective traits of mind essential to higher order thinking.

To educate the educator needs to attend to *what* learners think and value, otherwise the most powerful thoughts and values that they possess - affecting all others - will be left untouched. A professional education in the area of values must expect from learners to embark on a process of value self-reflection and clarification, to provide enlightened action in the professional setting (Glen, 1995: 175). The process of higher education should not be confined to the development of skills and understandings which are narrow in their scope and application.

4.10. Specific learning strategies congruent/associated with critical-reflective, and creative thinking processes

Various strategies can be derived from the discussions in this chapter (chapter 4).
Examples of such strategies include:

- having learners develop their own hypotheses and experiments and explain their own conclusions;
- routinely asking learners for their points of view on issues, concepts and ideas;
- having learners brainstorm their own ideas and argue among themselves about problems and solutions to it rather than simply having them discuss ideas found in texts.
- allocating a larger role to learners in gathering and assembling information, analyzing and synthesizing it and in formulation and evaluation of the conclusions or interpretations of others;
- routinely enabling learners to make use of the "Eight-R" strategy (see p.165-167) that will force them to reflect on different aspects of a situation or problem and relate important knowledge;
- exposing learners to dialogical reasoning. Learners learn best in dialogical situations, in circumstances in which they must continually express their views to others and continually try to fit the views of others into their own;
- the use of analogy and metaphor. Analogy and metaphor are seen as particularly helpful in clarifying certain abstract aspects of critical-reflective thinking. Teaching learners to think critically and reflectively involves teaching perspectives for analyzing and making sense of information rather than communicating facts and information. The figurative language of metaphor and the illustrative force of analogy can help to clarify perspectives by building bridges to what learners already know and have experienced;
- the use of silence to encourage critical reflection. Serious thinking demands periods of silence, reflection and incubation uninterrupted by words. Part of thinking

critically involves quiet meditation or deliberation before talking. Learners need time to mull over and digest new information, concepts, methodologies and experiences presented to them;

- modeling the process of critical, reflective thinking. Educators and facilitators ought to model critical reflection to help learners think critically and reflectively whether in or out of formally arranged activities. Modeling the process can however, not be reduced to a prescription. The personal qualities that make role models are as important as what the modelers do are: they must be confident, show insight about themselves, curious and persistent in their search for knowledge;
- reframing. Learning from experience, the facilitator or educator helps others to identify and reevaluate their frames of reference according to what they understand and experience. A learning journal which can be discussed in peer groups is a useful tool for reframing and helping people to become aware of their own practical reasoning and theory building. Journals enable individuals and groups to build a documentary trail of how the individual or group understanding of a problem has changed and to track the influences in the shift to understanding;
- frequently, question learners and direct questions to individual learners. Design questions which are process-oriented, seek explanations, or ask for evaluations. Emphasis should be placed on "why" or "how" and on relationships to previous information;
- use examples of and illustrations that challenge dualistic thinking and reinforce the notion that science and life do not have many absolutely correct answers;
- promoting discussions among learners by in-class group assignments and by encouraging out-of-class study groups. It promotes better discussions, discourages dependence on an authority figure, encourages alternate approaches to problem-solving

and evaluation of possible answers and alternatives. In this way a supportive environment for critical, reflective thinking is established (Kogut, 1996: 220);

- exemplification of critical, reflective thinking. Exemplification (modeling the thinking processes critical to the particular discipline) is critical to fostering critical, reflective thinking. Learners must be shown examples of alternate interpretations, and other skills that characterize critical, reflective thinking. Learners will only begin to see it as an important task if educators explicitly state the assumptions being made. One way to promote a healthy dose of scepticism is to ask learners to read articles on controversies such as abortion;
- encouraging learners and practitioners to view errors as "instructional friends," which lead to new knowledge. Accepting and learning from mistakes are important to fostering critical, reflective thinking (Case, 1995: 276);
- encouraging learners and practitioners to make "the question mark" ubiquitous in their practice. When tempted to think they have discovered the one right way to handle a situation, they should back off and consider other options;

The crucial point is - educators need to become aware of the variety of strategies available for cultivating the affective traits of mind essential to critical-reflective, and creative thinking. It is however, also necessary to look at more specific and important learning strategies or tools suggested by various authors. In selecting strategies or tools to be included the inquirer, within the context of this study, decided to only include those which are congruent with the naturalistic paradigm. Strategies which may result in learning phenomenological thinking or a phenomenological habit of mind, are therefore included.

It is the opinion of the inquirer that habit of mind can be encouraged by taking learners through the process of self-discovery (for example by use of value clarification) on to the process of seeking reasons for whatever is being examined and into the realm of lived

experiences through shared meaning. The learning programme for health care practitioners must allow for the activity of reflecting *with* the people with whom they enter a caring relationship. Discovering *meaning* must be a mutually enabling process that relies on dialogue and revelation of *the self* to another. The role of the educator as facilitator is to guide learners toward the interpretation of the shared meaning or to what Ricoeur (1976: 16), terms 'appropriation': to make 'one's own' what was previously foreign. Appropriation is to actualize the meaning of the experience and to come to identify with another's lived world. In the process the learner gains a new capacity for knowing him- or herself and in the Ricoeurian sense has discovered a new mode of being. To reflect *with* another is to uncover experiential reality and extract meaning for both partners (Kestabaum, 1982:15).

The different complementary ways of knowing which underpin the notions of reflecting *on* and reflecting *with* are outlined in table 4.3. Strategies complementing each other, because they are necessary to gain understanding of the human situation and world of health care, are thus outlined.

Table 4.3. Complementary paradigms of reflection

<i>Reflecting 'on'</i>	←	<i>Process</i>	→	<i>Reflecting 'with'</i>
Reductionist	←	Major thinking	→	Interpretive
Logical/deductive	←	Predominantly	→	Intuitive/inductive
Cause/effect	←	Relates to	→	Contextual holism
Past actions	←	Dwells on	→	Shared meaning
Improved decision making	←	Outcome	→	Understand lived world of others

Critical-reflective process is not merely daydreaming or idle speculation but an activity that is both purposeful and goal-directed. It begins with the goal to reconstruct individual

and social experiences as a basis for understanding the attitudes and emotions that shape our present knowledge of health care practice, and for incorporating new ideas and information. The process of reconstruction is not simple because it requires the learner to collect comprehensive descriptive accounts of their experiences (Street, 1991: 3-4). The moments of critical reflection-in-action may increase as learners and practitioners regularly engage in retrospective critical reflection-on-action. The moments may also become more powerful if they are recorded for further analysis. This analytical process enables the learner to revisit experiences in the light of new understandings and changed perspectives. Therefore, learning strategies such as journal keeping and critical incident reporting are included in this chapter.

Journals and critical incident technique can enable learners and practitioners to recognize that critical reflection is not carried out in a vacuum. Questions and the way they are framed are influenced by the historical moment and the ways in which value commitments insert themselves into contextualized actions. Once the values-in-use are identified learners or practitioners can examine them in the light of their espoused values. The full implications of values are not always evident during the individual's first critical reflection on practices. Re-examination is necessary over a period in time if the learner or practitioner is to uncover the deeper meanings.

Participation in critical reflective exercises and experiential learning methods should however, always be voluntary. If learning is to take place the learner must not only experience something, but must critically reflect on that experience. If individuals carry out exercises unwillingly, they are unlikely to reflect on it in a constructive way and the experience is likely to reinforce determination that this form of learning is not acceptable. From the ethical standpoint, adult learning should be about maintaining the dignity and freedom of choice of individual learners (Knowles, 1980; Rogers, 1983).

Pulsford (1993: 140-141) points to another fundamental issue which stems from the natural tendency of an educator to reflect upon and attribute meaning to what has taken place in an experiential session (critical reflective session) in which learners have refused to participate.

If most learners in a class consistently refuse to participate in a particular exercise but are normally willing to participate in other exercises, the educator is likely to attribute their non-participation to the situation; the exercise being inappropriate or ill-chosen. If, however, just one or two learners consistently refuse to participate in a wide range of experiential exercises the educator is likely to attribute the refusal to dispositional factors in the learner.

This may lead to individual learners being tagged with negative labels such as: 'defensive', 'got a lot of hangups', 'too concrete in his thinking', 'got an attitude problem', or even 'hasn't got what it takes to be a health professional'. This last tag raises the most fundamental issue around opting out of experiential (critical reflective) learning. Such labels fit awkwardly with the person-centered, humanistic philosophy that experiential (critical reflective) learning methods purport to embrace. Learners should have full information about what a critical, reflective or an experiential learning exercise will entail before the session begins or the specific methods are used. Educators who keep learners in suspense are more likely to be following a hidden curriculum of their own power than considering learners' interests. Discussion of critical reflective process and experiential learning methods should at the outset of a course, become part of the study skills' input and the rationale for their use.

Kagan, Evans & Kay (1986: 5-9) advocate the use of a written contract between educator and learners, so that they are all clear about what experiential learning will entail and learners will know they have the right to opt out and what to expect if they do participate. Hopefully these measures will prevent opting out due to fear of the unknown or opting out will at least, become a matter of informed choice,

allowing individuals to be encouraged to reflect on their reasons for it. Educators must ensure that the methods they use are appropriate to their purposes, and learners should be aware of the objectives of the exercise from the outset.

4.10.1. Socratic Questioning/Discussion and Dialogical Discussion

Socratic discussion allows learners to develop and evaluate their thinking in comparison to that of other learners. Since learners respond to Socratic questions according to their own points of view, the discussion inevitably becomes multidimensional. Socratic questioning means that educators wonder aloud about the meaning and truth of learners' responses to questions. The Socratic educator, according to Paul (1990[b]: 251), models a "reflective, analytic listener . . . one that actively considers alternative points of view . . . one that actively tries to reconcile differences of viewpoint . . . one that actively tries to find out not just what people think but whether what they think is actually so."

From Socratic discussions learners learn a sense of intellectual discipline and thoroughness. They learn to appreciate the power of critical, reflective thinking. They learn that all thoughts can be pursued in at least four directions:

- **Their origin:** How did you come to think this? Can you remember the circumstances in which you formed this belief?
- **Their support:** Why do you believe this? Do you have any evidence for it? Why do people believe this? In believing this are you not assuming that such and such are true? Do you think that is a sound assumption?
- **Their conflicts with other thoughts:** Some people might object to your position by saying . . . How would you answer them? What do you think of this opposing view? How would you answer objection that . . .? and, . . .?
- **Their implications and consequences:** What will the practical consequences be of believing this? What would you have to do to put it into action? What follows from the view that . . .?

This type of thinking focuses on process rather than the product of thinking and it is important in that both learners and educators learn to assess thought processes. Broadly there are three (3) general forms of Socratic questioning or discussion: spontaneous (unplanned), exploratory and issue-specific (Paul, 1990[b]: 271-274). Following is a short description of each:

- **Spontaneous.** This type of discussion or questioning is teaching imbued with the Socratic spirit, implying that the educator often spontaneously asks learners what they mean and explore with them how they might find out if something is true. It provides models of listening critically as well as exploring the beliefs expressed. If something seems questionable, misleading, or false, spontaneous Socratic questioning provides a way of helping learners to become self-correcting. Educators should learn the art of asking for examples, evidence or reasons, propose counter-examples, ask learners if they agree with a point made, suggest parallel or analogous cases, ask for a paraphrase of opposing views, rephrase learners' responses clearly.
- **Exploratory.** Exploratory Socratic questioning enables educators to find out what learners know or think, and to probe learner thinking on a variety of issues. This type of questioning raises a broad range of interrelated issues and concepts and require minimal preplanning. It has a relatively loose order or structure. Educators can prepare by having some general questions ready to raise when appropriate by considering the topic or issue, related issues and the key concepts to be discussed.

They can also prepare by predicting learners' responses and preparing some follow-up questions. However, it is important to remember that once the thought processes of learners are stimulated, no one can predict the nature of the discussion.

- **Issue-specific.** To really probe an issue or concept in depth, to have learners clarify, sort, analyze and evaluate thoughts and perspectives, distinguish the known from the unknown, synthesize relevant factors and knowledge, learners should engage in extended and focused discussion. Issue-specific Socratic discussion provides learners experience in engaging in an extended, ordered, and integrated discussion in which they discover, develop, and share ideas and insights.

This type of discussion requires preplanning or thinking through possible perspectives on the issue, grounds for conclusions, problematic concepts as well as implications and consequences.

Educators could also further prepare by reflecting on those subjects relevant to the issues: their methods, standards, basic distinctions and concepts, and interrelationships -points of overlap or possible conflict. Possible learner answers should also be considered.

All three types of Socratic discussion demand that educators develop the art of questioning. The following are suggestions for use in Socratic discussion (see text box 4.4.).

Text box 4.4. Suggestions for Socratic Discussion

- Have an initial exploratory discussion about a complex issue in which learners break it into simpler parts. Learners can then choose the aspects they want to explore or research. Have an issue specific discussion whereafter learners share, analyze, evaluate and synthesize their work.
- Have a *fishbowl* discussion. One third of the learners sit in a circle and discuss a topic. The rest of the group, sit in a circle around the others, listening, taking notes and afterwards discussing the others' discussion.
- Assign an essay asking learners to respond to a point of interest made in a discussion.
- Have learners write summaries of their discussions immediately afterwards. They could also add new thoughts or examples, provide further clarification, etc. These notes are later on shared with the rest of the group.

There are six identifiable categories of Socratic questions: questions of **clarification**, questions that **probe for reasons and evidence**, questions that **probe assumptions**, questions about **viewpoints or perspectives**, questions that **probe implications and consequences** and **questions about questions** (Paul, 1990(b): 276-277).

Care and caution however, should be used when introducing learners to Socratic questioning for the first time. The level of questions should match the level of the learners'

thoughts, and educators should not assume that learners will be fully successful with it (except over a considerable length of time). To participate effectively in Socratic questioning both educators and learners must:

- *listen carefully to what others say*
- *take what they say seriously*
- *look for reasons and evidence*
- *recognize and reflect upon assumptions*
- *discover implications and consequences*
- *seek examples, analogies, and objections*
- *seek to enter empathetically into the perspectives or points of view of others*
- *be on the alert for inconsistencies, vagueness and other problems in thought*
- *look beneath the surface of things*
- *maintain a healthy sense of scepticism*
- *be willing to play the role of devil's advocate*

Cooperative learning fosters dialogical and dialectical thinking because individual learners will inevitably have different points of view and will need to argue out those differences. Learners need to question each other in a supportive way and develop confidence in their capacity to reason together to find insightful answers to important questions. Learners often do not know exactly what they believe, or why they believe it. They often do not consider that there may be elements of truth in other beliefs. They therefore, need to learn how to fairly and accurately assess, both their own and others beliefs. To quote Scheffler (1973: 7), the knower "must typically earn the right to confidence in his belief by acquiring the capacity to make a reasonable case for the belief in question."

Educators should guide the selection of topics for discussion toward issues on which the class exhibits considerable diversity of opinion. Each opinion group should be prepared to defend its opinion on an issue and to: (1) deliver its clearest, most concise, and compelling rationale for its position; (2) interrogate the other position(s) as deeply and incisively as possible; and (3) answer questions and respond to criticism. The second and third of these goals involve critical-reflective reasoning - though not yet (necessarily) sympathetically - within the frame of reference of the opposition.

The educator encourages mutual awareness, respect, and fairmindedness by pointing out such problems as *straw-man* interpretations of opposing viewpoints. Learners should also be required to prepare a defense of a position to which they were initially opposed. This is crucial because of the extreme difficulty of considering alternative frames of reference sympathetically. By defending a position opposite to your own, learners learn to question and challenge positions they identify with, and thus engage in reflective self-criticism.

4.10.2. Journal Writing

According to Mezirow (1990), Lyte & Thompson (1990), Lukinsky (1990), Progroff (1973/75, 1980/83) and Degazon & Lunney (1995) keeping a journal may help learners to break habitual modes of thinking. A journal (diary), enables the individual to look back, to reconsider, to make explicit what often remains implicit. Once the individual is aware of informal theories, it can be contrasted with other people's theories and theories in the literature about the same phenomena.

This is in agreement with Usher (1988: 435) who suggests that practitioners can build their own theories more effectively (and critique formal theory) when they review their informal theories by contrasting them with formal theory. Keeping a journal is helpful, in that the practitioner keeps an ongoing record of his or her actions, feedback, beliefs, and assumptions. By comparing this with those of others the individual becomes aware of the way their theories are similar or different, and how they are contradicted or reinforced by experience (Mezirow, 1990: 43). It results in what Mezirow (1990: 43) calls "action learning." Action learning combines individual responsibility and reflection on personal experience with comprehensive attention to the multiple perspectives of various stakeholders within a social unit - in this case, the health care organization. It is thus oriented to problem-solving, but with a difference in that it emphasises helping the learner or practitioner to better understand and formulate problems or experiences through continual cycles of action (implementing of some sort) and critical reflection on, and in action. In this way, the individual identifies his or her practical reasoning and begins to build personal theories of action.

Action learning, through journal keeping, is uniquely suited to critical reflection in the workplace. It helps practitioners and learners, both individually and collectively to make explicit and question the social norms that govern their action, and the way their untested assumptions, beliefs, and expectations influence their perception of factors which influence and sometimes limit their thinking and decisions making.

Journal writing is an introspective tool, individuals use for personal growth, in educational applications, and in group settings. It connects thought, feeling, and action - a synthesizing tool that brings critical reflection and action together. When used purposefully, it is more than a means to an end, more than recording what has happened. It becomes, according to Lukinsky (Mezirow, 1990: 214), an "objectification of the inner search, and anchor from which to make further explorations."

A journal may help adult learners break habitual modes of thinking and change their life direction through reflective withdrawal and reentry. It enables the individual to step back from an incident, a conversation, a reading, from something heard or seen and reflect upon it and return to it with understanding. This is in agreement with Fulwiler (1987: 1) who argues that human beings find meaning in the world by exploring it through language - through their own language, not the language of textbook or textbook and teacher. Knowledge gained, need to be personally meaningful. The need for journal writing within an educational or practice environment is also highlighted by Ranier (1978: 72) who proposes the use of four basic diary devices: catharsis, description, free-intuitive writing, and reflection. Active journal writing jogs the memory, brings lost potential to the surface, and instigates retrieval. In the act of writing, connections and integrations occur to the writer and as the writing unfolds, new thoughts emerge and are written down. A journal preserve raw materials as a data bank to be regularly drawn upon (Lukinsky, In: Mezirow, 1990: 219).

In education, journals have common characteristics: *language features* (conversational, colloquial language, written in the first person); *cognitive activities* (such as observation, speculation, inner questioning, self-awareness, digression, synthesis, revision, information

seeking, and similar operations which demonstrate that attention is being paid to the course content); and *formal features* (frequent, long, and learner-initiated entries) (Fulwiler, 1987: 1-2). Journal writing technique applies in any situation where an introspective tool could be useful. Lyte & Thompson (1990: 230) are of the opinion that a diary (journal) can fulfil the following aims. Diary keeping:

- facilitates the development of a problem-solving practitioner who can assess various care options in response to differing needs and evaluate his or her interventions effectively.
- encourages the efficient use of independent learning by stimulating motivation to set personal learning objectives.
- assists in the reconciliation of theory-practice issues through exploration of applied theory to practice.
- assists in the development of the student's personal growth through increasing self-awareness in relation to patient colleague interactions.
- assists in the student's professional growth by identifying skills based learning needs and enabling learning contracts to be formulated between tutorial or clinical staff in conjunction with established theoretical and clinical objectives.
- functions as an integral part of the formative assessment process enabling feedback of information to both the educator and student.

A problem in using journals in a course is that educators cannot expect to read learners' journals in the form in which they are originally written unless the writer allows it.

Learners can however, provide edited versions, after removing personal elements they do not wish to share. Such a version still preserve many of the dynamic qualities which emerge in writing.

Lyte & Thompson (1990: 231) reported that some learners may find it difficult to complete the diary recordings. It is suggested that the educator may have to function in a supporter/ guide role to the learner in the initial stages to reduce the possibility of early abandonment due to higher than normal feelings of dissonance.

Alternative journal writing techniques, suggested by Ranier (1978: 76-112), Progroff (1975: 77-79) and Fulwiler (1987: 7-32) may be useful within an educational setting:

- **Lists.** This is a cluster of ideas which will help the writer to focus and comprehend wayward parts of an experience on a particular topic.
- **Portraits.** This is a description of persons or people fascinating the writer. The writer identifies with specific qualities of the subject, or builds a confidential and harmless "weapon" against him or her.
- **Maps of consciousness.** These are sketches/drawings in which the writer captures a state of mind.
- **Guided imagery.** This involves meditation. The facilitator (such as the educator) may stipulate or suggest a context: "Imagine yourself in . . ." The writer "goes" to that place, looking for an experience. There is also, in this mode, the possibility of behaviour rehearsal, which involves the writer imagining himself or herself behaving in a potential situation in alternative, desirable ways.
- **An altered point of view.** This is gained by writing about oneself in the third person or about someone else in the first person with the purpose of gaining empathy or objectivity, writing something painful or imagining oneself in a different place or time.
- **Letters written but not posted.** The writer expresses thoughts impossible to state in reality.

- **Dialogues.** The writer composes both sides of a dialogue with a conviction.
- **The dialectical notebook.** Journal writing is used as a way of knowing. It lets the writer represent ideas so that he or she can return to them to assess what is written. The dialectical notebook is an overarching or bridging technique which includes entries of observations, memoranda, notions of all sorts, before and after learning.

This enables the writer to look carefully at it - in a dialectic of feedback and feedforward - to identify and tolerate ambiguity, and to find meaning. The educator can write, in response to such text, directly in the learners' journal, clarifying what the learner does not understand.

- **Philosophic dialogue.** Journals can be used in the classroom study of philosophy, for a dialogue between the educator and learner as an analogue to the Socratic method.
- **Peer dialogue.** In a journal, shared by peers, every member writes regularly in the same journal and reads what other members have written. This exposes peers to each other's viewpoints, theories, and assumptions.

An ideal classroom or learning environment will be one in which everyone, including the educator, keeps a journal and reveals parts or all of it. Within the nursing practice environment a journal can be kept by all staff and shared during supervision. A structured journal (diary) focusing on particular experiences significant to the practitioner is, according to John (Palmer, et.al. , 1994: 123), fundamental to the concept of critical reflection. It can enable practitioners to see themselves differently over a series of similar experiences and to understand the factors limiting their potential.

Keeping a structured journal (diary) facilitates periodic reviews of experiences in order to make sense of the learning that has taken place. It can be linked with formal "reflective" performance review. Linking critical, reflective practice with formal mechanisms is desirable for two reasons: In the first place it becomes an organizational as well as

professional activity which management is more likely to recognize as a worthwhile activity. Performance review in the second place enables practitioners to fulfil their professional responsibility by striving to be effective in their actions.

Guided reflection can nurture, the practitioner's sense of awareness, curiosity, reflectiveness and of commitment. Guidance to critically reflect on practice enables practitioners to become more conscious of their existing qualities and skills and aids purpose and direction towards the goal of effective work. The supervisor or manager should however, also be committed to the same values and offer positive encouragement. Without commitment and encouragement the reflective practitioner may become increasingly stressed (John: Palmer, et.al. , 1994: 123).

When reflective journal writing requires feedback from a reader, specific approaches, according to Degazon & Lunney (1995: 272) must be used to improve critical, reflective thinking:

1. The focus should be on thinking processes, not on clinical or nursing content *per se*.
2. The reader's responses to what the writer has written should be supportive, facilitating and guiding the writer, and should not be judgemental.
3. Confidentiality must be assured in such a personal experience as sharing one's thinking, confidences must be protected to encourage truthfulness.
4. Those responding to reflective journals should be aware of ethical issues which may arise, such as penalizing the writer in some way for personal weaknesses or other lapses shared in the journal.
5. Minimal comments or responses on specific content can help writers move from emphasis on content to emphasis on process. Pertinent questions should be raised and comments on critical, reflective thoughts should be validated (see text box 4.5.), for suggested responses to encourage critical, reflective thinking about thinking).

In writing reflective journals, the writer (practitioner/learner) may attempt to please the reader and present a positive self-image. An assumption is that the journal and, therefore, the writer will be evaluated. To encourage useful reports of real thinking processes the reader should not evaluate the substance of what is written. Evaluation, according to Degazon & Lunney (1995: 273), tends to generate descriptions of what the reader expects rather than the real nature of thinking processes. Research has shown that evaluation suppresses creativity (Osborn, 1979),

a dimension of thinking that supports consideration of alternative explanations. Writers of reflective journals must therefore, be assured through the words and behaviour of those giving feedback, that their writing is fully accepted no matter what the content.

The purpose of writing reflective journals is personal development of critical, reflective thinking ability and not achievement of specific clinical outcomes. The reader's comments should support risk taking and should recognise that problems may be solved in several different ways.

Text box 4.5. Suggested responses to encourage critical, reflective thinking about thinking.

- *What did you think about this?*
- *What assumptions were you making at this point?*
- *Did you challenge the assumption of ____?*
- *Were you sceptical about the validity of this diagnosis/decision/conclusion?*
- *Which explanation is best supported by the data?*
- *What other interventions could have been used?*
- *Was intuition involved in making this decision/ or coming to this conclusion?*
- *Did you reflect on the feasibility of ____?*
- *How did you arrive at this conclusion?*
- *How did you evaluate your thinking processes re: ____?*
- *How did you evaluate your analysis of the data?*
- *How many other interventions/diagnoses/ outcomes might have been considered in making your decision?*
- *What decisions would you make to manage this situation differently?*
- *What would the results look like?*
- *Did you trust your judgement?*
- *Did you consider other alternatives?*
- *What conclusions did you reach after examining your own critical, reflective thinking?*

The confidentiality of practitioners' or learners' reports of their thinking must be assured so that they will feel free to share their current thinking processes without penalties to their self-esteem and status in the system.

4.10.3. Critical Incident Technique

The critical incident technique is seen by Crouch (1991), Dunn & Hamilton (1986), and Ingalsbe & Spears (1979) as a rather sophisticated method for collecting behavioural data about ingredients of competent behaviour in a profession. According to these authors it is an objective and efficient method of determining performance effectiveness. According to Smith & Russell (1991: 286), critical incident technique provides a sensitive basis for the identification of important job related elements and of the stressors and conditions which impair performance. It is a sound basis for making inferences in terms of training requirements and effective behaviour and attitudes.

A critical incident is any observable activity that is sufficiently complete in itself to allow inferences and predictions to be made about the person performing the act. To be critical an incident must occur in a situation where the purpose of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects (Crouch, 1991: 30). Overall the techniques should be regarded as a flexible set of principles to be modified and appropriately adapted to any area of study.

Clamp (1980: 1755) defines critical incidents as 'snapshot views of the daily work of the nurse' and describes how they may be used to study, promote, and assess attitude development in nurse education. Incidents can be used for:

- small group discussions, to result in in-depth discussion of attitudes behaviour, the identification of problems and possible solution strategies.
- workshops, for example directly after student nurses have completed a particular practica placement. Learners are asked to record incidents during practica, the context in which the incident occurred, and what they remember thinking and feeling at the time. The incidents are given to educators three to four days before the workshop takes place, to allow them to categorize it and look for common themes

or concerns. The incidents then form a basis for the loose framework of the workshop. Unique incidents can also be used if it is seen to provide an opportunity for particular learning.

Issues such as expectations and beliefs concerning the nurse's role, differing reactions to stressful situations and coping strategies, ethical dilemmas, the meaning of caring, the notion of individual rights, aspects of anger, power and control, responsibility and autonomy, problems encountered in health education and managing care can be discussed in a workshop. Although such topics can be found elsewhere in the curriculum, identifying them from learners' personal experiences means that the concepts are reapplied to meaningful situations or that gaps in knowledge are uncovered, providing the basis for further initiatives such as seminars or recommended reading.

Smith & Russell (1991: 289) found that the critical incident technique gives learners time and freedom to share concerns, experiences and feelings. This, results in increased understanding of their own and others' responses to nursing practice situations thus, enhancing their sensitivity to the need of others. The technique appears to be a means to enhance group cohesion as learners feel less isolated through the realization that they are often facing common difficulties. Critical incident technique is also a means of breaking down learner-educator barriers.

The technique however, is not an easy one. It requires an ability to deal with the unexpected, since one person's experience is likely to evoke memories of several others, to reduce undue tension and most difficult of all, to capitalize on and use incidents to facilitate learning, and transfer of it. The emphasis on the incidents should be on recalling specific situations, events and people rather than asking learners to identify general assumptions. A rule of thumb in assumption analysis is to use indirect rather than head-on approaches whenever possible to assist learners in exploring their assumptive worlds. The last thing educators should do is to ask directly what assumptions learners operate under in the various aspects of their lives, as this can be intimidating. It is far more fruitful to work from the specific (critical incident) to the general. Learners should be asked to produce detailed accounts of specific events and helped to move to collaborative, inductive analysis of the general elements embedded in the particular descriptions (Mezirow, 1990: 180).

Admitting that personal assumptions might be distorted, wrong, or contextually relative implies that the fabric of personal and political existence might rest upon faulty foundations. Even considering this possibility is, according to Brookfield (Mezirow, 1990: 191), profoundly threatening and yet helping learners to explore their assumptive worlds is at the heart of critical, reflective thinking. The critical incident approach represents one point of entry into this contradictory, ambiguous, and often painful reality.

Assisting learners to break out of their assumptive worlds without threatening or intimidating them to the point of mental withdrawal is a difficult process but, engaging in critical, reflective thinking is not a continuously joyful exercise in creative self-actualization. Learners should be made to understand that being correct or incorrect is not so important as the ability to perceive a problem and "wrestle" with it (Meyers, 1987: 31).

The process of critically reflecting on incidents can be viewed as comprising of three interrelated phases: (1) identifying the assumptions that underlie the learner's thoughts and actions; (2) scrutinizing the accuracy and validity of these in terms of how they connect, or are discrepant to personal experience of reality (frequently by comparing personal experience with others in similar contexts); and (3) reconstructing these assumptions to make them more inclusive and integrative (Brookfield, 1990 In: Mezirow, 1990: 177).

4.10.4. Problem-solving exercises using popular media

Problem-solving exercises built around newspaper and magazine articles, or radio and television broadcasts, are some of the most creative and productive forms of *bridge building*. They provide a variety of opportunities for drawing analogies and relating everyday experiences to more abstract concepts studied in the classroom. Whenever educators build bridges between concrete, everyday ideas and more abstract, academic concepts, they are fostering critical, reflective thinking (Meyers, 1987; Hester, 1994).

Assignments or problem-solving exercises based on printed media present a challenge to learners' habitual ways of thinking. Learners often are under the misapprehension that everything appearing in print or on the news is supposedly objective news reporting. Therefore, exercises that force them to raise questions regarding points of view, opinions, or bias in the popular press can help to dispel this illusion and can assist learners in

developing a healthy scepticism about the printed word and consciousness about the distorting power of television.

Participants, according to Brookfield (Mezirow, 1990: 19) can be helped to understand that television and written presentations are constructed rather than objectively reported realities and that various interpretative stances could be taken on an issue.

When familiar objects, such as newspapers or other articles, are used in a new or different way, learners' attention is captured by their initial surprise. Creative strategies will enhance learner interest, create anticipation for subsequent learning, and increase retention. With the primacy of critical, reflective thinking in nursing practice, it is essential to use multimodal approaches. Newspaper reports, popular media articles and television reports are rich vehicles to teach problem identification. Learners need to recognize the emotional and cognitive meanings of the written word. Chubinski (1996: 23) for example selects headlines of the same story published in local newspapers and magazines. Learners are requested to compare the wording of the headlines and the overt and covert meaning of those words. The learners discuss how the headlines set the tone for the article and forecast the author's interpretation of the news. According to Chubinski, learners afterwards demonstrate increased awareness of the implications that words have.

Demetrulias (Clarke & Biddle, 1993: 170) ends a class session with a picture and short article from a news magazine. She chooses a topic of interest and possible amusement. An example is an anthropological research study of the relationship between weight and sexual appetite. Learners are then requested to read the article and bring to class their questions (not answers) in response to the following directions:

"This article is typical of the manner in which popular magazines report the findings of research studies. Although interesting conclusions are stated, the reporting of the research is incomplete and should lead to a cautious and reluctant acceptance of the conclusions. As an enlightened scholar, indicate the types of questions that you would ask the researcher in order to elicit more specific information about the study, its design, sampling techniques, statistical analyses, and conclusions."

After questions of clarification, the discussion based on this article becomes more sophisticated and gives learners practice in drawing inferences, making judgements, identifying and applying criteria and suggesting alternative hypotheses for an observed phenomenon. The result, according to Demetrulias (Clarke & Biddle, 1993: 171) is a richness of insight and a variety of responses far beyond what occurs when learners are asked to answer questions generated by the educator. When learners present their questions during class discussions, they engage in a process of critical, reflective inquiry and scrutiny. As an extension of this exercise learners could be asked to add to the conclusions of the researcher by giving their own alternative explanations. In addition, they should be asked to write hypotheses that might guide the research studies if they were duplicated. As a final part of the lesson, they are asked to work in triads as a collaborative research team and to generate hypotheses and a research design which extends the research area under discussion.

4.10.5. Building learner interest: Analogy & Metaphor

Current views of thinking acknowledge varieties of intelligence and recognize that cognition takes place in diverse forms (Rubano & Anderson, In: Clarke & Biddle, 1993: 146). This justifies the cognitive value of a wide range of educational activities. While different modes of knowing may apply to any academic discipline, metaphorical thinking is seen as very important.

Leading learners successfully from concrete operations and simple mental structures to more abstract modes of thinking always begins by building on past experiences and existing mental structures. In a sense all learning proceeds from analogy, as learners can understand something new only by recognizing its similarities to and differences from something familiar. If learners are introduced to a topic too abstract and far removed from their own experiences and present knowledge, there is, according to Meyers (1987: 49) little hope that they will appropriate it. Thus, a central task of teaching is *bridge building* (between the known and the new) - an analogy itself.

Ideas for analogies can come from many sources, such as the popular media, newspaper clippings and magazine articles which illustrate particular concepts studied in class. Learners can be asked to summarize difficult abstract passages from texts, in their own

words and to provide illustrations of the concepts from their personal experiences. Analogies offer a fairly direct and obvious way to connect new concepts and ideas to learners' previous knowledge.

Some concepts, however, cannot be explained by simple, direct comparisons. For these, Meyers (1987: 51), Jones (1983: 51), and McFague (1975: 4) suggest turning to metaphor and figurative language. Metaphor suggests something more than analogy, for in metaphorical comparison, a new quality or connection which was not previously apparent is disclosed in what is being compared. McFague (1975: 4) defines a metaphor as the use of common words in unfamiliar context, giving new insight and moving those involved to see the ordinary world in an extraordinary way.

Metaphor and analogy are, according to Meyers (1987: 52), particularly helpful in clarifying certain abstract aspects of critical and reflective thinking. Building bridges between everyday concrete ideas and more abstract, academic concepts fosters critical, reflective thinking.

Developing metaphorical fluency

According to Rubano & Anderson (Clarke & Biddle, 1993: 147), learners can transform the focus and the meaning of the metaphor through additions to a core metaphor. Initially the educator's role should be to encourage multiple interpretations and to suggest re-interpretations and additional directions which emerge when the metaphor is examined and extended. The educator in doing this is modelling both a frame of inquiry and an attitude of mind. Analogies such as the following can for example be used as a means for stimulating effective metaphor production:

Example I:

Directions: Each of the analogies lettered "A" in Analogy 1 & Analogy 2 herebelow was written to suggest a dominant trait or characteristic. "B" & "C" are additions to the first analogy.

1. Write down what you think analogy "A" suggests about the **lane**.
2. Read analogy "B" How has the analogy been changed? How has the change affected your interpretation?
3. Read analogy "C." How has the analogy now been changed? How has the change affected your interpretation?

- **Analogy 1**

- A. A person walking down a dark, lonely lane.
- B. A person walking down a dark, lonely lane who is stopped by a watchman.
- C. A person walking down a dark, lonely lane who is stopped by a watchman and then proceeds to walk past the farthest light on the lane.

Educator guidance: *Are there any lights along the lane? Does this lane lead to another? What does it look like? Does it have a watchman as well? How is the return trip different?*

Reflection: After discussion the learners are asked to pick any analogy (the learners determine the scope of the analogy) and discuss some aspects of their own lives in the light of it. These personal responses are private journal entries.

Example II:

- **Analogy 2**

- A. An electron moving around a nucleus.
- B. An electron accelerating as it moves around the nucleus.
- C. Make your own next addition.

Educator guidance: *What keeps the electron within the orbit? Why is it accelerating? Will it spin off the nucleus? Can electrons lose speed and fall into the nucleus?* At this point it is, according to Rubano & Anderson (Clarke & Biddle, 1993: 149), important to allow learners to discern the flexibility of the metaphors. First, they are asked to use any of the metaphors discussed as a way to further explore and understand any other subject or

relationship. They are encouraged to modify the original metaphor in any way they see fit. Playing with the metaphoric possibilities, not forcing a fit, is the emphasis.

Prompts may be needed (other possible topics): different stages of life; personalities with whom they are familiar; abstractions such as "friendship," "morality;" social collectives such as the homeless, the elderly. Reading the newspaper may provide interesting material on current events, which can be conceived through metaphor.

The stages involved in metaphor production are important for two (2) reasons:

- They are the means for stimulating effective production. Yet fluency per se is not the goal. In fact, the fluency exhibited is constrained within the cognitive structure of exploration. Making learners apply one metaphorical template to different contexts produces an interaction that gives new meaning to both the metaphor and the represented experience or information. When the ingredients used to represent experience are themselves part of the conceptualization process, fluency becomes part of the design of metaphorical thinking and the metaphor assumes its role as a means to discover meaning.
- The metaphor must go beyond what is called its substitutional function, that is, the use of metaphor to stand in the place of some literal equivalent. It must take on the distinctive capacity to "create the similarity rather than . . . ; to formulate some similarity antecedently existing." (Black, 1962: 37)

Example III

Developing thinking about statistics through the use of metaphors

Having established cognitive functions, the educator can utilize similar methods to help learners move beyond computations of known statistics, beyond mastery of numbers

and numeracy and beyond fear resulting from slavery to absolute rules. The "beyond" is, according to Demetrulias (Clarke & Biddle, 1993: 168), a concentration on statistical *thought*, a process that employs creative and critical thinking skills. It is the "magic of statistical thought" that educators must transmit to their students.

According to Demetrulias (Clarke & Biddle, 1993: 169), it is necessary to address the learners' feelings of tension and torment before commencing with introductory statistics, research and measurement classes. It is therefore, necessary to adopt a playful tone in class and assignments. Group work, class discussions, and application exercises should be structured in such a way that it is exploratory, rather than competitive and convergent. Creativity, risk-taking, and imagination should be rewarded. Introductory questions such as the following can be used to foster creative thought about statistical concepts and terms. The examples are intentionally simplistic in design and should increase in complexity as learners gain sophistication with statistical thought:

- **Suppose** the measures of central tendency were applying for a new job at the local video store. Prepare a short resume of their credentials (strong points, skills, job experiences, etc.).
- **Suppose** the parametric and nonparametric tests were involved in a group therapy session. They are discussing their problems in being understood by educators and learners. Write a script of this therapy session.
- **Suppose** you are the proud parent of five different correlation indices. Describe the various children to a new neighbor.
- **If** you were an analysis of covariance, would you prefer to tiptoe through the tulips or walk on thin ice? Please explain.
- **Consider** each of the statistical tests of significance. **Suppose** that these statistical tests were candidates for the following offices or positions in a school election: President, Treasurer, Homecoming Queen, School mascot, Cheerleader, "Most likely to succeed," "Most humorous," and "Most talented." **Cast** your vote for the office or position in the school election that you believe is the most appropriate for each statistical test. If you believe that some office or position is more appropriate than those specified, write your own version of office or position.

- **How** would a hog on thin ice describe a multiple regression analysis?
- **How** would a curvilinear relationship look to a person of the same shape?
- **Your** parents named you "Scheffe test." What kind of person are you?
- **If you were to pick** a statistical concept that is **most like you** in behaviour, temperament, or appearance, which would you choose. **Why?**

According to Demetrulias (Clarke & Biddle, 1993: 170) several intellectual skills result from learners' responses to these types of questions: imaginative thinking, taking multiple perspectives, employing unusual mental angles to shift viewpoints, flexibility of thought and perspective, rethinking established patterns of thought, and assosiative thinking.

4.10.6. Consciousness Raising

During consciousness raising the individual experience is recalled by remembering certain scenes. In the process of remembering and trying to understand the experience, the scenes become concrete and their true meaning can emerge. This simultaneity of remembering and understanding which occurs in consciousness raising, according to Hart (Mezirow, 1990: 55), always constitutes *critical (self-) reflection*. Understanding is seen as both a process of completion and of opening the view on the terrain of unexplored interpretations of experience and of possibilities for action.

The person who remembers (recalls) the scene (experience) and understands its arrangement, participates in it once more but on a higher and more mature level. The meaning of the scene unfolds because "the normative contents and values embodied by the everyday life institutions [become] thematized and rendered accessible to communication." (Habermas, 1974: 100)

Consciousness raising is therefore a process of transformative learning because it changes the structure and the frame of the experience in general and thus the entire frame of reference within whose parameters the individual has been acting so far. At the very moment at which the person *understands* what is remembered, he or she looks at entire life in a new way. The "Ah" arising from the person's "entire being" shows that the

perceptual shift occurring at the moment of remembrance and understanding (both crucial elements in the process of *critical self-reflection*) an experience in itself (Hart, 1990: 56).

Consciousness raising however, is not a suitable learning tool for all settings. The members of the learning group must be able to feel safe in expressing their personal concerns and the educator or facilitator will have to be able to assume and identify with the perspectives of all participants of the learning situation. In spite of this need for identification with all perspectives, a theoretical distance to personal experience has to be gained. Theoretical knowledge must at some point, become an explicit concern because it supplies the general tools to make the relations among isolated and fragmented incidents and personal experience transparent (Hart, 1990:67).

Theoretical distance also means acknowledging the limits of individual and collective experience of the participants. Personal experience can only be the necessary point of departure for gaining socially valid knowledge which is located outside the individual experience (Smith, 1977: 176).

Allen (1973) suggests four stages in consciousness raising: *opening up* (fostering "a feeling of intimacy and trust"; p. 273), *sharing* ("building a collage of similar experiences"; p. 275); *analyzing* ("the period when questions can be asked about how the entire society functions"; p. 277) and *abstracting* ("take the concepts and analyses we have developed and discuss abstract theory"; p. 277). He emphasizes, however, that these are not necessarily successive stages but that all elements typical for each phase are always present although the relative emphasis may shift over time. Hart (1990: 68) warns against attempts to procedurally regulate the development of the learning group along the lines of these phases, and suggests that they rather be considered essential elements in the overall process.

Opening up refers to those moments in the overall process where feelings are expressed and experiences are recounted, remembered, or relived. *Sharing* refers to those phases where similarities of experiences are discovered and articulated and the nonindividual,

testimonial character of these experiences moves to the center of attention. This is also the point where deliberate attempts to overcome competitive habits of speech and interaction are made or have to be made. Once this phase has begun, it is a simple but highly effective procedure to go around the circle and let every member talk before comments are made. The latter is done in a second round where people consciously reflect on their previous contribution in the light of what others have said. This phase continues the work of disclosure as well as contains elements of *analysis* and *abstraction*.

The movement to explicit *analysis* or conceptualization is according to Hart (1990: 69), a difficult one, as no single method can enable the simultaneous work of criticizing old and shaping new concepts as well as developing new analytical-conceptual competencies. Only an ongoing process of learning and unlearning could accomplish this. A particular responsibility of the educator or facilitator at this stage is to make sure that the tension between the personal and the general is kept and that the process does not turn into a therapy session. In academic settings, readings can be assigned which propose theoretical explanations relevant to the experiences shared. In nonacademic settings, reports on such studies and accumulated knowledge and information may be offered to the group discussion. The phase of creating new and original solutions of the group members' situation may come in different forms. For example: the group may work on strategies or suggestions for policies; the group may engage in utopian thinking making proposals that reflect their hopes and their new possibilities for living and acting.

The full cycle of consciousness raising, therefore, according to Hart (Mezirow, 1990: 70-71), includes the "actual experience of power on the individual level, a theoretical grasp of power as a larger social reality, and a practical orientation toward emancipatory action." An explicit appeal to the professional person's conscience is an integral part of the justification of the professional's autonomy (Schrök, 1990: 3). Consciousness and thought about (our) own acts and those of others however, require a certain kind of courage.

4.10.7. Clinical Conferences

Use of the experiential learning model, as the major approach to clinical conferences, according to Iwasiw & Sleightolm-Cairns (1990: 260), is the key to assisting learners to gain critical thinking and reflective skills. The purposes of both pre- and post-clinical conferences have been explicated by various authors (Infante, 1985; Mitchell & Krainvoich, 1982; Reilly & Oerman, 1985; Wolf & O'Driscoll, 1975). These authors believe that well-conducted conferences are essential for enhancing and maximizing experiential learning.

Processing or debriefing the learning experiences is an essential and often overlooked aspect during clinical conferences. Post-clinical conferences, however, conducted in a systematic manner to ensure that the remaining stages of the experiential learning cycle are addressed could overcome the problem. A short description of the stages that should be characteristic of a post-clinical conference follows.

After learners have completed the "concrete experience" (clinical day), a 45-60 minute post clinical conference is conducted to address the remaining stages:

- **Sharing of data.** The aim is to have the data about various patients shared by all learners. The educator's responsibility is to restrict the discussion to the presentation of the data and to ensure that all pertinent data are reported. An additional aspect of this stage is to have the learners identify any missing data about each patient.
- **Reflective observation.** Attention is directed toward interpretation of the data. Differences and similarities in the patient data are identified, and learners are asked to explain the data with reference to normal values. They are asked to account for any incongruities within the data. Differences and similarities among patients are examined as well as its possible reasons. This is seen as a critical step of the process, by Iwasiw & Sleightolm-Cairns (1990: 263), since learners must draw upon and apply their knowledge from previous experience, nursing and

support courses.

- **Abstract conceptualization.** Learners are asked to develop abstractions from the data. Nursing diagnoses (working hypotheses) are developed. Complex mental processes are required to sort the relevant from irrelevant data and then to cluster the relevant data. Synthesizing the data is difficult for novice learners who have a limited experiential background on which to base their judgements and decisions. It is therefore, necessary to allow the required time necessary for learners to develop the diagnosis, to reach consensus and to feel confident about their decisions.

Devising the expected outcomes generally proceeds fairly rapidly once the diagnosis is established. Expected outcomes should be stated in concrete, observable or behavioural terms and are a logical extrapolation of the more abstract diagnoses.

- **Active experimentation.** Learners plan interventions to achieve the expected outcomes. They suggest alternatives, provide scientific rationale, make choices among the alternatives, establish priorities and justify their decisions. The active experimentation phase channels learners' thinking to practical application of knowledge but involves complex and creative synthesis of data. Decisions about interventions are tested in other clinical experiences, thus providing new concrete experiences for analysis.
- **Synthesizing learning.** The final step of the post-conference is to synthesize the learning. Learners are asked to draw conclusions about the assessment category, about patients with particular diagnoses and about the care of those patients. The conference ends with questions asking learners to summarize their learning about the assessment category, from their clinical day (experiences), from the conference itself and from its future application. Clarifying questions may also be asked as necessary following learner responses. The exact content of the questions will depend on the data presented and the conceptual framework used.

The conference method requires the educator to become thoroughly familiar with the links among the experiential learning cycle, the nursing process and the conceptual framework.

Conscientious attention to the completion of the experiential learning cycle can be effective in assisting learners to become critical reflective practitioners, who derive meaning from all aspects of their clinical experiences.

The value of the approach to clinical conferences lies in the fact that it is directed toward learners' actual experiences. As such it integrates classroom learning with clinical experience and highlights the cognitive, reflective and creative processes of professional nursing. The post clinical conference strategy described above is based on Kolb's (1984) experiential learning cycle which has four stages:

- **concrete experience** followed by
- **reflective observation** which leads to
- **the formation of abstract concepts and generalizations** which progress to
- **active experimentation** in which generalizations are tested and new hypotheses are developed for testing in future concrete experiences.

4.10.8. Portfolio Method

Knapp (1975: 2) defines a portfolio as: "a file or folder of information which has been accumulated about a student's past experiences and accomplishments . . . can be the vehicle for organizing and distilling raw prior experiences into a manageable form for assessment . . . a process by which prior experiences can be translated into educational outcomes or competencies, documents and assessed for academic credit or recognition."

Portfolios with their associated norms of 'ipsative' reference, negotiation and participation form a loose and untested constellation of innovative projects (for example incidents, journals and profiles) for pre- and post-registration courses (Glen & Hight, 1992: 416). Portfolios ensure dialogue between learner and educator. This dialogue has clear merits in educational terms in constantly reminding learners that learning is a two-way process.

Richert (1990) and Schön (1983) suggest that portfolios are an effective mechanism designed to facilitate reflection on practice. The selection of content should therefore reflect and promote the ongoing development toward a critical, reflective practitioner. Content might therefore include:

- personal aims (and their continuing modification);
- course aims;
- reflection and comments on experience in institutional and non-institutional placements;
- reflection and comments by the learner and the educator on the learner's progress in relation to personal and course objectives and learning outcomes. It may include self-assessment by the student highlighting perceived strengths and needs and the educator's comments as to their perceptions of strengths and needs;
- peer review;
- learning contracts, and proposed actions;
- reflection on the outcomes of the actions and subsequent plans of action; and
- personal diaries.

Portfolios can potentially bring about the development of critical awareness of personal and professional values and norms and the development of self assessment and evaluation skills. It is however, important to prepare learners for a rather different role in the assessment process (Ruddock, 1991: 12). Any attempt to skim on the process of consultation, reflection, and preparation of educators and learners is likely to result in a scheme which does not achieve its goal.

4.10.9. Brainstorming Strategy

Brainstorming is, according to Bruce (1995: 179), an exciting, creative process for learners because they enjoy the freedom of a "no-holds-barred" atmosphere, they can offer "off-the-wall" ideas and they intersperse their own appropriate humor. Educators can present situations to small groups of learners or entire classrooms, then gather learners' ideas rapidly. With deferred judgement as the only rule, brainstorming expands typical thinking in several ways. Firstly, learners broaden their understanding of reality when they realize that situations involve numerous complex factors not always grasped by any one person. Secondly, learners generate an extensive variety of responses through emphasis on diverse points of view. Respect for the potential merits of all ideas, no matter how

strange or different, is inherent in the process. Thirdly, with a ban on critical evaluation, learners escape rigid mindsets and produce innovative ideas within an established psychological safety zone (Davis, 1992: 9).

Demonstrated appreciation for innovative thinking lets learners know that there are numerous workable ways to approach situations, not one "right" way (Seligman 1990: 1). Learners who often face continuing difficulties become depressed and hopeless. Practice in brainstorming helps learners to examine a situation and ease away from depression's tunnel vision. Brainstorming encourages learners to expand old thinking patterns and view things in a broader sense. Guided practice in such thinking skills as a component of critical, reflective problem-solving pushes learners to be proactive, handle challenges purposefully and cultivate power in themselves (Bruce, 1995: 180).

Handling frustrating situations with flexible, innovative thinking builds problem-solving skills which lead to increased resiliency. Creative, problem-solving strategies (such as brainstorming) help learners to regard a problem as a challenge to overcome. Each step demands a generation of ideas, then a convergent process of choosing and further movement toward a solution. Resiliency increases as learners improve their ability to think abstractedly, reflect, then examine alternative solutions.

Six divergent questioning models can be used to encourage learners to explore personal viewpoints as well as explore opposing viewpoints (Taylor, 1992). The models are:

Quantity Model. This model asks learners to generate a list of all possible responses to a given situation. Sample questions could include: *List all types of sexual abuse? List as many reasons for sexual abuse as you can think of. How many ways can you come up with to prevent sexual abuse?*

Viewpoint Model. This model encourages learners to look at a situation from the perspective of another individual. Sample questions could include: *How would sexual abuse look to a child? What would sexual abuse look like*

from the viewpoint of the abuser?

Involvement Model. This model requires learners to place themselves in the situation. Sample questions could include: *How would you feel if you were sexually abused? If you were the abuser, how would you feel? You are a juror in a sexual abuse case. Describe your feelings.*

Conscious Self-Deceit Model. This model assumes that learners have all the power, resources, and ability to impact on the situation. Sample questions could include: *Suppose you could have anything you wanted. How would you prevent sexual abuse? You have been given power to change sexual abuse laws. How would you change the laws?*

Forced Association Model. This model focuses on analogies and encourages learners to make associations. Sample questions could include: *How is sexual abuse like war? Get ideas from women to prevent sexual abuse.*

Reorganization Model. This model requires learners to organize and present their thinking about a situation and view the situation in the light of other perspectives. Sample questions could include: *Suppose we were all the same gender how might this change sexual abuse? What would happen if there were no children to be sexually abused?*

The first step of this strategy is to introduce the six divergent questioning models to the learners. Review each model and provide clarification. Discuss rules regarding the expression and acceptance of different viewpoints. Allow learners adequate time to discuss and record their responses to each of the questions, and then to share their responses (Cinelli, Bechtel, Rose-Colley & Nye, 1995: 119-120).

4.10.10. The Topic/Form Grid

Schiebert (1996: 8) devised an invention strategy to help learners and other writers to use diverse forms of writing to enrich critical, reflective and creative thinking. This strategy is known as the form grid. The grid is adaptable to any writer and to any written situation, such as journal writing or assignment writing. The author introduced the form grid to learners with the following instructions:

- Firstly, draw a grid and label the vertical axis "Topics" and the horizontal "Forms."
- Secondly, list possible topics for writing along the vertical axis. Topics can be related to a particular subject (e.g., Psychology) or a specific assignment within a subject (a research paper on health policy) or they can be personal.
- Thirdly, list kinds of discourse you would use to write about these topics (letters to editor; public speech; magazine interview; letter; press conference; personal letter; panel discussion; unsend letter to a person; dialogue; diary) along the form axis.
- Finally, use the diverse topic/form combinations and create a writing on each topic. For example: three topics and three forms should yield nine possible combinations. The writings are resources to be accumulated, read, reread and revised when needed to stimulate thought. An example of a grid for writing on public affairs follows in figure 4.5.

TOPICS				
Politics				
Civil rights				
Health policy				
Affirmative action				
FORMS	Letter to Editor	Public Speech	Press Conference	Conversation with the self

Figure 4.5. Grid for writing on Public Affairs

The form/grid is adaptable to any writer and to any writing situation. It enriches learners writing in course journals and gives them a stronger awareness of the contextuality of all writings thus resulting in better academic papers. The grid is a valuable asset for educators who assign course journals as a means of helping learners prepare for class discussions, formal assignments, or exams. The grid is seen by Schwiebert (1996: 11) as a simple tool that can help transform and enrich learners' experience of journal writing.

According to the author the topic/form grid:

- encourages fluency with invention. A writer's grid provides a nearly inexhaustible number of ideas for writing. With practice learners internalize their grid(s) when faced with a topic they call up various forms for its composition without graphically listing the forms on a page.
- supplies learners with a vehicle for approaching a topic from a new mental direction, and
- generates material or information (e.g. memorandum, proposal, or research essay) which a learner can incorporate into a formal paper. Schwiebert (1996: 11) considers it necessary as year after year educators exhort learners to "consider your audience," "clarify your purpose," and "define your rhetorical relationship with your readers!" Too often the exhortations bring disappointing results as many learners remain insensitive to rhetorical concerns and the conventions of particular discourses in which they write.
- promotes understanding of the contextual character of every writing task. Writing from a grid (as letter writer, diarist, interviewer, etc.) involves writing in a spectrum of roles and writing in role is among the most powerful means of sensitizing learners to the contextuality of all writing. With the grid, learners discover contextuality for themselves. They discover that even the simplest form of writing, involves a complex range of rhetorical, structural, and other considerations.
- encourages learners to read in order to master the conventions of the forms in which they want to write. For example, a learner who develops a preference

for writing dialogue has an incentive to read fiction to learn the conventions of punctuating conversations. Writing encourages reading which, in turn, encourages better writing.

- becomes a kind of metaphor for learning itself. By becoming aware of multiple options, learners can make choices based on individual interests and return to those choices again. They practice writing in the forms they do best and are stimulated to think critically, reflectively and creatively. This process gives learners a heightened knowledge of themselves and of their sources of power.

4.10.11. "Six hats" Technique

De Bono (1985:1) suggests a useful technique for considering perspectives that could apply to any situation in which people are considering a particular course of action. This technique could be applied to any situation in health care, from a new policy on visiting hours, to planning a ventilator patient's discharge or planning a new staff schedule.

De Bono's "six hats" technique assigns a coloured hat to each of six perspectives

(see text box 4.6.)

Text box 4.6. "Six hats" technique

This technique assigns a coloured hat to each of six perspectives:

- **White = the information or factual perspective.**
- **Yellow = the optimistic perspective.**
- **Black = the pessimistic perspective.**
- **Green = the creative perspective.**
- **Red = the feelings perspective.**
- **Blue = the clarifier of perspectives and facilitator of discussion.**

Using the "six hats" within a group discussion, individuals are assigned particular perspectives or "hats to wear." For example, when discussing discharge planning for a ventilator dependent patient, a few of the concerns raised by each perspective could be:

- **White =** *What facilities (including the patient's home) can accommodate the patient? Who will care for the patient? What costs will be incurred and who will pay?*

- **Yellow** = *The home environment will provide familiar surroundings and the patient will experience less stress. His recovery potential will increase in the home environment.*
- **Black** = *The patient will be back here in twenty-four (24) hours, or he will die, and then all these expenses and complicated arrangements will be for nothing.*
- **Green** = *Arrange for volunteers from the nursing staff to provide twenty four (24) hour coverage in his home.*
- **Red** = *How does he feel about leaving the hospital? What are the feelings of others who are affected such as family members and staff?*
- **Blue** = *Clarify the criteria for deciding whether the home or a long-term care facility is most appropriate. Encourage the group to find ways to modify some of the "green," creative suggestions into practical recommendations.*

According to Case (1995: 278) this technique helps to clarify perspectives and expand the view beyond one perspective. Learners or practitioners who typically take one view on an issue can be encouraged to look at it differently. If a learner or practitioner typically takes a "black," negative perspective, that person could be assigned the "yellow," optimistic perspective.

4.10.12. PMI Technique

This strategy requires that learners examine an issue from multiple perspectives and reach a conclusion. PMI technique is particularly useful to examine controversial issues on which learners may already have formed opinions. To conduct a PMI, the educator writes the issue to be examined on the board. Learners are requested to list the **Plus** (good), **Minus** (bad), and **Interesting** points related to the statement (deBono, 1985: 14). For instance, a educator teaching professional issues might ask learners to conduct a PMI on the topic of termination of pregnancy on request. The challenge is to find as many P or M or I points as the individual learner can. Instead of intelligence being used to support a particular prejudice it is used to explore the issue or subject matter. In exercises, such as PMI, educators may find that learners identify all the points which the educator would have covered in a lecture.

4.10.13. Debate Technique

Use debate as a strategy for teaching critical, reflective thinking. Problems in health care are multi-causal, and their solutions require multiple interactions and advanced decision-making skills. Critical thinking involves justification of beliefs and argumentation. Debate focuses on the skills of argumentation. Debate is the midpoint in a deliberation that moves from problem to decision. When disagreement over the decision occurs, debate follows. Debate, according to Bell (1991: 6) is a reasoned advocacy for or against a proposal for the purpose of convincing others. The steps in debate include: analyzing the problem, finding evidence, compiling a brief, constructing a case, organizing a speech, planning refutation and rebuttal, rehearsing, and debating.

These steps in the process encompass all argumentation skills inherent to critical, reflective thinking. Debate provides a comprehensive and innovative learning mode. Debate is an effective learning tool in that it compels learners to confront biases, rethink ideas and beliefs, and find new justification for personal ideas in view of stronger arguments (Kurfiss, 1988).

4.10.14. Guided Imagery

Imagery is a very effective pedagogical technique that, according to Whatley, Maddox & Armstrong (Clarke & Biddle, 1993: 221), is well received by learners. Basically, guided and non-guided imagery techniques are nothing more than having learners relax and use their imagination. Application of these techniques can be found in the areas of medicine, health, psychology, counseling and even sports performance. Wherever there is a need to enhance personal well-being and performance, imaginal technology is utilized. The value of mental imagery technique to enhance the educational process has been demonstrated in virtually every area of academic endeavor.

Whatley, et.al. (Clarke & Biddle, 1993: 222) found that mental imaging is very effective in the business management classroom, as it increases scenario building and goal-setting productivity of students. In testing the efficacy of imagery to enhance decision-making

they found that imagery-trained students generated significantly more alternative solutions, more unique solutions, and more original solutions to decision-making exercises than non imagery-trained students.

According to Whatley, et.al. (Clarke & Biddle, 1993: 222-229):

- **Guided imagery techniques** can be script specific (students vicariously project themselves into a formally prepared script) or can employ an informal script to promote an atmosphere where students will visualize a particular topic and then act upon it.
- **Non-guided imagery techniques** involve exercises designed to induce a relaxed environment which will yield a high level of ideas and experiences.

Both of these imagery techniques allow development of creative and imaginative skills. Formative script guided imagery training allows a student to project him/herself into a script that has been prepared by the educator.

The formal steps used are:

- **Tonesetting and centering.** Students are oriented by explaining the basic format of learning and asked to take a few minutes to center their thoughts and emotions in the moment.
- **Self-induced relaxation.** Students are directed in a relaxation technique to induce a state of restfulness (a ten minute period).
- **Free imagery practice.** Present an open script to enable students to experience how to evoke clear and vivid images in their minds.
- **Specific script presentation.** Present the specific script to the students in a clear and balanced manner. **Instruct** them to visualize as vividly as possible the details of the script and to involve themselves cognitively and effectively in the process of guided imagery.

- **Free imagery practice.** Following presentation of the specific script, use a second free imagery session to reinforce learning and perceptions gained from the script. A short relaxation period combined with some initial suggestion on focus helps the students to actively use this new information in their imaging.
- **Retrieval and recentering.** Upon completion of the imaginal process request students in a gentle manner to re-focus their attention back into the moment and into the classroom environment. Imagery techniques create considerable relaxation and internal focus and it is important to recenter all students prior to ending the session.
- **Processing and debriefing.** At the completion of the session, opportunity for critical reflection and discussion should be allowed, so that students can review the experience, their feelings about it, and any unusual or positive aspects of the experience.

The main point in a guided imagery process is to allow the students to become comfortable with the relaxation process which is vital for the generation of vivid images. Some students may be uncomfortable with the process and the educator will need to overcome this resistance by fully explaining the imagery process and its related benefits. In addition a good script is vital if the vicarious guided imagery technique is to be a successful learning tool. Each script should contain a relaxation scene and should include specific suggestions to invoke images of the topic at hand. A script should not contain terms with strong emotional content which may disrupt the state of relaxation.

Informal script guided imagery technique involves a less formal script which normally centers around one particular topic. The educator gives students time to relax and then asks them to visualize some current or future event. After a short period of visualization students are requested to create what they envisioned in many different mediums such as modeling clay or coloured pipe cleaners. Once the students have completed their vision in the medium of their choice, they share their sculptures and its meaning with the class.

Non-guided imagery techniques can also be powerful tools to enhance imagination and creative skills. The technique includes the key ingredients of relaxation, no criticism, and processes which allows students the opportunity to utilize their imagery processes to develop new and novel approaches to various activities. Whatley, et.al., (Clarke & Biddle, 1993: 227-228) for example, use flip chart exercises to develop and reinforce management concepts and theories ranging from leadership styles to management information designs. This type of technique is a projection technique which generates excitement and a relaxed atmosphere conducive to greater degrees of divergent thinking:

- Students are directed to think about the management topic just discussed and to incorporate the underpinnings of the topic in images.
- The images are then consummated into a pictorial model or paradigm which the students draw on large sheets of flip chart paper.
- The flip chart papers are then taped to the classroom walls for all to observe and to learn from.

In addition to enhancing imagination and creativity, several other learner outcomes, according to Whatley, et.al., (Clarke & Biddle, 1993: 228), are obtained from flip chart exercises. The small group naturally provides a better stage for quality and quantity communication; students are more apt to offer their opinions during group projects and they feel more comfortable asking their peers about what they do not understand. Individual students feel more personally responsible, the motivational power of group membership is intensified by participating in cooperative group activities rather than competition and a learning experience evolves which will yield dividends later in learners' professional careers.

Guided imagery and other evisionary techniques are not teaching and training methods that are to be employed to the exclusion of other strategies. They should be utilized in conjunction with existing teaching methods to enhance the creative, reflective and imagery skills of students. The use of guided imagery in the classroom is limited only by the imagination of the educator.

4.11. Synthesis

The following table, table 4.4. shows the congruency between experiential learning, critical reflective learning and creativity.

Table 4.4. Relationships between the learning environments of experiential learning, critical reflective learning and creative learning

EXPERIENTIAL LEARNING	CRITICAL REFLECTIVE LEARNING	CREATIVE LEARNING
Open atmosphere <ul style="list-style-type: none"> • challenging • stimulating 	Open atmosphere <ul style="list-style-type: none"> • challenging • stimulating • reflective 	Psychological openness <ul style="list-style-type: none"> • emphatic • curious • psychological safety
Authenticity <ul style="list-style-type: none"> • mutual trust 	Authenticity <ul style="list-style-type: none"> • trust • respect • acceptance • risk-taking 	Authenticity <ul style="list-style-type: none"> • trust • respect • acceptance
Collaborativeness <ul style="list-style-type: none"> • critical, reflective observation <i>with</i> peers 	Collaborativeness <ul style="list-style-type: none"> • critical reflective thinking: individually and <i>with</i> others • flexibility • openness 	Collaborativeness <ul style="list-style-type: none"> • critical reflection • flexibility • brain storming
Affective and cognitive involvement	Affective and cognitive involvement	Affective and cognitive involvement
Supportive <ul style="list-style-type: none"> • respect • acceptance • spirit of inquiry • openness • collaboration 	Supportive <ul style="list-style-type: none"> • spirit of inquiry • openness • acknowledge all contributions • respect • acceptance 	Supportive <ul style="list-style-type: none"> • spirit of inquiry • encouragement • openness • acknowledge all contributions
Control <ul style="list-style-type: none"> • learner controlled • expanded consciousness, self-knowledge and self-evaluation • choice 	Control <ul style="list-style-type: none"> • individually controlled • expanded consciousness, self-knowledge and self-evaluation • risk-taking • curious • choice 	Control <ul style="list-style-type: none"> • individually controlled • persistence • curious • risk-taking
Non-judgemental <ul style="list-style-type: none"> • uniqueness of personal experience recognized 	Deferred judgement <ul style="list-style-type: none"> • openness • recognize uniqueness of personal experience and context 	Deferred judgement <ul style="list-style-type: none"> • relaxed • absence of threat

The experiential learning process, critical-reflective learning process, creative process and adult learning are similar in aims, assumptions and learning environments. The models have a flexible approach to learners, and attempt to match teaching and learning strategies to individual learner needs. Self-direction, autonomy, self-evaluation, responsibility, collaboration and the development of self-knowledge, self-esteem and openness are encouraged. Learners are supported by the educator and peers who act as co-learners and co-explorers. The environment is characterized by challenge, openness, risk-taking, healthy scepticism, mutual acceptance, psychological safety, reflection and playfulness. Freedom is allowed to question, think aloud, reflect, experiment, hypothesise, imagine and choose.

In an openlearning environment learners and educators provide psychological safety which encompasses willingness to listen to others, and respect for different viewpoints and theories. A spirit of healthy scepticism and inquiry is established so that learners feel free to verbalise their ideas, opinions and theories and to challenge each other.

The following table, table 4.5. shows the similarities and differences in processes and phases of the models reviewed under critical thinking, reflection, creativity and problem-solving.

Table 4.5. Similarities/differences in processes and phases

CRITICAL REFLECTIVE LEARNING PROCESS	EXPERIENTIAL LEARNING PROCESS	CREATIVE LEARNING PROCESS	PROBLEM SOLVING PROCESS
<p>Phase 1</p> <ul style="list-style-type: none"> • Awareness (Boud et.al., 1985) • Recall [descriptive] (Stockhausen, 1994) • Problem identification (Garrison, 1991) 	<p>Phase 1</p> <ul style="list-style-type: none"> • Exposure Consciousness Involvement Spatial memory (Steinaker & Bell, 1979; Caine & Caine, 1990) 	<p>Phase 1</p> <ul style="list-style-type: none"> • Preparation readiness (Siske, 1989) • Problem finding Redefining;; relocating; reframing (Barell, 1995) 	<p>Step 1</p> <ul style="list-style-type: none"> • Problem analysis Recognition Identification (Hester, 1994) • Recognize feelings about situation
<p>Phase 2</p> <ul style="list-style-type: none"> • Critical analysis thoughts and feelings. Heightened self-awareness (Stockhausen, 1994; Boud et. al., 1985; Boyd & Fales, 1983). • Exploration ideas; trigger- ing event and context (Brookfield, 1987; Garrison, 1991; Habermas, 1984). • Problem definition purposeful thinking; deliberation; questioning (Garrison, 1991) 	<p>Phase 2</p> <ul style="list-style-type: none"> • Participation Interaction with the experience: covertly (imagination or analogy) or overtly (group interaction). Modification of current experience (Steinaker & Bell, 1979; Ellison, 1993; Caine & Caine, 1990) 	<p>Phase 2</p> <ul style="list-style-type: none"> • Incubation Unconscious sorting (Siske, 1989) • Playing with variables <i>What-if</i> questions (Barell, 1995). 	<p>Step 2</p> <ul style="list-style-type: none"> • Hypotheses formation Collecting, choosing and managing information. Writing hypotheses (Hester, 1994). • Research gather information (Barell, 1995)

Table 4.5. continuation

CRITICAL REFLECTIVE LEARNING PROCESS	EXPERIENTIAL LEARNING PROCESS	CREATIVE LEARNING PROCESS	PROBLEM SOLVING PROCESS
<p>Phase 3:</p> <ul style="list-style-type: none"> • Perspective transformation • Learning: in-depth reflection, introspection, association, integration, validation, appropriation, openness/receptivity, resolution, creative synthesis and evaluation (Boud, et.al., 1985; Boyd & Fales, 1983; Stockhausen, 1994; Cust, 1995). • Exploration: alternative ideas, creative thinking and intuitive thought (Garrison, 1991). 	<p>Phase 3:</p> <ul style="list-style-type: none"> • Identification: Union of learner with experience. Cognitive and emotional involvement. Express need to share. (Steinaker & Bell, 1979) 	<p>Phase 3:</p> <ul style="list-style-type: none"> • Illumination • Inspiration • Insight: the <i>light bulb</i> moment (Siske, 1989) • Visualization (Barell, 1995) 	<p>Step 3:</p> <ul style="list-style-type: none"> • Examining and testing hypotheses <p>Recognize assumptions Develop implications Examine implications Interpret observations Draw conclusions (Hester, 1994)</p> <ul style="list-style-type: none"> • Represent the problem: <p>Visual thinking Picture drawing Charting Diagramming</p> <ul style="list-style-type: none"> • Deepening understanding • Transfer of previous knowledge
<p>Phase 4:</p> <ul style="list-style-type: none"> • Applicability: <p>abstract thought scepticism questioning critical analysis explanation hypothesis personal meaning (Garrison, 1991)</p>	<p>Phase 4:</p> <ul style="list-style-type: none"> • Internalization: <p>Change in attitude and activities . (Steinaker & Bell, 1979)</p>	<p>Phase 4:</p> <ul style="list-style-type: none"> • Verification: discipline and negotiation (Siske, 1989) • Personal projection (Barell, 1995) 	<p>Step 4:</p> <ul style="list-style-type: none"> • Relate to other problems, ideas and concepts. • Identify patterns (Barell, 1995)

Table 4.5. continuation

CRITICAL REFLECTIVE LEARNING PROCESS	EXPERIENTIAL LEARNING PROCESS	CREATIVE LEARNING PROCESS	PROBLEM SOLVING PROCESS
<p>Phase 5:</p> <ul style="list-style-type: none"> • Integration: testing; confirming; adopting [overt/imaginative action] (Garrison, 1991) 	<p>Phase 5:</p> <ul style="list-style-type: none"> • Dissemination: Influencing and motivating others to have equivalent experience. • Total cognitive and emotional involvement (Steinaker & Bell, 1979) 	<p>Phase 5:</p> <ul style="list-style-type: none"> • Metaphoric thinking: Crating and analyzing metaphors; analogies and models (Barell, 1995) 	<p>Step 5:</p> <ul style="list-style-type: none"> • Reduce: Break problems into parts. Identify reasons for problem. (Barell, 1995)
		<p>Phase 6:</p> <ul style="list-style-type: none"> • Story invention: Inventing Figuring out (Barell, 1995) 	<p>Step 6:</p> <ul style="list-style-type: none"> • Reflect: Assumptions Definitions Information (Barell, 1995)
			<p>Step 7:</p> <ul style="list-style-type: none"> • Resources: Identification Various perspectives/theoretical frameworks (Barell, 1995)
			<p>Step 8:</p> <ul style="list-style-type: none"> • Reasons: Play with variables. Identify causes. (Barell, 1995)

4.12. Theory building as a teachable process

The challenge in current curricula is to teach learners to manage the work of their own minds. Critical thinking, reflective and creative strategies cannot be taught by educators standing at the front of the classroom, instead, critical, reflective and creative strategies must be learned by individual students working cooperatively or alone, to make sense of course material. Critical, reflective and creative thinking should be the purpose of teaching. This type of thinking cannot be reduced to a single paradigm, protocol, or catalog of heuristics. The type of thinking required for success in modern life is adaptable to different demands. It is, according to Resnick (1987: 20-21):

- nonalgorithmic; the path of action is not fully specified in advance.
- complex; the total path is not mentally visible from any single vantage point.

This type of thinking :

- ▶ often yields multiple solutions, each with costs and benefits, rather than unique solutions.
- ▶ involves nuanced judgement and interpretation.
- ▶ involves uncertainty; not everything bearing on the task is known.
- ▶ involves the application of multiple, sometimes conflicting, criteria.
- ▶ involves self-regulation of the thinking processes, not regulation by others.
- ▶ involves imposing meaning and finding structure in apparent disorder.
- ▶ is effortful.

The central feature of critical, reflective and creative thinking is not skill in any particular kind of thinking strategy but the planned use of different strategies to fulfill different purposes. To think critically, reflectively and creatively about a subject, a student must first develop a purpose for thinking and then devise or select a method for moving toward that purpose. Thinking at it's broadest level, can move between concrete experiences and abstractions which explain the experience. In most subject areas, drawing inferences from facts is necessary to critical thinking.

Another avenue for movement in thinking is the use of established theories to plan, predict, or solve experiential problems. The use of theoretical constructions to explain, predict, or plan is a source of enormous power but it is also the source most resisted by learners. Movement in thinking also involves interaction between reflection and action. Humans reflect to adjust their actions, and the actions then give further cause for reflection. Critical thinking as continuous movement among abstract/concrete thinking and reflective/active thinking are visualized by the inquirer (adapted from Clarke & Biddle, 1993) in figure 4.6.

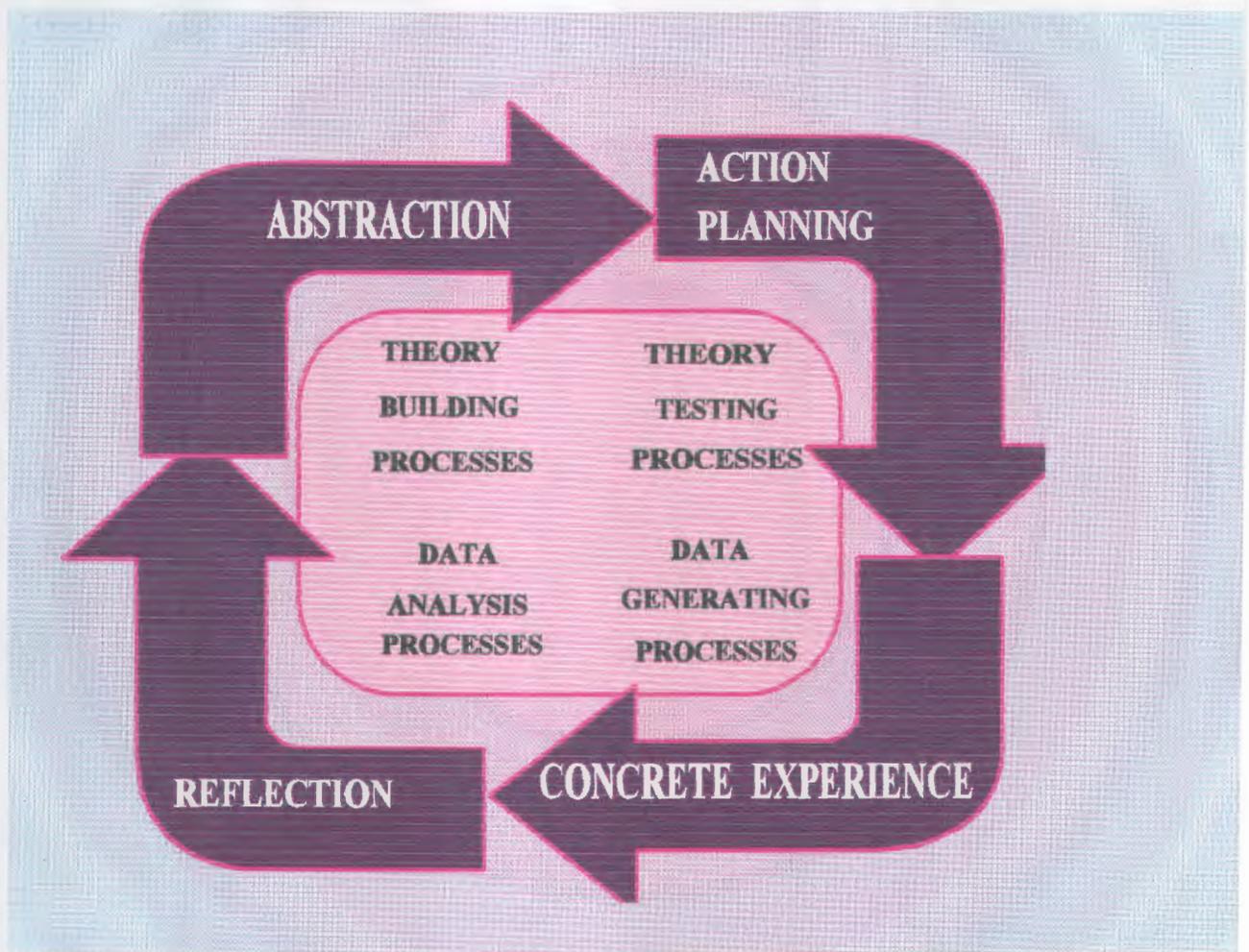


Figure 4.6. Critical thinking as continuous movement among processes

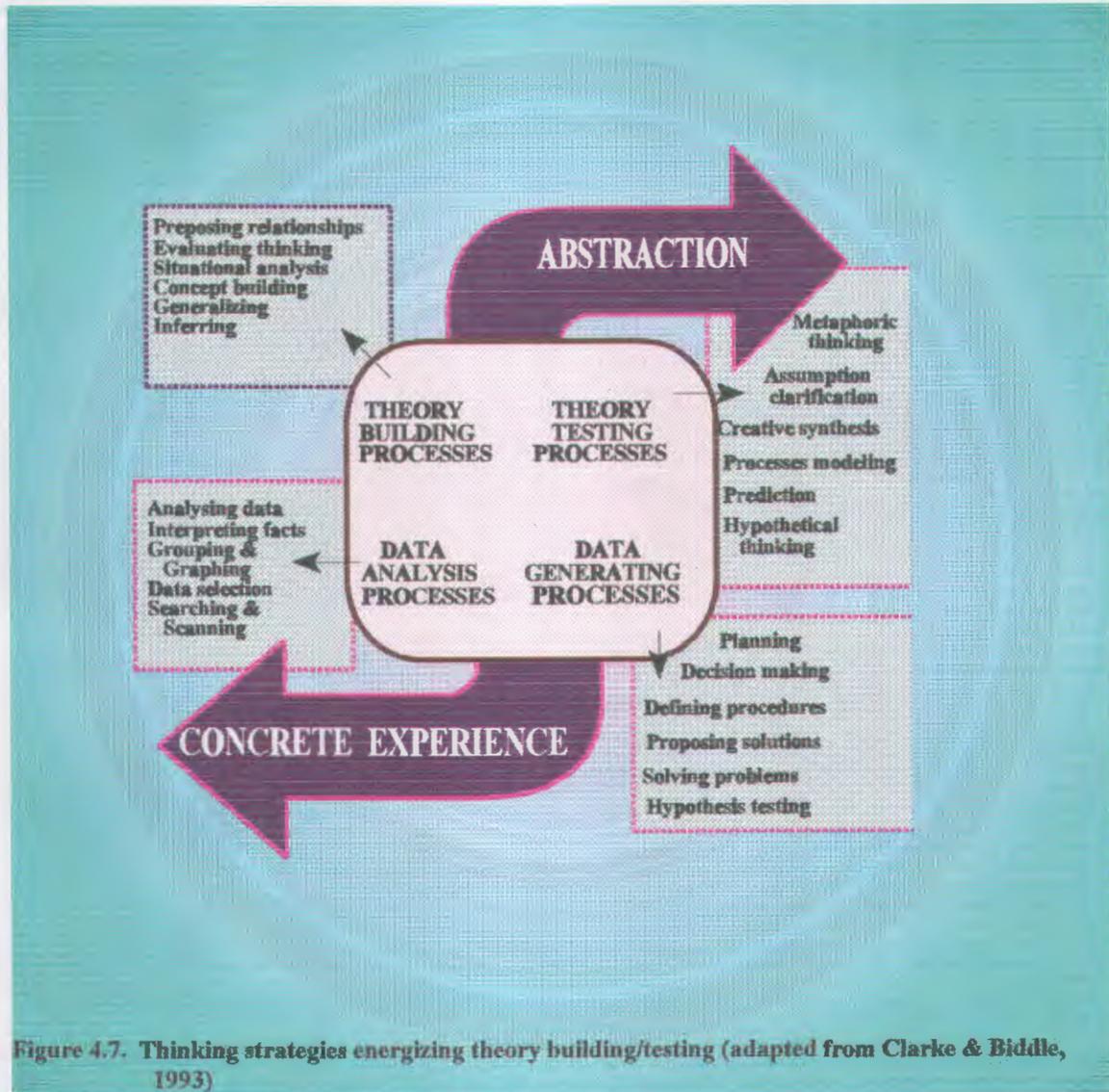
Figure 4.6. proposes that:

- **Data analysis processes** include movement from observed experience to reflection, selecting information, making connections and developing ideas that describe general patterns.
- **Theory building process** includes movement from reflection to abstraction, using observation, concepts, and generalization to propose cause-effect relationships.
- **Theory testing process** includes movement from theory to action, clarifying and synthesizing ideas as a basis for creating new ideas, planning, predicting, or designing.
- **Data generating process** includes movement from action planning to experience, developing processes or procedures for solving problems (Clarke & Biddle, 1993: 5-6).

Different kinds of thinking are thus, demonstrated by the educator and enacted by learners during a data gathering and interpreting phase, a theory generation phase, a theory testing or creative phase and a data gathering or problem-solving phase. Education should not aim solely at facilitating any one of these areas but should teach students to use any one of these strategies as the beginning point for another in a purposeful effort to make sense of information or develop new, creative ideas. Education should result in an continuous cycle of refinement and adjustment. In teaching critical, reflective and creative thinking, educators are teaching movement on a self-correcting cycle.

The following figure, figure 4.7. shows examples of specific critical, reflective and creative thinking strategies that could be used in the four processes. Thinking in different disciplines may begin at different points, for example: medical diagnosis often begins with a search of patient history, and then moves toward physical findings (data analysis), interpretation of findings (theory building), some hypothetical diagnoses (for theory testing) and a plan for treatment (data generating). Other science disciplines may begin questioning with clarification of assumptions, synthesis of findings and predicting (theory testing process) and then again move to a specific plan (data generating process) through data analysis and theory building.

Learners need to see and practice the kind of thinking professionals do in a subject area in order to build a flexible repertory of critical, reflective and creative thinking strategies.



Aspects of thinking - reflective and active, abstract and concrete - are inextricable in the human mind. It is one process - a cycle. If critical, reflective and creative thinking strategies were taught explicitly and demonstrated in higher education, learners could use them to make sense of academic experiences and experience at large.

4.12.1. Drawing inferences from facts

According to Clarke & Biddle (1993: 74) the human mind automatically draws inferences from facts. The human mind observes, infers, assembles generalizations i.e. creates theories to explain what is experienced - often without awareness. This lack of self-consciousness can create problems for learners who need to control their theory building to ensure that the process remains flexible and self-correcting. In all disciplines and professional areas, educators can teach learners how to manage the construction of theories so that their perspectives grow more sophisticated and their theories become more reliable for predicting, planning and higher level analysis.

The theories of learners exert tremendous influence on what they do. By teaching theory building, educators can guide learners to be more purposeful and successful in academic learning. What does it take to build a theory? Which intellectual skills are required to develop a coherent perspective on events? The process seems simple enough in linear form:

1. The theory builder gathers details that may have some relationship.
2. The theory builder draws inferences explaining connections between different details. connection.
3. The theory builder proposes general rules or explanations (theories) from the inferences drawn.
4. The theory builder uses the new theory to explain further details, adopt a new perspective, predict future events or plan solutions to foreseen problems.

The first two steps in the linear scheme (data gathering and making connections) are data analysis processes. The last two steps add predictive power to simple interpretation and add new purpose to classroom learning. In subject area learning, theory building hardly

ever achieves a simple linear form in that it is a circular self-correcting structure (Clarke & Biddle, 1993: 74-75).

All human beings are theory builders and spend a lifetime constructing a view (coherent, justifiable or useful) of the world. Humans to a large extent, inhabit a world of their own making, a world imbued with values, beliefs, prejudices and fears developed through years of exposure to detail, years of ceaseless theory building. It is therefore, necessary to teach learners how to manage the process of theory building so that they can revise beliefs which restrict their personal capability or understanding. By showing learners how built-in bias creates the possibility of error educators may prepare them to be creative, durable, flexible, disciplined and persistent in their search for truth. Theory making requires openness to an endless process of revision as illustrated in figure 4.8. (adapted from Clarke & Biddle, 1993: 75).

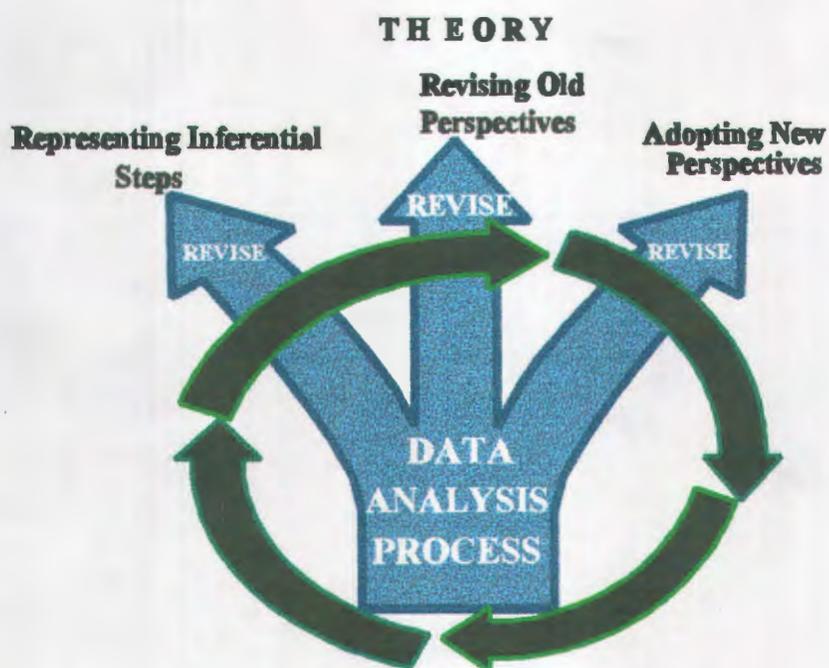


Figure 4.8. Developing perspectives: Theory building process

Theory building requires endless repetition, consideration and revision. Sudden awareness, commitment, falling back from commitment, leaping out, falling short, exhilaration and despair are all, according to Clarke & Biddle (1993: 78), part of the business of developing a perspective. An individual may hold a theoretical position for years only to completely revise that position after collecting a sufficient mass of contrary evidence. Educators should make learners aware that their own learning is a kind of theory making that parallels the work of the disciplines and applied sciences. They should teach learners how each discipline:

- aims to define a body of knowledge which can support the development of powerful new ideas.
- is refining it's methods for locating and interpreting information to reduce the risk of error.

The excitement of learning is in theory making, not memorization. Therefore it is up to the educator to represent and explain the intellectual work that links facts, inferences, generalizations, and theoretical propositions. It is the responsibility of the educator to repeatedly accompany learners through the process, until they sense the promise and risk of following different paths through information (data).

There are three challenges involved in teaching theory building:

- **Representing inferential steps.** The challenge of making an invisible process explicit to learners so that they can manage it.
- **Revising old perspectives.** The challenge of recognizing what learners already believe in order to use it as a basis for retheorizing or adopting new perspectives.
- **Adopting new perspectives.** The challenge of helping learners extend their theories in the light of it's implications.

Tinberg (In: Clarke & Biddle, 1993: 90-103) devised a writing course that encourages learners to reflect on the extent to which humans are "constructed" by culture: *How are*

we shaped and how are our choices defined by the traditions, beliefs, and values around us? To answer the question, learners must be able to see themselves through a kind of cultural frame. They must view their beliefs and behaviour within the context of their community's beliefs and behaviour. They must achieve a critical distance. The situation is analogous to that of the anthropologist who must stand outside the culture studied to read and interpret its larger structures and forms.

Enabling learners to interpret culture is not the only objective of this exercise, as Tinberg wants them to be convinced that theirs is a world "ripe with meaning and significance." (Clarke & Biddle, 1993: 90) The author suggests the following guidelines:

1. Enable learners to see themselves among others:

- Learners should be encouraged to see themselves as part of a group or community before attempting to define the term culture. This step is necessary to make discussions concrete since learners are encouraged to verbalise examples of groups to which they are affiliated.
- Begin by brainstorming the ingredients necessary for any community: people, a common purpose, a set of rules for its members to observe, a distinct language and various roles to be enacted.
- List various examples of communities from daily life, for instance religious dominations, political parties, families or nationalities.
- Ask learners to identify one community to which they belong and to describe the roles they and the other members play. Encourage them to reflect whether they are "leaders" or "followers" in the group and whether such terms are even relevant. The purpose being, that the learner in the end, should realize that the question of who leads and who follows, becomes subsumed by the interest of the community as a whole. Each member of the community pulls his or her own weight; each member is essential to the maintenance of the group.

2. Move from community to culture:

- A community's culture is central to its maintenance. Learners attention is now

directed to the idea of culture. Tinberg (Clarke & Biddle, 1993: 92) directs learners to culture by exposing them to an essay which describes what it is like to be amid a culture different from their own. Questions such as the following should be answered:

What are the obstacles that such a person faces in trying to observe and understand that culture? According to Tinberg (Clarke & Biddle, 1993: 93), many learners betray their own ethnocentrism when reading such essays.

3. Ask learners to identify a ritual for observation and interpretation:

- Before sending learners into the field for observation of a ritual, let them brainstorm the necessary ingredients for a culture's "ritual". They may for example, decide that it must have the following characteristics: repetition of action and a set or formal code of behaviour and rules. In other words rituals do not and cannot vary with each enactment.
- The learners then verbalize examples of rituals such as: a mass, in church wedding. Although there may be a great deal of difference in the relative complexity and depth of meaning among rituals, they all fall under the category of rituals.
- After observation in the field learners should interpret the behaviour observed and say what it all means. This enables the learner to capture the ritual in considerable detail and to begin the process of framing the action, thereby gaining critical distance from it.

4. Ask learners to research a narrower subject, yet one that speaks powerfully about popular culture:

- Tinberg (Clarke & Biddle, 1993: 94) use television advertisements to approach the subject of popular culture, by requesting learners to answer the following question: *Is it possible that television advertisements may say as much about popular culture as does? Is it possible that television may be selling more than particular products, but certain beliefs and values as well?*
- Learners are requested to read a television advertisement, as they had done with a "live ritual." They are advised to describe what they observe, paying attention to seemingly

peripheral images such as clothing worn and background furniture.

- Request learners to probe further what the images are saying: *Who is the targeted audience? How exactly is the audience being appealed to? What, finally, does the advertisement say about the culture's values and beliefs?*

The inquirer is of the opinion that much can be gained by this kind of *research into culture* as described by Tinberg (1993). Learners in *reading their worlds*, acquire a way of seeing what is critical and reflective. When learners can view a television commercial, for example, as a construction of various cultural attitudes and values, they have arrived at a new and richer way of seeing. It puts the observer in the position of making sense of the world, a position of personal empowerment which learners seldom feel in traditional classrooms where they receive information rather than seeking it out themselves.

4.12.2. Examining ideas and relationships: theory testing processes

Once learners have developed a set of ideas, they can begin to move those ideas around, asking new questions, testing relationships, thinking hypothetically, imagining alternatives, and projecting different visions of the future. According to Clarke & Biddle (1993: 123), the human mind can manage its ideas without constraint when free of its reliance on sensory data. Free of external stimulation, the human mind can:

- juxtapose distinct ideas to create new ones.
- move fast across time and view invisible forces working to shape events.
- create visions of a future which does not yet exist, and then imagine ways to bring that future into being.

The human mind can create experience in its own right. "What if?" is the creative question. Humans ask questions that can change the universe and personal experience of it thinking hypothetically. To shift ideas existing in the mind can generate extraordinary insight and creativity.

In its strictest sense the process of thinking is a process of managing metaphors (Clarke & Biddle, 1993: 124). All learning requires metaphoric thinking to the extent

that all language is a metaphor of experience. The word metaphor, itself, can be traced back to two Greek terms - "meta" meaning across or beyond and "Pherein" spelled with an initial P-h sound (the Greek verb "to carry" or "bear") later showed up in English as "ferry." A ferry boat is designed to carry or bear passengers. It also showed up in the final syllable of the English word "transfer." The word "metaphor" derived from the same Greek words means to carry or transfer meaning from one sense experience to another. Metaphor implies the possibility to see and interpret experience in entirely new ways. It is a peculiarly human capacity of which most humans are completely unconscious (Eddy, quoted in Clarke & Biddle, 1993: 124). In this way words may be described as verbal images for nonverbal experiences. Humans use familiar words to examine the unfamiliar, they use what they know as a platform for understanding what they do not yet understand. They use their mental models to imagine changing the world of physical experience.

Educators should therefore, show learners how to construct better models for the world in which they live thus enabling them to gain control over a wider spectrum of human experience. Learners should learn to manage ideas by:

- **making metaphor.** The challenge of seeking out familiar metaphors for unfamiliar ideas.
- **expanding ideas.** The challenge of testing relationships among ideas and assessing their implications.
- **creating new vision.** The challenge of fashioning new ideas for use in solving problems (see figure 4.9.).

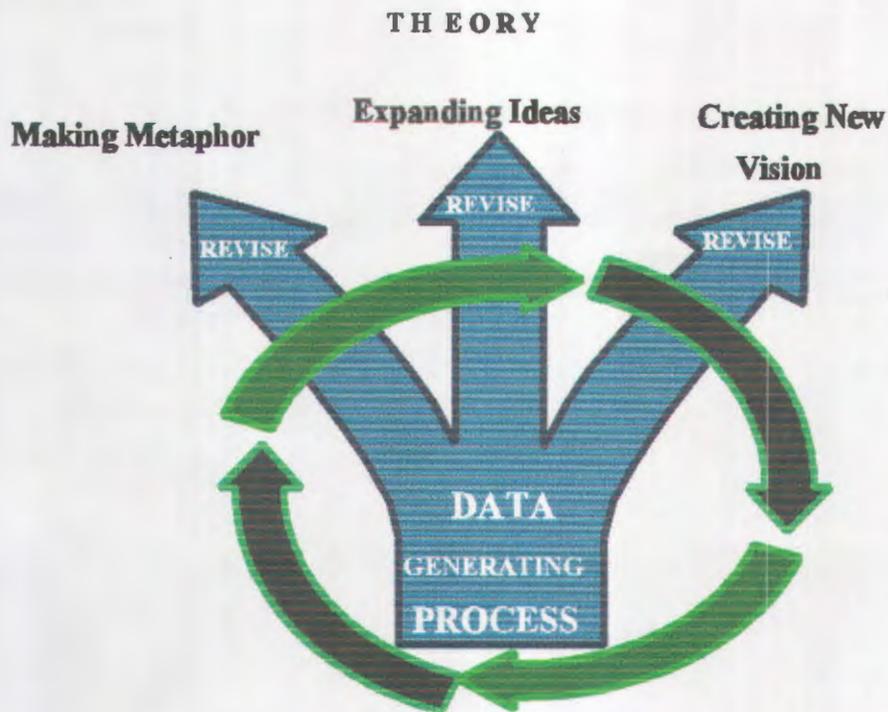


Figure 4.9. Teaching learners to manage ideas (adopted from Clarke & Biddle, 1993: 124)

Examples of:

1. Making metaphor:

- In teaching literature, Rubano (Clarke & Biddle, 1993: 129) saw that discussion of literature stalled easily because learners had little prior knowledge to use in interpreting classical texts. As a result he taught learners to use provocative but

common metaphors as a doorway to character analysis. He believes that if learners can recognize the resemblance between a character in Shakespeare and objects from daily life, they will also search text more efficiently to extend that metaphor.

- Demetrulias (Clarke & Biddle, 1993: 130) uses metaphor to expand learners' understanding of statistics. Memorizing formula and working through problems failed to teach statistical concepts. Through the use of metaphor she shows learners the distinctive elements which make different statistical concepts useful. For example Demetrulias, asks learners to see different statistical tests as members of one family and then to verbalize how different statistical tests respond to calamity. By using familiar ideas as a base, she devised a method for helping learners understand difficult concepts and their relationships.

2. Expanding ideas:

- Blachowicz (Clarke & Biddle, 1993: 130) recognized that the vocabulary of a content area is the key to model making in any area. Asking learners to memorize vast lists of words, however, is counterproductive. The learner who most needs the words, has the least success with memorizing. In addition a list of memorized words disguises the relationships that give power to ideas. Blachowicz therefore decided to vocabulary building as testing words against each other. By asking her learners to assert a base of relationships first, she empowers them to add new elements and test new ideas against the structure of relationships they have asserted. In doing so the new vocabulary becomes part of the mental network they are creating and the network expands in size and complexity.
- Daemmrich (Clarke & Biddle, 1993: 130) wanting learners to recognize the pervasive power of rituals in human experience asked learners to examine their own recent college experiences and to develop a hypothesis explaining a familiar ritual (this was done before lecturing on the power of rituals in cultures). With this hypothesis in view learners begin to examine rituals increasingly removed from their personal lives and to alter their initial hypothesis as new patterns emerged. In doing so learners gained analytic and predictive power.

3. Creating new vision:

- Leff, Nevin, Meeker, Cogan & Isenberg (Clarke & Biddle, 1993: 130) began to see that students in psychology were not learning effectively because they failed to actively reconstruct and apply the ideas of psychology. To make their students aware of the mental processes which make ideas useful, Leff developed the format of an awareness plan, an exercise requiring students to apply difficult ideas to daily problems. According to Leff and his colleagues the awareness plan creates novel solutions and gives specific form to creative thinking processes.
- Chilcoat (Clarke & Biddle, 1993: 131) wanted learners to recognize how popular art reflects culture, specifically in nineteenth century America. The students created dime novels to represent American culture. Recognizing that dime novels reflect popular values in ways which more formal writing ignores, Chilcoat asked his students to study both nineteenth-century culture and the conventions of the dime novel. They had to look carefully at indicators of cultural value during the nineteenth century and then write their own dime novels reflecting the perceived values. Their writing became a vehicle for the ideas that they were trying to analyze. The dime novels from different students became the subject of interpretation in class.

4.13. The need to infuse critical, reflective thinking into in-service design for educators

According to Paul & Binker (Paul, 1990(b): 379) "no one can teach critical thinking who does not think critically." It is the opinion of these authors that most educators did not have their own critical and reflective thinking developed when they were learners. Therefore, educators need to be involved in in-service training that is designed to accomplish two ends: (1) to stimulate and develop critical, reflective thinking of educators and (2) to help them transform their teaching from a didactic to a critical, reflective, dialogical model of education. These objectives can be met by involving educators in what Paul & Binker (Paul, 1990(b): 379) refer to as "a lesson plan

remodelling strategy."

The basic idea behind this strategy for staff development in critical, reflective thinking is to critique one or more lesson plans and to formulate one or more new lesson plans based on critical- reflective process. Lesson plan remodelling is seen as a powerful tool in developing critical, reflective skill in educators, in that it is:

- action-oriented. It puts an immediate emphasis on close examination and critical, reflective assessment of what is taught on a day-to-day basis.
- more manageable. It makes the problem of critical thinking infusion more manageable by paring it down to the critique of a particular lesson plan, and the progressive infusion of particular principles. Few educators have patience with abstract theory, or have any experience in developing it. However, someone must translate the concepts into principles, link the principles to applications, and implement them in specific lessons.
- a means of cooperative learning for educators, as results can be collected and shared.
- respectful of the autonomy and professionalism of educators. The educators choose the strategies to use in a particular situation and control the rate and style of integration. The educator can apply the strategies to any kind of material: textbook lessons, the educator's own lessons or units, discussion outside the formal lessons, discussion of movies, etc.

Learning the art of lesson plan remodelling can according to Paul & Binker (Paul (b), 1990: 382) be separated into five tasks (each focussing on some stage of in-service activity). These tasks are summarized in text box 4.7. (following page)

These tasks, goals, or understandings (adapted from Paul & Binker, 1990) are interrelated and achieving any of them or all of them is a matter of degree. The authors therefore, warn against trying to achieve "complete" understanding of them before proceeding to the others. Paul & Binker (Paul (b), 1990: 382) also emphasize that understanding should be viewed practically or pragmatically - the educator's mind must be actively engaged

at each point in the process - concepts, principles, applications, critiques, and remodels.

Text box 4.7. Beginning to infuse critical-reflective thinking

1. **Clarify the global concept** - How is the fairminded critical thinker unlike the self-serving critical thinker and the uncritical thinker? What is it to think critically? Reflectively? Why think critically? Reflectively?
2. **Understand the component principles** underlying the component critical-reflective values, skills and processes. What are the basic values that strong sense critical-reflective thinking presupposes? What are its macro-processes? What are the micro-skills of critical-reflective thinking? What do critical-reflective thinkers do? Why? What do they avoid doing? Why?
3. **Seeing ways to use the various component strategies in the classroom** - When can each aspect of critical, reflective thought be fostered? When is each most needed? What contexts most require each dimension? What questions or activities foster it?
4. **Getting experience in lesson plan critique**- What are the strengths and weaknesses of this lesson? What critical, reflective principles, concepts, or strategies apply to it? What important concepts, insights, and issues underlie this lesson? Are they adequately emphasized and explained? What use would the well-educated person make of this material? Will the usefulness be clear to the learners?
5. **Getting experience in lesson plan remodelling**- How can I take full advantage of the strengths of this lesson? How can this material be best used to foster critical, reflective insights? Which questions or activities should I drop, use, alter, or expand upon? What should I add to it? How can I best promote genuine understanding of this material?

At each level, "hands-on" activities should immediately follow an introduction of explanatory or illustrative material. Educators involved in this staff development process, should understand that initial practice is not the same as the final product. That what is remodeled today by critical-reflective thought can be remodeled tomorrow and improved progressively thereafter as experience, skills, and insights grow.

However, too much time on the general formulations of what critical, reflective thinking is should be prevented, as educators should develop an operational view of critical-reflective thinking. An operational view includes understanding of it as a particular intellectual behaviour derivative of basic insights, commitments, attitudes and principles. Critical-reflective thinking "is not a set of high-sounding platitudes, but a very real and practical way to think things out and act upon that thought." (Paul, 1990(b): 383).

This viewpoint agrees with Jacobs, Ott, Sullivan, Ulrich & Short (1997: 19) who identifies the need for educators to define and operationalize critical thinking.

Text box 4.8. Principles facilitating the infusion of critical, reflective thinking in educators

- **Involve the widest possible spectrum of people in discussing, articulating, and implementing the effort to infuse critical-reflective thinking.** This includes educators, administrators, learners, clinical practitioners.
- **Provide incentives to those who move forward in the implementation process.** Focus attention on those who make special efforts. Do not embarrass or draw attention to those who do not.
- **Work continually to institutionalize the changes made as the understanding of critical, reflective thinking grows. Make sure that the goals and strategies being used are deeply embedded in the institutions statements and articulations.**
- **Foster discussion in how progress in critical, reflective thinking instruction can be made permanent and continuous.**
- **Honor individual differences among educators.** Maximize the opportunities for educators to pursue critical, reflective thinking strategies in keeping with their own educational philosophy. Enforcing conformity is incompatible with the spirit of critical, reflective thinking.

Defining, operationalizing and evaluating critical thinking is a continuing process which becomes increasingly complex the more the educator learns about it. The effort however, is necessary as the definition and indicators should be meaningful and usable for educators and learners of nursing. Educators, according to Paul & Binker (1990: 383) need to see how acceptance of the general concept of critical thinking and reflection translates into clear and practical thinking, teaching and learning strategies.

Lesson plan remodelling as a strategy for staff development and curriculum development is not a simple, one-shot approach. It requires patience and commitment as enthusiasm for critical, reflective strategies will grow over time. However, it is important for management or the educator who facilitates this process to remember the principles summarised in text box 4.8.

In planning and giving workshops, workshop leaders should:

- Model for educators the behaviour they wish them to learn and internalize. This teaching behaviour includes getting the participants actively involved, calling upon and using previous experience and knowledge of participants, and letting the participants process and deal with ideas rather than just lecturing them.
- Use the discovery method, allowing educators to internalize ideas and giving time for discussion and elaboration.
- Include writing in their plans, as individuals internalize what they can process in their own words.

The remodelling approach has a number of advantages, but the most important is that it avoids the pitfalls of prepackaged materials, which educators follow without understanding why or even what the process is that is followed. Pre-packaged material does not provide an opportunity for educators to gain insight and reflection into personal teaching. The remodelling plan infuses critical, reflective thinking into the curriculum rather than treating it as a separate subject, an "add on" to an already over crowded curriculum. It is practical and manageable in that educators do not need to feel overwhelmed in their attempts to change an entire curriculum immediately. Educators are able to exercise their professional judgement in deciding when, at what rate, and how their lesson plans can be infused with more critical thinking.

Critical reflection by its nature, is however a very intangible topic to attempt to teach unlike factual knowledge or technical skill. Educators have no control over the learning outcomes for such a process and some of the outcomes may be very threatening for learners and practitioners alike. How one assesses whether the individual is critical reflective or otherwise is also problematic. Educators at present have limited means by which they can measure critical reflection or indeed assess that critical reflection on practice has taken or is taking place. Accepting the word of a learner concerning their ability to critically reflect may not be sufficient to ensure that critical reflection is occurring at different levels: the technical, the practical, the moral-ethical and the personal (James & Clarke, 1994: 89).

4.14. Assumptions derived from the literature reviewed

The inquirer derived the following assumptions from the literature reviewed:

- Conscious awareness of *the self* and the environment is a prerequisite for critical reflective practice.
- Sense of *agency* is dependent on the social, political, professional, organizational and cultural environment which the learner or practitioner finds themselves.
- Effective thinking is the result of *conditionalized* knowledge - knowledge that becomes associated with the conditions and constraints of its use.
- Ability to make inferences and to generate new information is fostered by ensuring maximum contact with prior knowledge.
- Pre-existing theories (schematic knowledge) need to be challenged, thought about, modified, replaced, or confirmed in the course of the development of critical reflective ability.
- The need for critical reflection on practice will only be internalized by learners/practitioners if the environment is one in which knowledge and skills are the objects of interrogation, inquiry, and extrapolation.
- Expert problem-solving is organized around principles and abstractions.
- Critical-reflective skills develop not as abstract mechanisms of heuristic search and memory processing. They develop as the content and concepts of a knowledge domain are obtained in learning situations which constrain the knowledge to serve certain purposes and goals.

- Critical-reflective skills will only be internalized if learners *consciously* focus on their own experiences in the practice situation and learn to *value* what they are experiencing.
- Problem-solving ability does not necessarily mirror critical reflective and creative ability in the learner or practitioner.
- Learners must experience dialogical thinking which is essential for a rational approach to problems, and recognition of weaknesses in currently held theories and viewpoints.
- To strengthen learners' and practitioners' critical thinking, reflective and creative skills, they need to learn to live comfortably (not complacently) with the ambiguous question mark (uncertainty).
- Critical reflective practice involves personal, professional, and political risk for the learner and nurse practitioner.
- A supportive *community* (peer group) can help the learner and practitioner to cope with the risks involved in being a critical, reflective thinker in a "hostile" environment.
- The explanatory power of critical, reflective process can enable nurse practitioners and learners to reject a determinist view to nursing and their personal lives.
- The learner or practitioner must recognize the need to bracket prior judgement and hold personal bias in abeyance, in order not to block the creative exploration of alternative ideas.
- Abstract and propositional skills do not occur naturally. These skills must be taught, practiced, refined and reinforced.
- Critical reflective process and self-reflection can enable the learner or practitioner to gain insight into their personal perception of a situation and the assumptions embedded therein.

- *The self* has the ability to detach, analyze, and examine alternatives systematically and can commit itself to the necessity of personal choice in a relativistic world after the relative merits of alternatives have been examined.
- Critical reflective *involvement* in practice is only possible if the learner or practitioner recognizes the need for self-awareness, open-mindedness, a multilogical orientation, imagination and proactive thought.
- Nursing actions without critical reflection do not result in informed, intentional behaviour.
- Nurse practitioners and learners must learn the art of self-critique and moral self-examination through critical reflective process by which they may acquire sensitivity to everyday pitfalls of moral judgement, moral intolerance, self-deception and uncritical conformity.
- Only critical reflective thinkers enter sympathetically into opposing points of view, in that they recognize weaknesses in their own.
- The learning environment for development of critical reflective skills is controlled by the learner while the role of the educator is that of a facilitator.
- Experiential learning places emphasis on the experience, situation, problem and process, rather than on the solution.
- Learner support in creative learning environments involves acknowledgement of all contributions and encouraging flexibility and persistence; assisting learners to cope with failure and frustration and assisting learners to become more sensitive to others' viewpoints, feelings and experiences.
- Experiential learning experiences ensure active participation by the learner, in that it requires the total affective and cognitive involvement of the learner.
- Experiential learning results in cooperative learning, as learners share ideas, knowledge.

perspectives and approaches. Learners proceed to a higher level of understanding and critical thinking by sharing, explaining and elaborating their own ideas, and listening to others.

- Metaphor and analogical thought can be developed through cooperative dialogue, thus, promoting critical thinking, reflection and creative thinking.
- Openness in the learning environment and in the learner is essential to the optimal facilitation of learning and understanding. Openness is characterized by honesty, responsibility, sense of *agency* (commitment to freedom), respect, self-discipline and self-and-other-directed.
- Learning is dialectic in nature. Learning involves a resolution of the conflict between concrete experience and abstract concepts and conflict between observation and action. Freire (1972) demonstrates the nature of dialectic learning and adaptation in his concept *praxis*, which he describes as *reflection and action upon the world* in order to *transform* it.
- Experiential knowledge is knowledge through relationship. It requires interaction (transaction) between the person and the environment. Experiential knowledge is knowledge gained through direct encounter with a subject, person or thing. It is the subjective and affective nature of the encounter which contributes to this sort of knowledge.
- Effective problem-solving requires not only critical thinking skills but also subject specific skills and knowledge. Learners need to be taught the skills, concepts and facts associated with a variety of subjects.
- The learning environment must facilitate understanding of the importance of risk taking (experimentation) and the need to experience failure.
- A practitioner critically reflecting-in-action, becomes a researcher in the practice context as he or she is not dependent on the categories of established theory and technique.
- The learning environment must facilitate understanding of the need to forgo early

conclusions and why it is necessary to find meaning (structure) in apparent disorder by searching for relationships among facts, ideas, concepts, and similar situations.

Thoughtful practitioners are not reactive. They do not react impulsively in complex situations but rather gather information before acting. Thoughtful practitioners are research oriented. Thoughtful practice reflects creative thinking ability.

Thoughtfulness involves thinking that enables the practitioner to go beyond the boundaries and constraints of the immediate situation.

- It is important to stress the role of subjective elements in critical, reflective thinking, because the term critical thinking is usually identified with a strictly impersonal or objective mode of analysis.
- Educators are really teaching frameworks or modes of perception, not mere facts and formulas when teaching learners the knowledge base of any academic discipline and even more in teaching them to think critically and reflectively about it. Teaching of critical, reflective thinking skills is not the teaching of logic, but the teaching of perception.
- Educators should present their own opinions and those of others and distinguish clearly between the two. Learners must to be aware of this distinction and they need to know that even acknowledged experts struggle to maintain a balance between objective and subjective elements in their thinking.
- Educators should not act as passive facilitators of learning, but as empathetic provocateurs, creating dilemmas which encourage, learners to face up to: contradictions between what they believe and what they do, disjunctions between espoused theory and actual practice and discrepancies between a specific way of seeing, thinking, feeling, and acting and other perspectives which may prove more inclusive, differentiating, and integrative of experience.
- It is pointless for the educators to ask critical, insightful questions if learners are insulted or intimidated in the process. Learners need to be respected and valued as individuals or they will mentally disengage from the process. A key to successful teaching or critical reflective thinking is to simultaneously challenge learners' old

modes of thinking and provide structure and support for the development of new ones.

- It is important to mirror the thinkers' ideas and actions. One of the most useful tasks an educator can perform is to reflect their attitudes, rationalizations, and habitual ways of thinking and acting to learners. In mirroring learner's views they learn to reflect on their own motivation, action and justification as if it were those of others.
- At the outset the educator may know more about the subject than learners but he or she relearns what is initially known in the context of the learners' efforts to interpret the insights in their own lives.
- By modeling critical, reflective thought in lectures and discussions, educators can do much to encourage a critical, reflective frame of mind in learners. Positive role models exhibit external, specific behaviour that allows for interpretative imitation (not slavish replication) by observers.
- The ability to reflect upon one's practice is essential for competency in nursing. During critical, reflective thinking new questions, strategies and objectives are formulated which are based on the nurse practitioner's repertoire of theoretical principles, technical knowledge and experience.
- Metaphor and analogical thought can be developed during cooperative learning through the dialogue between peers.
- Cooperative learning promotes a higher level of cognitive and moral reasoning than competitive or individualized learning.
- Cooperative learning in brainstorming sessions, group discussions, and the "six hats" technique, focuses on questioning and diversity rather than on answers. In this way critical, reflective and intuitive thinking is encouraged.

4.15. Tactical recommendations

Considering the literature reviewed, the inquirer poses the following tactical

recommendations to guide educators in helping learners to use critical, reflective and creative reasoning in learning content:

- **Cover less content so that learners learn more.** It is the opinion of the inquirer that unnecessary content overload results in superficial and temporary learning. Responsible nursing practice depends on deep learning and retention of knowledge for application in practice. Superficial learning occurs when learners are exposed to a myriad of information which they memorize and learn as disjointed ideas. Learners need an opportunity to analyze content, by breaking it down into its component parts and reassembling it into cohesive wholes.
- **Design the presentation of content in a manner which enables learners to acquire and apply organizing concepts which facilitate increased retention of the content transmitted.** Focus on fundamental concepts which have a high generalizability to practice. Examine courses critically for the most fundamental concepts and limit excessive coverage. Design courses in a way which allows learners opportunities to analyze the fundamental concepts while engaging in problem-solving and critical, reflective activities.
- **Use concrete examples to illustrate abstract concepts and abstract thinking.** Quote experiences which are more or less common in the lives of learners (relevant to what is lectured).
- **Teach learners to read texts for themselves, actively, critically and reflectively.** Focus on how they should read the text and not on the educator reading the text for them.
- **Speak less as an educator so that learners think more.** Strive to lecture no more than 25% of the total lecture time.
- **Model the critical, reflective thinking required for learners.** The educator should think out aloud, puzzling his or her way through problems and issues in the subject area and clinical setting.
- **Question learners Socratically.** Probe various dimensions of learners' thinking

including their purpose, their evidence, motivations, data, assumptions, interpretations, deductions and conclusions as well as the implications and consequences of their thoughts and their response to alternate thinking from contrasting points of view.

- **Pose challenges to learner thinking and reasoning by encouraging exploration of alternate points of view and theories.**
- **Design classroom activities so that learners begin to recognize the importance of assessing their own thinking and work while it is in progress.** Encourage learners to apply intellectual standards by questioning their own thinking routinely: *Is my thinking clear, objective, accurate, precise, relevant, complete and consistent?*
- **Infuse content through and continuously shape it by goals, questions, problems, ideas, concepts, principles, theories, evidence, data and reasons, interpretations, inferences and lines of formulated thought, consequences and implications and a personal point of view.**
- **Allow learners to critically and reflectively reason their way through the logic of nursing practice.** In doing it they will transform information into knowledge which then becomes the basis of sound intuitive and critically monitored practice. By critically monitoring intuitive practice the professional nurse avoids prejudice, gains genuine knowledge and ensures that quality care is provided by a thoughtful practitioner (Paul & Heaslip, 1995: 47).
- **A body of knowledge cannot be given to another.** Educators can 'expose' learners to a body of 'information' but only the learners, through their personal intellectual reasoning can transform it into knowledge. Information given to a person only becomes knowledge when the person verifies it and not merely assumes that it is true because they heard it or read it somewhere (Paul & Heslip, 1995: 41). Learners need assistance to critically and reflectively 'digest' information in such a way as to transform given information into conscious knowledge. They require assistance in sorting through information, i.e., in analyzing, categorizing, doubting, synthesizing and testing it, to 'construct' a knowledge base to be utilized in nursing practice. This process occurs when learners have opportunities to engage in dialogue about their experiences.

- **The learner must repeatedly reflect critically on practice to initiate the process of building a repertoire of knowledgeable expectations related to the various scenarios present in practice.** The learner must continuously question and critically consider the variety of case scenarios present in practice, noting similarities and differences and gaining experience in critical and reflective reasoning. Expert nurse practitioners do not simply have sound intuitions, they also have highly developed skills of using critical reflective thought to focus on what is 'critical' and 'problematic'. They can think through a situation to determine where intuition and ignorance interface with each other. Expert nurse practitioners "are not gods who know everything immediately, directly, and intuitively." (Paul & Heaslip, 1995: 43)

Expert nurse practitioners have learned the art of critically 'noticing'. They are always on the alert for unusual circumstances or deviations from the norm, constantly reassessing fundamental knowledge for accuracy and relevance in new situations, thereby avoiding distortions and generalizations based on misconceptions and prejudicial judgements. Sound professional practice is both intuitively thoughtful and self-consciously critical.

- **Enable learners to maintain awareness of their assumptions.** Sound nursing practice requires nurse practitioners to maintain awareness of their assumptions. Assumptions are the starting points of reasoning. Any defect in the starting points of reasoning, in what is taken for granted, is a possible source of problems.
- **Ask learners for 'justified' reasons.** Continuously ask questions such as the following: *Why are you defining your purpose in this or that way? Why did you use this concept or theory and not that? Why did you interpret the information in this way rather than that? Why did you collect this data and not that? Why did you decide to intervene in this way and not that way? Why did you decide to choose to evaluate this aspect of care and not another?*

Questioning exposes implicit and explicit reasoning.

- **Tolerate silence.** When pausing in a lecture to ask a question, the educator should

note the time waited before providing the answer if no one responds. Most educators wait only one or two seconds but they should try to extend their tolerance of silence to at least ten seconds. Usually, a learner will volunteer an answer before the time limit expires. Even if no one does, the learners will have spent the ten seconds actively considering the question asked.

Bateman (1990) describes the discomfort that silence produces for the educator. He goes on however, to offer reassurance that, with a bit of patience and practice, both the educator and the learners will learn to discuss an issue, to question an assumption, to define a concept, to explore alternatives, and to gain the skills needed for critical, reflective thinking.

- **Create disequilibrium.** Learners learn better when the educator creates a sense of cognitive disequilibrium - when the educator raises questions which they cannot immediately answer. Bain & Travis (1994: 18-20) suggest that the educator should "create an expectation of failure" by asking learners a question which demonstrates that their previous mental models do not always work.

Elliott (1996: 50) suggests that, when educators introduce the topic of nursing theories, they should present learners with a description of eight hypothetical clients to whom they might be assigned on an eight-hour shift. Learners should be reminded that eight hour shifts will seldom allow them to meet all identified client needs. Ask learners to list the needs they would address in priority order. Ask them to share their decisions, as it is certain to create disequilibrium. Their priorities will be challenged by peers and they should account for the priorities they have set. According to Elliott, learners' priorities may reflect their theory of nursing - a possibility that the educator can proceed to explore.

- **Make learning meaningful.** To think critically learners must first be able to attend, to retain and to retrieve relevant information. This can be done more efficiently if the information is meaningful and associated with previous learning. Use analogies to make content meaningful and to create bridges between familiar and new content.
- **Recognize and use different paradigms.** Recognizing paradigms is closely related to

identifying assumptions. A paradigm or point of view influences the individual's view of other people or issues, what data they 'see,' and what they fail to 'see.' (Case, 1994: 101- 109) According to Chubinski (1996: 24) paraphrasing or summarizing classmates' comments is a quick, easy way to practice the skill.

A learner can be asked to summarize the class discussion up to a point, as well as the point of view of the class. Another learner can be asked to describe a contrasting point of view. Paradigm trades involve personification of important persons or theories by learners. Optimally, learners should recognize differences and conflicting concerns.

- **Demonstrate different methods of reasoning.** Methods such as decision analysis can be used in groups to improve the quality of personal and professional decisions. This method forces learners to deal with values and criteria for decision making. There are no correct answers to these exercises. Learners can for instance be provided with a list of fourteen people who survived a nuclear accident and need to go into a fallout shelter. Their assignment will be to select seven people from the list of fourteen to go into the shelter.

Once the group's decision time has elapsed, all group answers and rationales are shared with the class. The decision methods are the focus of the discussion as groups have to defend their criteria for inclusion of the seven people selected. Learners might find the most difficult is to acknowledge that a decision was made on an emotional or impulsive basis.

- **Enable learners to determine what is fact, fiction, or opinion.** Chubinski (1996: 26) suggests a quick, easy strategy to demonstrate this skill. She exercises the skill by "reading the newspaper in colour." A newspaper article is taken and the facts underlined in blue, opinions in red, and fiction in green. This reinforces learners' critical reading ability.

- **Enable learners to identify relationships of data.** This skill is very important in a data-intensive profession such as nursing. Metaphors can enable learners to see relationships between data - often even between two unrelated items. Such exercises can enable learners to use imaginative thinking and to look at familiar subjects in a new and creative way. After learners have, for instance, been taking care of cancer patients for a few weeks, they should be able to complete the following phrase: "All cancer patients have _____ in common."
In this exercise learners are encouraged to use their imagination and look at familiar subjects in a new way.
- **Use strategies which facilitate alternate solutions.** Strategies which facilitate the creation of alternative solutions involve invention. Von Oesh (1983) suggests that creativity is looking at the same thing as everybody else, but thinking something different. Playing the game "What if?" will not only be fun, but helps learners use their creative ability to predict outcomes and create alternatives. Questions such as the following will be relevant: *What if no one got old? What if no one died? What if no one got sick? What if no one got AIDS? What if no one practised birth control?*
- **Create scenarios that center on a central problem or multiple problems.** This helps the learner to focus on a single issue or multiple problems (depending on the learner's level of development). With the guidance of the educator the learner can explore issues such as the following: *What cultural or economic problems are associated with this scenario? Who are the main actors and what relationships exist between them? What action should be taken by the main actors? What is the individual's rights? Compare the individual's rights with community rights within the context of ethical decision making. What are the desired outcomes envisaged by the actor, the community, the nursing profession? Which future problems may occur if the desired outcomes are not met? Which hypotheses and problem solutions can be drawn from these analyses?* (Cascio, Campbell, Sandor, Rains & Clark, 1995: 38-43).
- **Employ expansive modes of learning and teaching.** Encourage divergence

through the use of techniques such as brainstorming, metaphor, lateral thinking and reversal. Its practice stresses a principle of anything goes and encourages a state of dreaming and drifting and building on others' ideas. The assumption here are that quality ideas will emerge from numerous of ideas generated (Henry, In: Mulligan & Griffin, 1992: 189). The distinguishing feature is not just the use of imaginative thinking but rather the deferment of all judgement. The underlying principle is that this non-evaluative phase prevents premature closure with acceptance of the first possible solution, while examination from different perspectives may have produced a different and better alternative.

Learners may be encouraged to spend time in deciding between options, on imagining the likely consequences and using it to shape their judgement on the best way forward instead of just reflecting on their own preferences.

4.16. Conclusive remarks

Chapter four stressed the need to change the nature of the educator-learner, the organizational-nurse practitioner relationship and the view of *what* constitutes knowledge. Talking about critical-reflective and creative thinking is not enough - learners and practitioners need to see educators and other role models engage in the critical-reflective process. To engage in critical reflection and creativity however, requires a disposition to listen as well as a tolerance for diversity, disagreement and uncertainty and the ability to engage learners and practitioners in dialogue, to encourage divergent thinking, to be open to new ideas and the ability to consider possibilities for the sake of engaging in appropriate action. Such action is guided by critical reflection and by what is "right" in the particular context or situation.

In the second place educators need to examine their views of what constitutes knowledge within the context of curriculum as praxis. Knowledge is composed of patterns which make sense, insights and the building of cognitive structures. Knowledge cannot be equated with information. It requires reasoning, deliberation, interpretation, insights,

reflection, dialogue and meaning-making. Curriculum as praxis concerns the development of a critical consciousness and "freedom from dogmatism of tradition rather than 'freedom to' in the guise of autonomy." (Grundy, 1989: 187) A shift in paradigm from curriculum as product to curriculum as praxis requires a different conceptualization of critical thinking. The necessary shift is from critical thinking as problem-solving to critical thinking as a process in which knowledge and action are dialectically related through mediation of critical reflection.

Knowing how we think, or metacognition, has many applications in health care practice. Particularly in the present and future environments of exponential increases in available knowledge and information, safe effective care will require the use of algorithms and schema rather than a multitude of specific, stepwise procedures. To strengthen personal critical reflective skills, health care practitioners must learn to live comfortably, not complacently, with the ubiquitous question mark. 'Knowledge why' - the justification for a professional action - demands a moral argument in terms of what is known and can be done (taking scientific knowledge into account) and, most importantly, asking whether it ought to be done (Schrök, 1990: 3). Decisions need to be informed by expert knowledge internalized through critical reflection on practice and with the ultimate justification of professional action which is the right action, to the best of the professional's knowledge and conscience.

The degree to which persons can be considered morally mature depends on the degree to which they are autonomous, critical, reflective thinkers, altruistic and responsible. An autonomous person has a secure sense of identity (self-knowledge) and can rely on the validity of his or her professional and moral judgements and can reach a conclusion independent of heteronomous guides to 'good' conduct. Autonomous persons are critical, reflective and rational in so far as they are willing to reason about the moral obligations of interdependent personal and professional relationships and sufficient flexibility to abstract moral and other principles from a mass of authoritarian data (including that offered by the profession).

Critical, reflective thinking and moral reasoning do not take place in a vacuum. It can be a painful experience to expose oneself, as a learner or practitioner, to such an enquiry. But unreasoned convictions too, are dangerous. No learner should leave higher education courses without a sound foundation for knowing that, knowing how, knowing why and the ability to reason coherently and consistently.

Nurse practitioners who are genuinely critical and reflective of their own practices would function at four levels: the technical, the practical, the moral-ethical and the personal. It is through reflection on all domains that the practitioner will come to fully understand their own practice (James & Clarke, 1994: 86). The most serious issue faced by education has to do with the nature of nursing knowledge implicit in critical, reflective practice. Nursing should no longer be characterized by routines and rituals or justified solely by a set of theories created by research application by nurses. Nursing should now be viewed as an "immensely complex form of practical knowledge possessed by all nurses" and it should be updated and extended in a variety of ways including critical reflection (James & Clarke, 1994: 89). For educators this presents a considerable challenge in the way they view the practice of nursing and the process of becoming a nurse. There is a need for more debate and research on critical reflection in nursing. Only by such means can the nature of critical reflection in nursing be understood and can educational strategies evolve for the development of critical reflective skills.

A variety of teaching strategies, such as Socratic discussion, journal writing, critical reflective exercises which involve the popular media, analogy and metaphor, critical incident technique reporting and consciousness raising, can assist learners and practitioners to incorporate different approaches to experiential learning. Educators and supervisors need to support learners and practitioners while practicing critical reflective and creative thinking. Critical reflective thinking threatens an individual's security and one must expect that they will try to resist it. Educators and supervisors need to strengthen their supportive skills to be able to offer constructive criticism and to build confidence while simultaneously expecting their learners or staff to master critical, reflective thinking. Accountability for quality care depends on critical, reflective and creative thinking!

Chapter 5: Conceptual Framework for facilitation of Critical Reflective Practice

5.1. Introduction

The aim of this chapter is to construct a conceptual framework for facilitation of critical reflective practice. In doing this the inquirer strived to show how the component parts of critical reflective practice and other component parts fit together. This is seen as necessary by Bernard (1988, In: Miles & Huberman, 1994: 90) who suggests that complicated phenomena need to be made understandable. The conceptual framework was the inquirer's first attempt at making some explicit theoretical statements, thus preventing diffuseness and overload (Miles & Huberman, 1994: 91).

According to Miles & Huberman (1994: 18) theory building relies on a few general constructs that subsume *a mountain of particulars*. Categories such as *critical thinking*, and *reflective practice* are labels which the inquirer selected to put on intellectual *bins* containing many discrete events and behaviour. This was done as any inquirer, no matter how inductive in approach knows which *bins* are likely to be in play in the inquiry and what is likely to be in them. The *bins* selected for inclusion in this inquiry came from theory, experience and the general objectives of the inquiry. The constructed framework was simply the vision of the inquirer's map of the territory under investigation. The inquirer used the processes of analysis, synthesis and derivation, in the construction of a conceptual framework for critical reflective practice.

Development of the conceptual framework forced the inquirer to be selective: (a) to decide which variables are most important; (b) which relationships are likely to be most meaningful; and, consequently (c) what information should be collected and analyzed. Using a confirmatory mode, the inquirer, during data collection, revised the framework to make it more precise, to replace empirically feeble *bins* with more meaningful ones and to reconstruct relationships.

After the conceptual analysis (chapter 3) and intensive review of the literature (chapter 4), the inquirer selected as main *bins* the following concepts: critical thinking, creativity (creative thinking), critical reflection, reflective learning, (self) consciousness and praxis. The meanings of the chosen concepts are specific to this framework. The conceptual framework is a representation that include only concepts which the inquirer considered relevant and an aid to understanding.

In construction of this conceptual framework the inquirer admits that by it's very nature, the framework is abstract and imprecise. These characteristics however, do not necessarily constitute methodological weakness as abstractness has its virtues. According to Silva(1986: 9) abstractness allows creativeness, the inquirer can "dare to imagine beyond the bounds of traditional reality." Abstractness has power. For out of abstractness often comes the first ingredient of methodological soundness- creative and significant ideas. Conceptual leaps are seen by Silva (1986: 9) as a part of innovative studies which are on the cutting edge of advances in science.

5.2. Definition of the concept: Conceptual Framework

According to Fawcett (1984: 2) a conceptual framework is made up of concepts and propositions. It is therefore, a set of concepts and statements integrated into a meaningful configuration. The utility of a conceptual framework comes from the organization that it provides for thinking, for observation and for interpreting what is seen.

Conceptual frameworks are *conceptual packages* (Wright, 1990: 7), which contains bundles of ideas about phenomena. In construction of a conceptual model, an eclectic approach is necessary - taking in elements from many different approaches and models, using what is useful and discarding which is inappropriate. The inquirer attempted to meet this requirement by reviewing various viewpoints, models and theories on critical thinking, creativity and reflection. The conceptual framework was generated from the conceptual analysis phase (chapter 3) and thorough study of previous theories and models (chapter 4). Various aspects of the literature study were integrated with steps in the inquiry. To limit bias or prejudice an open stance was maintained in continual adaptations of the conceptual

analysis phase and the literature study as more current literature were identified. This resulted in the conceptual framework being constructed over the life of the inquiry.

5.3. The inquirer's vision of Critical Reflective Practice

The conceptual analysis phase (chapter 3) and literature review (chapter 4), resulted in selection of the following concepts (main *bins*) as underlying the phenomena of critical reflective practice:

- **(Self) Consciousness/Awareness** (p. 271)
- **Critical Thinking** (p. 275)
- **Creativity (Creative Thinking)** (p. 276)
- **Critical Reflection** (p.278)
- **Reflective Learning (Guided Reflection)** (p. 278)
- **Praxis** (p. 279)
- **Critical Reflective Practice** (p. 280)

Analysis and review of the literature explicitly and implicitly revealed *meaningful* relationships between the selected concepts. The selected concepts can philosophically not be separated from each other as the one implies the other. During conceptual analysis (chapter 3) of the inquiry tentative *working definitions* for critical thinking, critical reflection, and critical reflective practice were constructed. The conceptual analysis phase also led the inquirer to construct *working definitions* for creativity, *the self*, consciousness, praxis and guided reflection.

Supporting concepts (*bins*) include the following:

- **Transformation/Change** (p. 283& 302)
- **Transformative intellectual (educator/practitioner)** (p. 284; 295 & 303)
- **Empowerment** (p. 284 & 290)
- **Autonomy (Regulation through choice)** (p. 285)
- **Reflective scepticism** (p. 290)
- **Epistemology** (p. 293)
- **Critical attitude/spirit** (p. 294)

- **Responsible action** (p. 294)
- **Reflective self-criticism** (p. 291)
- **Motivation** (p. 323)
- **Reasoning/Dialectical Reasoning** (p. 292)
- **Learned conversation with *the self*** (p. 294)
- **Communication** (p. 308)
- **Care/Caring** (p. 312)
- **Vision** (p. 322)

Working definitions for the supporting concepts (*bins*) are woven (blended) into the discussion of this conceptual framework.

5.4. Working definitions for, and discussion of the main concepts (*bins*)

5.4.1. (Self) Consciousness

The self plays a critical role in motivation to practise in a critical reflective manner and to learn from practice. The role of *the self* can be explicated as the source of the practitioner's perceptions, affect, and behaviour. The metacognitive, cognitive, and affective aspects of *the self* are subsystems of the self and under control of the self as *agent*. *The self* directs and/or oversees information processing, formulates intentions, makes choices, and generates motivation to engage in critical reflective activities. A practitioner with a positive self-concept will be more likely to engage in exploration of ideas, which may conflict with personal views. Self-evaluation which refers to "our view of how good we are at what we think we are" is an important aspect of self-concept (Heiss, 1981: 83). A positive self-concept results in *reflective self-criticism*, which requires provisional or hypothetical detachment from personal viewpoints.

Consciousness is awareness. It is understanding and experience of how thought, consciousness, and mind work together. It is the degree by which the practitioner sees his or her ability stepping out of the conditioned system. A high level of *self consciousness* is a prerequisite for critical reflective practice as it allows the individual access to a more objective perspective (see figure 5.1.).

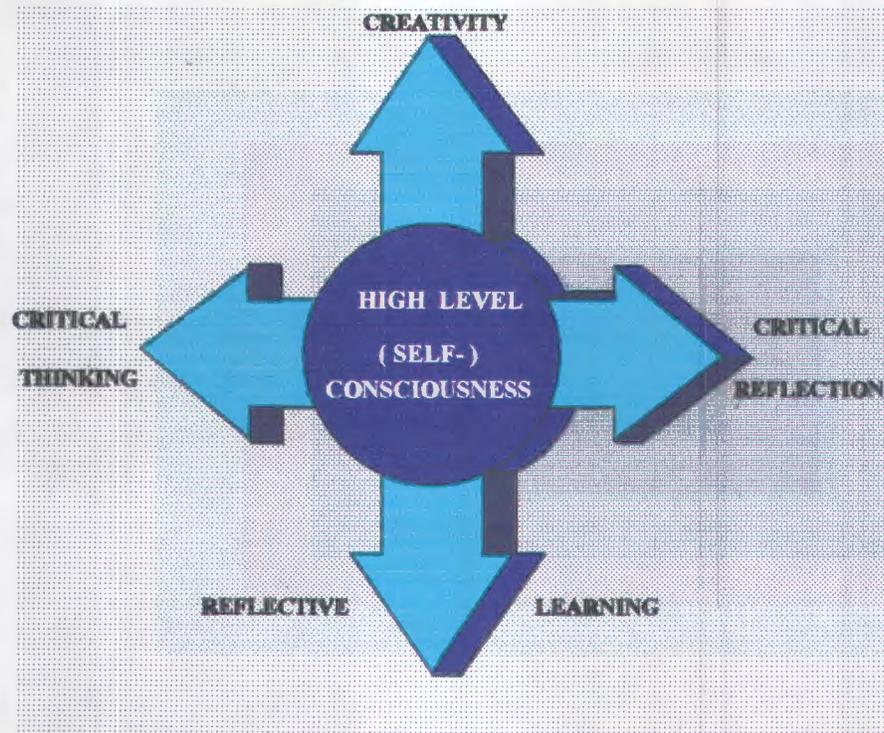


Figure 5.1. (Self-) Consciousness: pre-requisite for Critical Reflective Practice

Self-awareness is defined by the Oxford Paperback Dictionary (Pollard, 1994: 727) as "conscious of one's feelings, motives" and the Sorter Oxford English Dictionary (Onions, 1980: 1933) as "self-conscious. Having a consciousness of one's own identity, acts, thoughts." Tappens (1989: 66) defines self-awareness as "knowing yourself as a thinking, feeling being interacting with an ever-changing world. Its focus is 'getting in touch with your feeling' or being 'open to experience.'" Covey (1989: 67) states that self-awareness "enables us to stand apart and examine even the way we 'see' ourselves - our self-paradigm." Only when the practitioner is able to *see* him- or herself will he or she be able to understand how others *see* and feel about themselves and the world. Self-awareness includes knowledge of one's strengths and weaknesses and the ability to discern gaps between one's strengths and weaknesses (Charlton, 1992: 87).

The nurse practitioner needs to become aware and conscious of his or her own identity, acts, thoughts, feelings, assumptions and motives. The practitioner should know himself or herself as a thinking, feeling being who interacts with an ever changing health care system and be open to experience. Self-awareness has four interconnected parts (Stuart & Sundeen, 1991: 95):

- **Psychological component** of self-awareness. This includes awareness of one's emotions, motivations, self-concept and personality. It requires sensitivity to personal feelings and external elements affecting those feelings.
- **Physical component** of self-awareness. This includes awareness of personal and general physiology, one's bodily sensations and physical potential.
- **Environmental aspect** of self-awareness. This consists of one's social environment, relationship with others and awareness of the relationship between humans and nature.
- **Philosophical component** of self-awareness. This refers to the sense that one's life has meaning. It takes into account the world in which one lives and the ethics of one's behaviour. Figure 5.2. represents the interconnected parts of self-consciousness/self-awareness.

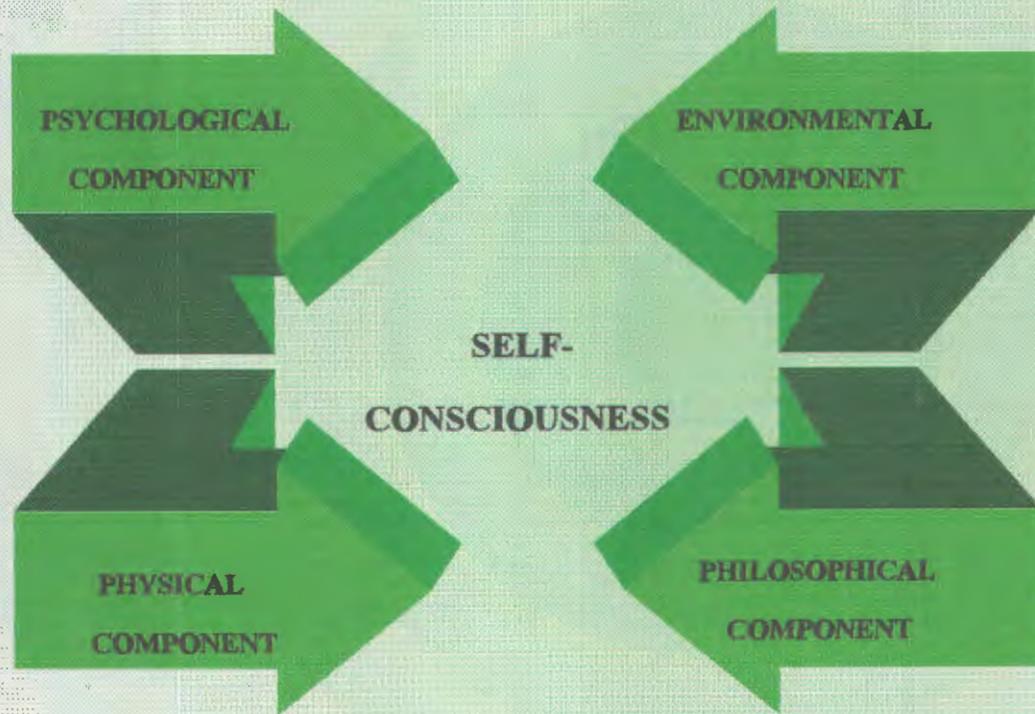


Figure 5.2. Interconnected components of Self-consciousness

The nurse practitioner should be able to examine personal feelings and reactions and have a clear understanding and acceptance of *the self* to enable optimal functioning of *the self* and others. Strategies to increase self-awareness include *self-talk* (listening to oneself, learning conversation with *the self*), learning from others and self-disclosure. The process of increasing self-consciousness can be a painful experience especially when one is in conflict with one's ideal self and institutional expectations. The advantages of self-consciousness include an integration of the aspects of one's being, commitment to choices and authentic relationships. *Authenticity* means to be open to explore *the self*, personal

thoughts, needs, emotions, values, assumptions, defences, communications, problems and goals. Increasing self-consciousness presents a challenge to the practitioner to accept the limitations of *the self* or to change the behaviour which supports these limitations (Stuart & Sundeen, 1991: 95-97).

Increasing self-awareness leads to acceptance of *the self* and others. As the practitioner becomes more self-accepting, he or she values *the self* more and can therefore value others more. These skills are important to critical reflective practice as it frees energy for other activities and promotes self-control over behaviour. Self-consciousness has the following advantages:

- development of personal strengths;
- commitment to self-development (growth and change);
- perception of change and potential threatening situations as challenges;
- acceptance of self-reality for creating individual life- and work-experiences rather than blaming others or circumstances (internal locus of control); and
- ability to diagnose and change inappropriate behaviour and independently take constructive action (Charlton, 1992: 90).

Through self-consciousness the person becomes conscious of disciplines of weakness, disciplines of improvement, disciplines of talent that could be developed or changed in his or her life (Covey, 1989: 92). Increased self-consciousness:

- presents a challenge to accept the limitations (weaknesses) of *the self*, to change behaviour and to accept *the self*;
- promotes open exploration of *the self*, thoughts, needs, emotions, values, assumptions, defences, problems and goals;
- frees energy for critical reflective practice and makes self-control over behaviour possible;
- results in commitment to continual learning and professional development; and
- results in internal locus of control (creating individual life-experiences) rather than viewing others or circumstances as being responsible for misfortune.

5.4.2. Critical thinking

A definition developed by the American Philosophical Association (1990: 3) was selected

by the inquirer because it is congruent with the viewpoint of the inquirer. It captures what is called *the critical spirit*, a style, a set of attitudes that define a personal disposition to value and use critical thinking in one's personal and professional conduct. The working definition, selected is:

The ideal critical thinker is "**habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fairminded in evaluation, honest in facing personal bias, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in selection of criteria, focused in inquiry, and persistent in seeking results that are as precise as the subject and the circumstances of inquiry permit.**" (American Philosophical Association, 1990: 3)

Constructs empirically derived from the American Philosophical Association's (1990) consensus definition for the ideal critical thinker, includes the following disposition toward critical thinking:

- ***Truthseeking:*** A courageous desire for the best knowledge in a context even if such knowledge fails to support or undermine personal preconceptions, beliefs, or self-interests.
- ***Open-mindedness:*** Tolerance to divergent views, self-monitoring for possible bias.
- ***Analyticity:*** Demanding the application of reason and evidence, alert to problem situations, inclined to anticipate consequences.
- ***Systematicity:*** Valuing organization, focus, and diligence in the approach to complex problems.
- ***Critical Thinking Self-confidence:*** Trusting personal reasoning skills.
- ***Inquisitiveness:*** Eager to acquire knowledge and to learn explanations even when applications of knowledge is not immediately apparent.
- ***Maturity:*** Prudence in making, suspending, or revising judgement; an awareness that multiple solutions may be acceptable and that reaching closure may be necessary even in the absence of complete knowledge (Facione & Facione, 1996: 129-136).

5.4.3. Creativity

The element of *creativity* in relation to critical reflective practice may be described as the

ability to sense gaps or problems within known information; ability to see many relationships among elements; flexibility in thinking and reorganization of understanding to produce innovative ideas and solutions; testing ideas and modifying those ideas in a unique way; and communicating the results.

Creativity within critical reflective practice conjures up several abilities rather than a single characteristic. It involves curiosity, imagination, discovery, innovation, invention, balance between divergent and convergent thinking, intuitive processes and contemplation of abstract philosophical issues (see figure 5.3.).

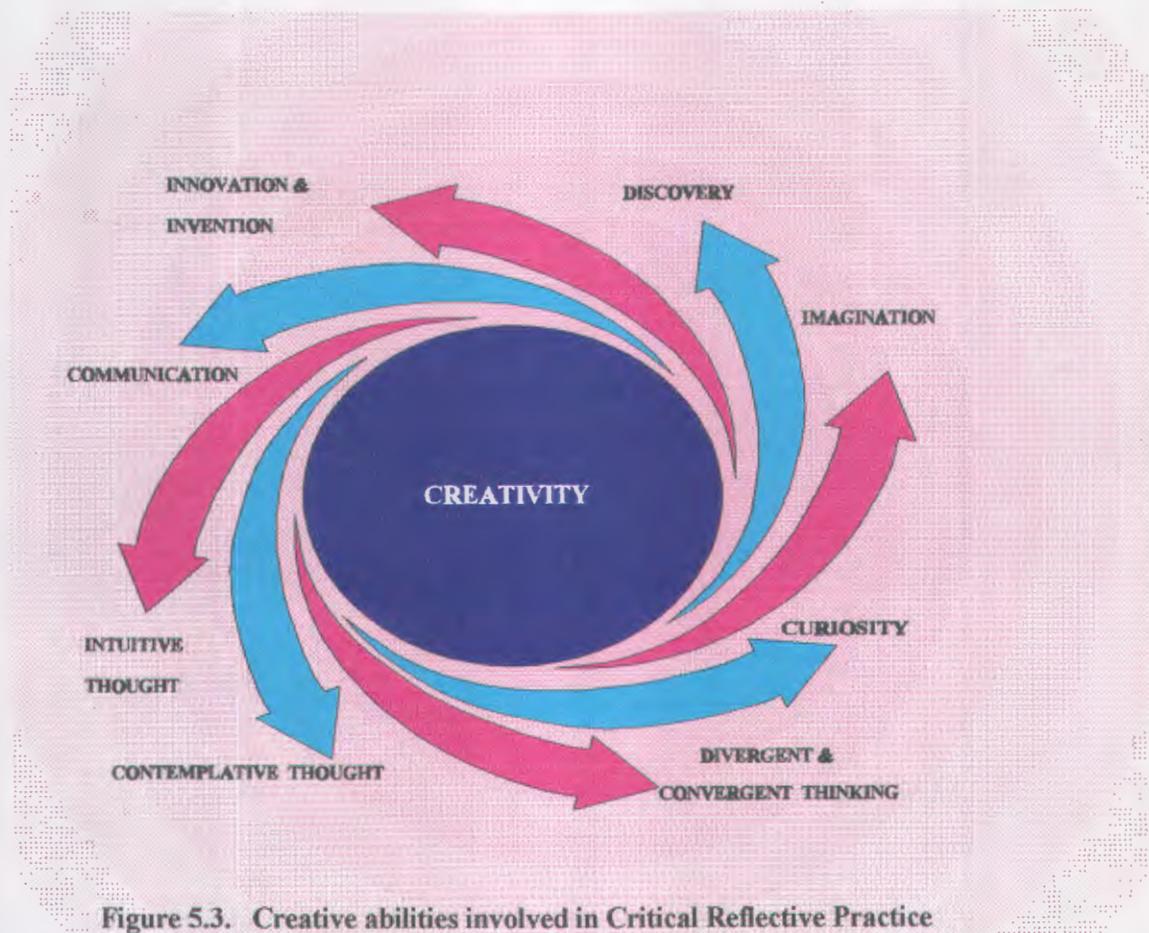


Figure 5.3. Creative abilities involved in Critical Reflective Practice

5.4.4. Critical reflection

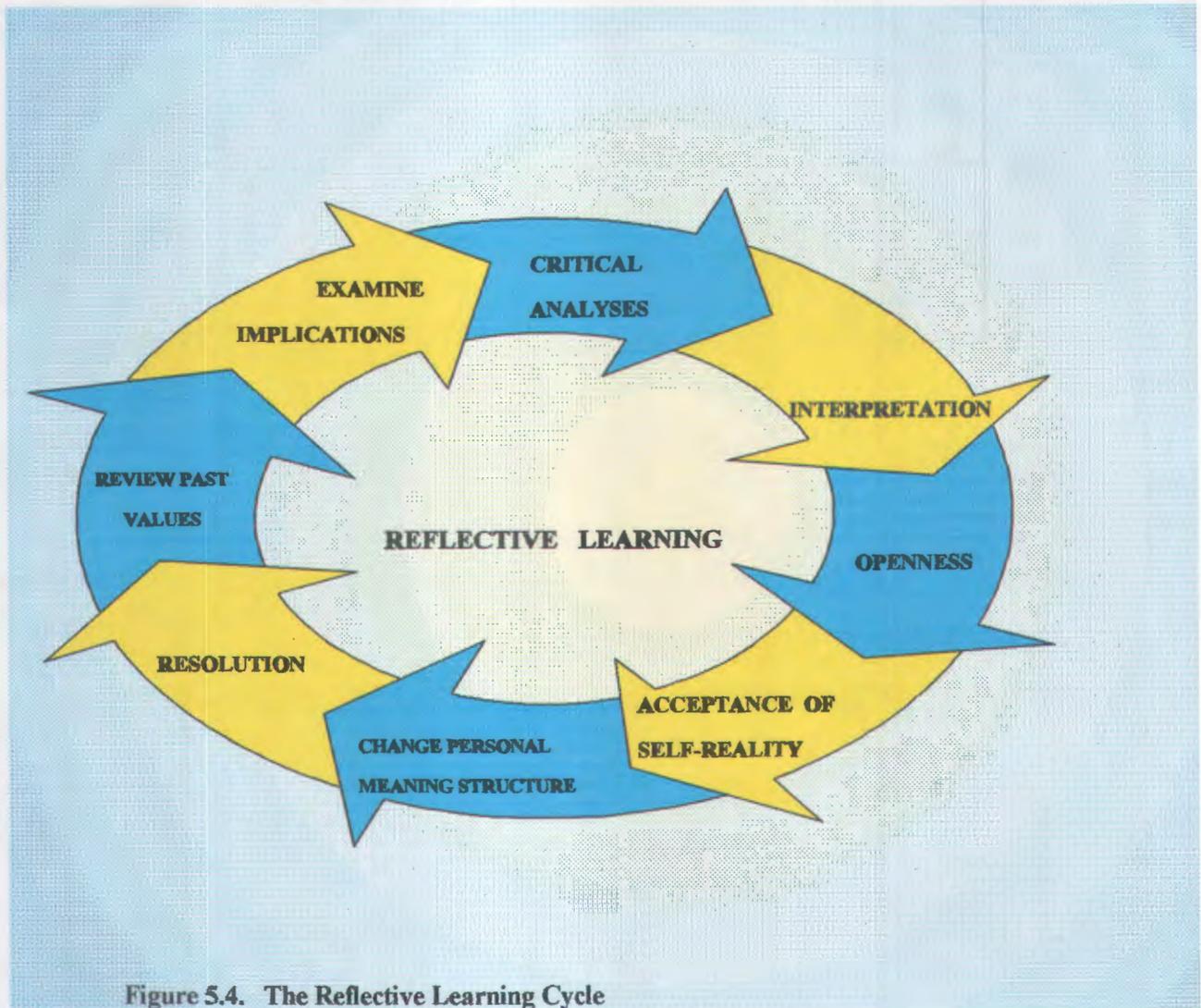
The thinker involved in *critical reflection* challenges the validity of previous learning, questions the premises on which problems are posed or defined, is not concerned with the *how* or the *how-to* of action but with the *why* (the reason for and consequences), examines the realities of practice as experienced while assuming that much is not known, accepts that there is more than one equally acceptable response or answer, goes beneath the surface structure of the situation in order to reveal the underlying assumptions that constrain open discourse, autonomous and responsible action. The critical, reflective thinker is willing to take risks, to challenge the status quo to obtain a new perspective on existing knowledge.

5.4.5. Reflective Learning

Reflective learning is the process of making a new or revised interpretation of the meaning of an experience which guides subsequent understanding, appreciation and action. It involves critical analysis and interpretation of an experience, openness to new information, acceptance of self-reality, a change in personal meaning structure, resolution, review of past values in relation to the changed perspective and examination of the implications for future behaviour and others (see figure 5.4.).

Reflective learning occurs as a result of the process of *guided reflection*. *Guided reflection* is a combination of techniques intended to enable practitioners (learners) to reflect on their professional and personal conduct (experiences) in order to become increasingly effective (critical, creative and reflective). *Guided reflection* enables the practitioner to use and learn in a structured and supported way through critical reflection on experiences. This is necessary as critical reflection is a profoundly difficult process. The process of reflective learning through *guided reflection* includes the following elements:

- Using a model for structured reflection
- A supportive environment
- Strategies such as *reflective journals, critical incident reporting and analysis, problem solving exercises, use of the popular media or journal articles* and the *topic/form grid* (see chapter 4).



5.4.6. Praxis

Praxis is thoughtful reflection and action that occur in synchrony. Action is *informed* by reflection, and reflection is *informed* by reflection and reflection is *informed* by action (see figure 5.5.). Praxis involves a shift away from critical thinking as problem solving, to critical thinking as a process in which knowledge and action are *dialectically* related through the process of *critical reflection*. The process of critical reflection results in *authentic knowledge* and *autonomous action*. Praxis does not maintain the status quo, it changes and transforms the practice situation and understanding of it.

In reality *praxis* is critical reflective practice. The inquirer however, decided to include both concepts in the conceptual framework as a more comprehensive *working definition* for critical reflective practice was developed during conceptual analysis (chapter 3).

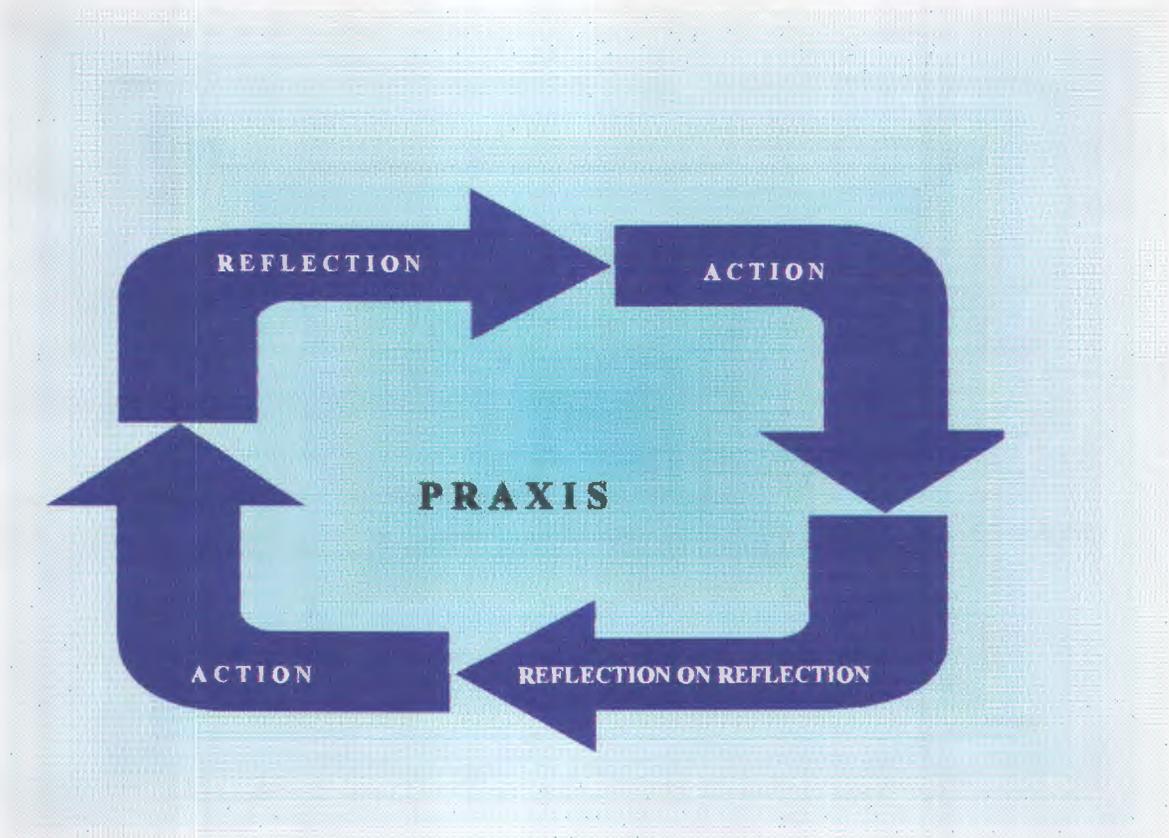


Figure 5.5. Praxis

5.4.7. Critical reflective practice

Critical-reflective practice requires ability to consciously and purposefully withdraw (internally) from the situation, experience, an issue at stake in order to reflect and critically think about what has happened or what is or will be happening. Critical reflective practice is characterized by habitual inquisitiveness; well-informed and multilogical (dialectical) reasoning; open-mindedness; proactive thought; fairminded evaluation; honest self-evaluation; focused inquiry; persistence; empathy into diverse opposing points of view; devotion to truth against self-interest; willingness to take risks; deliberate and principled

thinking about the thinking processes; insight into the social construction of the situation; creative synthesis; autonomous, responsible and informed action; and reflective learning. Critical reflective practice shows self-regulation, imagination, innovation, insight, moral integrity, courage, and perseverance.

Critical reflective practice is thus something more than thoughtful practice. It is that form of practice that seeks to problematise many situations of professional performance so that they can become potential learning situations and so that the practitioner can continue to learn, grow and develop in and through their practice. Critical reflective practice is the utilization of good theory in practice in what must always be a situation of probability. The critical reflective practitioner is continuously trying to ensure that the outcome of any action is close to what is anticipated by the theory and the previous experience combined. Critical reflective thinking as praxis, require action, involvement and risk taking.

Critical reflective practice is characterized by critical thinking, creativity, critical reflection and reflective learning (see figure 5.6.).



Figure 5.6. Building blocks (bins) for the main concept

5.5. The conceptual framework for Critical Reflective Practice

The conceptual framework in this inquiry was structured according to Dickoff, James & Wiedenbach's (1968: 420-423) survey list:

- **Purpose (Terminus).** *What is the goal or the endpoint of this activity?*

Lifelong critical reflective learning and practice (the final aim).

- **Agent.** *Who practices the activity?*

The transformative intellectual (for e.g., nurse practitioner or educator).

- **Recipient.** *Who receives the activity?*

The client, community/health services, other health care practitioners and learner (developing nurse practitioner).

- **Framework (Context).** *In what context is the activity taking place?*

External environment in which the activity (social, economical, educational, political, legal, institutional) is taking place and the internal environment (forces within the nursing unit/community and the nurse practitioner/educator).

- **Dynamics.** *What is the energy source for the activity?*

Motivating factors demanding lifelong critical reflective learning and practice.

- **Procedure.** *What is the guiding procedure, technique or protocol of the activity?*

Intentional provision of an environment that encourages critical reflection on learning and practice.

Guided critical reflective techniques that enable consciousness of *the self* and others.

5.5.1. Purpose

Dickoff, et.al. (1968: 435) describe the purpose of the inquiry as the terminus (endpoint) of the activity. The purpose of this inquiry is facilitation of lifelong critical reflective learning and practice. The opposite of critical reflective practice is seen as uncritical, unconscious

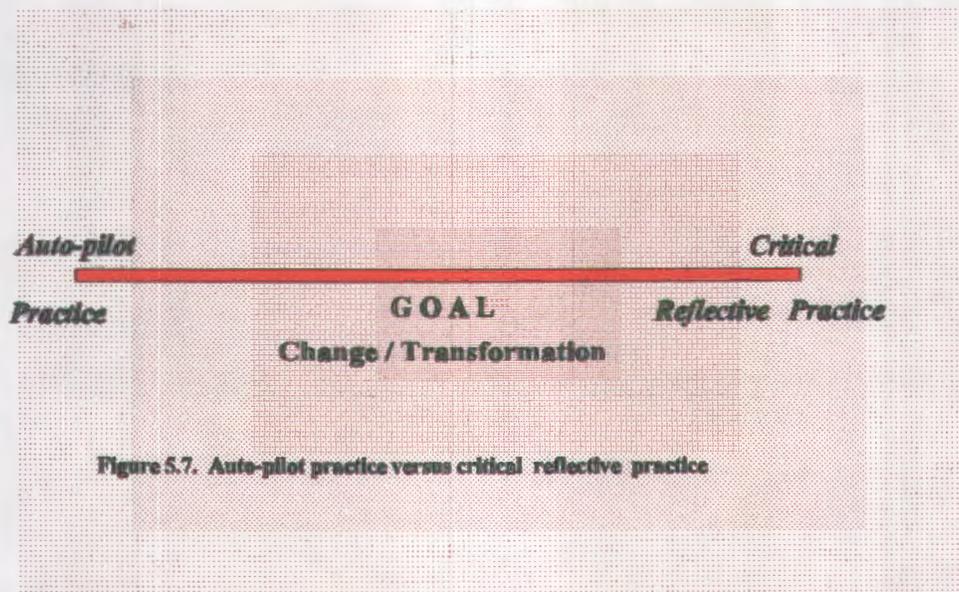


Figure 5.7. Auto-pilot practice versus critical reflective practice

practice - that is "*auto-pilot*" practice or functioning. See the following figure, figure 5.7. The goal (lifelong critical reflective learning and practice) can only be reached if *change/transformation* takes place. That is transformation from functioning in *auto-pilot mode* to *critical-reflective mode*.

■ Change/Transformation as phenomenon

Webster's Collegiate Thesaurus (Kay, 1976: 128) defines change as "make or become different; pass from one phase to another." Morrison (1993: 256) defines change as "a process of making or becoming different." Robbins (1993: 668) defines change as "making things different." Transform is "to make over to a radically different form, composition, state disposition." (Kay, 1976: 844) Synonyms include: "change; convert; metamorphose; alter; modify." Silber (1993: 60) states that change is "an inevitable,

complex and continuous process." Change consists of two dimensions: unplanned (reactive) change and planned change. Reactive change is the unplanned transformation in the individual toward personal and professional development, due to demands and expectations from the internal and/or external environments.

Unplanned change or accidental change without prior planning (preparation) results in an imbalance in the system - thus is met with resistance. Planned change is goal-directed, well-planned and deliberate transformation of the individual (psychologically, physically, cognitively and socially) in striving for personal and professional development. The critical reflective practitioner and educator is a *change agent*, i.e. is a person who acts as a catalyst and assumes the responsibility for managing change activities (Robbins, 1993: 668).

The registered nurse practitioner/educator as *transformative intellectual* underscores the vitality of critical reflective practice as the sole means to clearer understandings, developed skills, and improved ethics of intellectual freedom. *Changing* people refers to changes in their attitudes, skills, expectations, perceptions, and/or behaviour. However, changing attitudes toward nursing practice involves use of persuasive messages. The agent of critical reflective practice needs to establish his/her credibility. Nothing undermines persuasive efforts more than credibility. Credibility is developed through role modeling competence, objectivity, high ethical standards and critical reflective thinking ability.

- **Change/transformation and empowerment**

To *empower* learners/practitioners as transformative intellectuals means to educate them for critical reflection. Through exposé and critique of ideology, practice and theories, critical reflection forces into consciousness the nature and meaning of conventions used to organize reality. The registered nurse practitioner/educator as a *transformative intellectual* "unites the language of critique with the language of possibility" (Aronowitz & Giroux, 1985: 37) and is aware that student and practitioner growth means being able to use knowledge for the liberation of both the individual and society. Transformation (change) is only possible if the individual (nurse practitioner) and nursing service (health service) *mobilizes (realize)* the need to go beyond the usual (habitual) thinking to

reconfigure the norm (be critical, reflective and creative).

The process of empowerment involves *transformational* nurse practitioners and educators who are self-empowered through their critical reflective processes (ability) and are willing to empower others to discover and use their unique skills, knowledge, experience and creativity. People are empowered by involving them in their work through a process of *inclusion*. Empowerment is a process that increases employees' /learners' intrinsic motivation.

Empowerment involves taking actions that affect *impact, competence, meaningfulness, and choice*:

- *Impact*. A practitioner/learner task has impact if it is perceived as making a difference in terms of accomplishing the purposes of the task.
- *Competence*. If a practitioner/learner can perform the task skillfully, then the task positively affects a feeling of competence.
- *Meaningfulness*. If a practitioner/learner views the task as worthwhile it provides meaningfulness.
- *Choice*. A task provides choice if it allows the practitioner/learner self-determination in performing task activities (Robbins, 1993: 682).

Empowerment is composed of two specific conceptual components: (1) a cultural change process: this means defining new, or revising and reaffirming existing values; and (2) a paradigm shift: this means changing what an organization believes about itself and how it thinks and acts. There should be a move from organizational domination to person participation through the process of critical reflective practice- thus, partnership. The paradigm shift results in commitment as the practitioners'/learners' actions are freely chosen, owned and critiqued without any requirement to do so (Tebbit, 1993: 18-19).

- **Empowerment and autonomy**

Empowerment enables *autonomy*: "Having control of one's beliefs, values and inferences." "To think for oneself, to gain command over one's thought processes." (Paul & Binker, In: Paul, 1990(b): 553).

In this conceptual framework *intellectual autonomy* does not entail willfulness, stubbornness, rebellion or heteronomy. It entails a commitment to analyze and evaluate beliefs on the basis of reason and evidence, to question when it is rational to question, to believe when it is rational to believe, and to confirm when it is rational to confirm. The following summary (see text box 5.1.) provided by Dittman (1976: 467) is a delineation of behavioural and attitudinal components characteristic of autonomy versus heteronomy:

The concept of *autonomy* is a theoretical rather than an empirical one, though it has clear empirical consequences. "Autonomy connotes an inner endorsement of one's actions, the sense that they emanate from oneself and are one's own." (Deci & Ryan, 1987: 1024) Autonomous action is thus chosen but the term *choice* is not a cognitive concept referring to decision and behavioural option. It is an "organismic" concept anchored in the sense of a "fuller, more integrated functioning." (Deci & Ryan, 1987: 1024) The more autonomous the behaviour, the more it is endorsed by the *whole self* and is experienced as *action for which one is responsible*.

Text box 5.1. Behavioural & Attitudinal components characteristic of autonomy and heteronomy

Autonomy	Heteronomy
Cooperation	Egocentricity
Mutual respect	Unilateral respect
Individual creativity	Conformity
Flexibility	Rigidity

The behaviour of someone who is seeking approval or avoiding guilt is intentional, but is not autonomous. This person is compelled to engage in the behaviour and would not experience a sense of *choice*. When autonomous, practitioners experience themselves as the initiators of their own behaviour, they select desired outcomes and choose how to achieve them. Until the action is self-initiated and grasped as one's own solution it would not be characterized as autonomous. ***Regulation through choice*** is characterized by flexibility and the absence of pressure.

Actions that *empower* others (practitioners/learners) include: delegation of authority, using participative decision making; encouraging self-management, lessening formalization, creating a supportive culture and encouragement of goal setting (Robbins, 1993: 683).

- **Change/transformation and reflection**

Change/transformation from auto-pilot functioning to critical-reflective functioning is only possible if the practitioner/learner recognizes the need for reflection. According to Emden (Gray & Pratt, 1994: 336) *reflection* derives from "a desire of individuals to free themselves from the constraints of their own conventional thinking." To be a *reflective practitioner* suggests professional maturity and a strong commitment to improving practice. The notion of *reflection* as a valid way of knowing arises out of the critical social science paradigm (Emden, In: Gray & Pratt, 1994: 335). Critical reflection involves a highly introspective inquiry involving the complex processes of observation, critical thinking and reflection.

Observation and reflection within the context of the nurse practitioner's inquiry means seeing, hearing and sensing events within the practice world and pondering their meanings with a view to *action*. The processes are intended to lead to heightened awareness about the practice of nursing and to new courses of action. By engaging in observation, critical thinking and reflection it is possible for all preconceived ideas to be challenged, including principles, theories, policies and "right" ways of thinking and behaving.

- **Change/transformation and creative thought processes**

The processes of observation, critical thinking, and reflection require *creative thought processes* (see the working definition 5.4.3.). The creative individual has a high degree of psychologic health, is persistent, self-assertive, energetic, dominant, individualistic and playful. He or she can see many relationships among elements, relationships that baffle the conformer, the person who does only what is expected by the traditional system. The learner or practitioner who behaves creatively is oriented toward setting and solving meaningful problems, using an inner drive to recombine his or her storehouse of experiences in new ways.

Creative thinking allows the practitioner/learner to search for ideas, manipulate knowledge and experience, try various approaches, break rules occasionally and explore for ideas in unusual places (Ochse, 1990: 6).

In short, by adopting a creative outlook the practitioner/learner opens to new possibilities and to change. Creativity born of the union of *imaginative risk taking* (see 3.1.20.: imaginative thinking) and *systematic scientific observations* are the hallmarks of critical reflective practice. By being open to alternate ways of knowing and practicing, the individual may facilitate obtaining insights or seeing the meaning in findings that may not be readily apparent by using only scientific procedures (Talbot, 1995: 392).

Creative thinking is at the opposite end of the spectrum from the "habit" mode (Rubenfeld & Scheffer, 1995:12). Instead of saying, "This is the way things have always been done," the creative thinker says, "Let's try this new way." New ideas and creativity are seen as very important in this inquiry as they are at the root of individualized care. Problems in nursing practice are not well defined and structured, and cannot be resolved simply by applying professional knowledge and technical rationality.

- **Change/transformation and modes of thinking**

Critical reflective practitioners/learners (see the working definition for critical reflective practice: 5.4.7., p. 280) are able to use all of the modes of thinking (see text box 5.2.).

- **Total Recall/Reflection (T):**

Critical reflective practitioners/learners are consciously (deliberately) and willingly involved in the process of *reflection-on-action* and *reflection-in-action* (see

Text box 5.2. Modes of thinking

T = Total Recall/Reflection

H = Habits (Frame of reference; Bias; Assumptions; Theories used)

I = Inquiry\Critical Inquiry

N = New ideas/creatively/imaginatively/multilogically

K = Knowing how you think/reflect (conscious thinking and reflection)

3.3.12., p. 101). They are engaged in active exploration and discovery.

Three stages are apparent: preparation, engagement in an activity, and the processing of what has been, or is being experienced. Total recall/reflection is the process of internal examination and exploration of an issue of concern triggered by an experience which creates and clarifies meaning in terms of self and results in a changed conceptual perspective (Palmer, Burns & Bulman, 1994:13). It is initiated by a *trigger experience*,

such as an unexpected happening which prompts a sense of inner discomfort, perplexity or wonder.

Conscious total recall/reflection is far more than a thoughtful approach to nursing (practice), it is rather a way of being, a state of mind. It is not passive contemplation, it is an active process and as such requires willingness to learn about yourself and your practice. "When you **reflect** on something or **reflect** over it, you think deeply about it." "**Reflection** is thought. You can refer to your thoughts about something as your **reflections**." "You say **on reflection** to indicate that you have thought very carefully about something." (Fox, 1989: 663-664)

The practitioner/learner who reflects also plans thoughtfully, acts deliberately, observes the consequences of action systematically and reflects critically on the situational constraints and practical potential of the strategic action being considered. A practitioner/ learner with a high level of *self-consciousness* (see the working definition for self-consciousness: 5.4.1.) (a positive self-concept) will more likely engage in an exploration of ideas conflicting with personal views (Erikson, 1990: 134).

- Habits (H):

A positive self-concept enables the individual to examine and admit *habits* of mind (frame of reference; bias; assumptions; theories used). Critical reflection requires a critique of the presuppositions on which beliefs have been built. The critical reflective practitioner/learner challenges the validity of presuppositions in prior learning. Such a thinker addresses the question of justification for the premises on which problems are posed or defined in the first place. They are not concerned with the *how* or the *how-to* but with the *why*, the reasons for and the consequences of action. Critical reflective practice and learning are demanding as it requires examination of the realities of practice as experienced. It examines experiences and poses dilemmas with the acknowledged assumption that there is more than one equally acceptable response (Street, 1991: 24).

Critical reflection is essentially a political process as it not only involves understanding of the world of nursing and health care but also changing it. Transformative nurse practitioners/educators are *emancipatory* in their concern with the *empowerment* of

individuals as autonomous and responsible *agents* in the world (Hedin, 1989: 81).

Empowerment involves the sharing of power and the authorization of practitioners/learners to think critically, reflectively and creatively. It is a process of focusing on the needs of individual learners and practitioners and encouraging self-responsibility by altering self-limiting beliefs (habits of mind). Critical reflective processes go beneath the surface structure of the situation to reveal the underlying assumptions, theories and bias which constrains open discourse and autonomous and responsible action. Transformative nurse practitioners/educators recognize the importance of critical inquiry in others.

- Inquiry/Critical Inquiry (I):

Inquiry/Critique (see 3.3.31.) implies objective judgment, analysis or evaluation. The purpose of *critique* is the same as the purpose of critical thinking: "to appreciate strengths as well as weakness, virtues as well as failings." Critical thinkers *critique* in order to "redesign, remodel, and make better." (Paul & Binker, In: Paul, 1990(b): 546). To be *critical* is to "weigh-up, to evaluate and to decide upon the validity of something. It does not mean to criticize." (Burnard, 1989 (b): 272) The characteristics of inquiry/critical inquiry are summarized in textbox 5.3.

Reflective scepticism occurs when an individual questions the belief that an idea, theory, or a social structure must be both right and the best possible arrangement just because it has existed unchallenged or

Text box 5.3. Characteristics of inquiry/critical inquiry

- It identifies and challenges assumptions.
- It challenges the importance of context.
- It imagines and explores alternatives thus leading to *reflective scepticism*.

unchanged for a period of time. McPeck (1981: 6) said that "perhaps the most notable characteristic of critical thought is that it involves a certain scepticism, or suspension of assent, toward a given statement, established norm or mode of doing things." The *inquiry/critical inquiry* process builds on scepticism and entails an examination of what is known and how things are done. The process involves identifying assumptions, their roots and their manifestations by comparing and contrasting them with evidence derived from empirical observations of an external reality (context).

Inquiry/Critical Inquiry is a process of questioning, discerning discrepancies or inconsistencies, and identifying similarities or consistencies. It employs and demands *creativity* that defies logic and formalization. *Critical thinking* (see the working definition: 5.4.2.) involves seeing what is and conceiving of (or envisioning) what could be (the creative component). It involves the examination of knowledge and actions in their current context and in alternative contexts and mentally trying alternative explanations or actions. The endpoint of *critical inquiry* or *critical thinking* per se is personal enrichment and, ultimately, enrichment of nursing practice by increasing awareness and acceptance of diversity and improved understanding of universal truisms.

Critical inquiry involves affective reflectivity (see 3.3.6.) discriminant reflectivity (see 3.3.7.), judgemental reflectivity (see 3.3.8.), conceptual reflectivity (see 3.3.9.), psychic reflectivity (see 3.3.10) and theoretical reflectivity (see 3.3.11.). Conceptual reflectivity and psychic reflectivity pertains particularly to *perspective transformation* and to *clinical consciousness*.

Critical inquiry, therefore, involves *reflective self-criticism*. Thinking "about one's own thinking, to make one's own thinking the object of one's thought, to discover its limitations and weaknesses." (Paul, 1990(b): 300) Reflective self-criticism requires provisional or hypothetical detachment from the personal viewpoint. Critical inquiry is possible through the process of *reflective withdrawal* and *reentry* (Lunkinsky, In: Mezirow, 1990: 213). Reflective withdrawal enables the practitioner/learner to step back from an incident, a conversation, a reading, from something heard or seen and to reflect upon it and return to it with understanding.

The type of critical thinking involved in *critical inquiry* is more than indiscriminate questioning of ideas and activities. Two central activities are present: (1) identifying and challenging assumptions and (2) explaining and imagining alternatives. Critical thinking within critical inquiry is a constructive activity with the ultimate purpose of gaining insight for purposes of changing things for the better. However, for critical inquiry to avoid indiscriminate scepticism and negativity it must be guided and shaped by *reason*. Reason transcends the particular, is opposed to arbitrariness, and is determined to account for facts.

The critical reflective practitioner who is accustomed to reason is "one who has taken a critic into his own consciousness . . . is prepared to discuss things, [and] to look at a situation impartially." (Peters, 1972: 209-229)

- New Ideas (N):

Critical reflective practitioners/learners display the ability to : (a) question deeply their own frameworks of thought, (b) reconstruct sympathetically and imaginatively the strongest version of points of view and frameworks of thought opposed to their own, and (c) reason *dialectically* (multilogically) [see 3.3.19. & 3.3.22]. They are not just willing and able to explore alien, potentially threatening viewpoints but also desire to do so.

Critical reflective practitioners/learners are willing to suspend judgement. Suspending judgement is an attitude, which, to Paul (1990 (b): iii-xv) exists only in concert with a host of other attitudes such as: humility (recognize that you don't know), self-confidence (to assert that you do not know), morality (enough to feel that there is something wrong in acting as if you know when you don't).

Critical reflective practitioners/learners are actively engaged with life. They appreciate creativity, are innovative and exude a sense that life is full of possibilities. Critical reflective practitioners/learners see the future as open and malleable and not closed and fixed. They are self-confident about their potential for changing aspects of their worlds, both as individuals and through collective action. Critical reflective practitioners/learners admit that almost every important issue and system is *multilogical*. They engage in *exploration* and *imaginative thinking* to seek new relationships. *Imagination* (see 3.3.20.) is the "fashioning, designing, shaping ability" of the human mind (Barell, 1995: 194). Imagination is a "form-finding and form-creating power." (Berthoff, 1981: 28) All understanding within critical reflective practice is a primary act of imagination - practitioners/learners take what they perceive (information) and redesign it into their own patterns of *meaning*(see *meaning schemes*: 3.3.25. ; *meaning perspectives*: 3.3.26 & *meaningfulness*: 3.3.27.).

- Knowing how you think/reflect (K):

Critical reflective thinking is by it's very nature *principled* not procedural thinking, in that

it is impartial, consistent and non-arbitrary. It requires practitioners/learners to continually monitor their thinking by means of questions which test for clarity, accuracy, specificity, relevance, consistency, logic, depth and significance. Critical reflective practice (see working definition: 5.4.7) engages the practitioner/ learner in an evolving process in which the individual progressively takes control of own thinking, disciplining it by degrees, making it more and more responsive to evidence and reason and extending it to more domains and situations.

Critical reflective thinking is *consciously* used to create, build upon, reform, modify, and redesign personal beliefs and behaviour. To be a critical reflective practitioner/learner is to have a good understanding of, and the ability to use principles governing the assessment of reasons.

According to Siegel (1988: 34) there are two types of such principles (see text box 5.4.):

Critical reflective practice

manifest itself in both types of principles. There is no reason for regarding either sort of principles as more basic to critical reflective thinking than the other. Critical reflective individuals need a theoretical

grasp of the nature of reasons, warrant and justification and some understanding of *why* a given putative reason is to be assessed as it is. Assessment of the reason component involves *epistemology*.

Text box 5.4. Principles governing assessment of reasons

Subject-specific principles govern the assessment of particular sorts of reasons in particular contexts.

Subject-neutral principles apply across a variety of contexts.

Epistemology is a crucially important component of a proper conception of critical, reflective thinking. To carry out and to understand the nature of reasons and their assessment the practitioner/learner must have a strong grasp of warrant and justification in general as these notions function across fields. However, being able to assess reasons is not sufficient in critical reflective practice - to have an appropriate attitude toward the activity of critical reflective practice/learning is equally necessary. This necessitates discussion of the important component of critical reflective practice: *the critical attitude or spirit*.

A critical attitude or spirit shows willingness to conform judgement and action to principle. The critical reflective individual has integrated a host of *rational passions* with his or her assessment skill. Together these constitute and instantiate the critical attitude. Paul (cited in Siegel, 1988: 40) explains the rational passion as: "A passionate drive for clarity, accuracy and fair-mindedness, a fervor for getting to the bottom of things . . . for listening sympathetically to opposing points of view, a compelling drive to seek evidence, an intense aversion to contradiction, sloppy thinking, inconsistent application of standards, a devotion to truth against self-interest."

A positive self-image and psychological health are prerequisites for critical reflective practice. Their absence may present practical obstacles to the execution of critical reflective thinking. Deliberately thinking about thinking is essential to the fullest development of critical reflective practice. It is virtually impossible for the mind to become disciplined and self-directed unless it is systematically stimulated to turn inward upon itself and so become *consciously aware* of its own operations, its own powers and disabilities. Critical reflective learning and practice have to do with becoming aware of *how* you think and finding ways to facilitate clear, reasoned, logical, and better informed thinking and doing. It involves a *learned conversation* with *the self*.

This learned conversation with the self involves risk, surprise and spontaneity and entails disagreement, diversity, and challenge. The learned conversation with the self includes: thinking actively (consciously); careful exploration of the situation with questions; thinking for yourself; viewing situations from different perspectives; and discussing ideas in an organized way (Chaffé, 1991: 37). Critical reflective learning and practice constitute *self-talk*, a process of proceeding through the underbrush of the problem to find a solution or resolution (Barell, 1995: 25).

Knowing *how* you think or reflect requires *praxis* (see the working definition: 5.4.6.).

Praxis is about the development of a *critical consciousness*. An explicit appeal to the practitioner's/learner's *consciousness* and *conscience* is an integral part of the justification of the individual's autonomy. *Autonomous action* as previously stated is action that is deliberately thought out and has as its goal the benefit of the client as goal. *Responsible action* is a continuous exercise of critical reflective thinking, creative imagination, independent judgement and decision making. It does not mean being compelled to do a

job solely by rules and regulations. Responsible action is dependent upon knowledge, discretion, judgement and the ability to make critical, reflective decisions about one's practice.

5.5.2. Agent

Who practices critical reflection? Dickoff, et.al. (1968: 425) identify the agent as the person performing the activity. The agent within this conceptual framework is the role model of critical reflective practice namely a *transformative intellectual*: the nurse practitioner (professional nurse practitioner) and educator (see figure 5.8.).

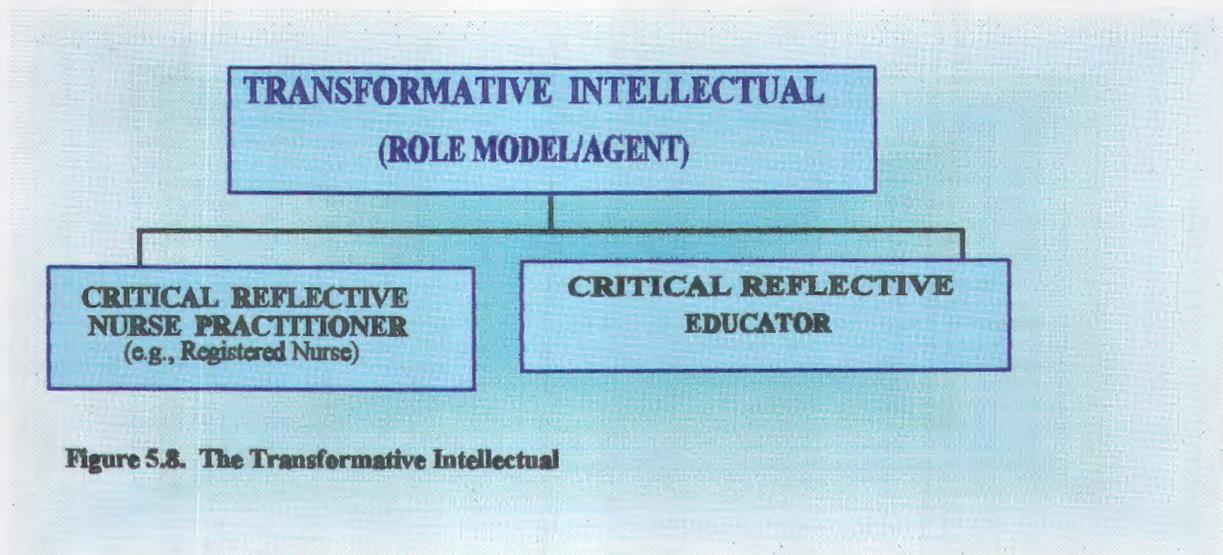


Figure 5.8. The Transformative Intellectual

5.5.2.1. The transformative nurse practitioner as agent

- the transformative nurse practitioner as agent is responsible for clinical, managerial, educational and research activities. The "art" of nursing encompasses "intuitive, expressive, subjective, creative, humanistic, and holistic dimensions." (Jennings, 1986, cited in Gray & Pratt, 1994: 51). The transformative nurse practitioner (agent) is a person who is registered as a nurse under section 16 of

the Nursing Act (Act no. 50 of 1978). This registration entitles the individual to practice within South Africa as an independent practitioner. As a member of the health team the transformative nurse practitioner has to practice within the philosophic, legal and ethical related framework of nursing. This framework serves as a guideline when ethical decisions have to be taken. As a *transformative intellectual/practitioner* the nurse is an individual educated for personal and considered in the context of ideological possibilities and probabilities rather than on personal fictions and conventional wisdom (Armeline & Hoover, 1989: 43).

5.5.2.1.1. The transformative nurse practitioner as:

- **independent practitioner**

Nurse practitioners/midwives are independent practitioners in that they have to make nursing decisions and choices when accepting instructions from other registered persons such as medical practitioners. Decisions and choices are made within the context of R2598. The scope of practice of the registered nurse/midwife is circumscribed by the South African Nursing Council in Regulation R2598 of 30 November 1984 as amended.

The implications of being an independent practitioner are that it is the sole responsibility of the individual nurse practitioner or midwife to practice within the philosophic, law and ethics related framework of nursing - within the conceptual framework of this study such responsibility is seen as only possible within critical reflective practice.

- **member of the health team**

Within the context of the health team the nurse practitioners/midwives function as independent members, who remains solely responsible for their own acts and omissions. They also have a responsibility to work with, coordinate, consult and refer. As registered nurse practitioners/midwives they also have to be an advocate for the client in need of care, as it is largely their responsibility to see that clients get the care they require.

Besides the personal individual responsibility for their own practice and maintenance of professional standards, nurse practitioners/midwives also have wider responsibilities

namely be prepared to report poor standards of care when they encounter them. Codes of ethics and laws do not provide a panacea. The nursing profession can exert most influence within a climate of critical reflective and high moral practice. Nurse practitioners, as well as their colleagues in the caring professions, must develop a sense of moral judgement in their interactions and recognize the need for critical reflective practitioners in health care work.

Ethical decisions within the context of human rights (currently being formulated by the constitutional committee and court) will also influence the practice of the registered nurse practitioner or midwife. Within the context of human rights, ethical guidelines will not only be principles, it will be the law (Hamilton, 1992: 189). Within the ethical context the patient will thus have the right to autonomy (self-determination). The principle of autonomy affirms the individual's sovereignty over his or her own life. According to the principle of autonomy, the values and choices of the client (patient) are to be the major consideration in any deliberation about matters concerning the care of the individual. If the client's personal values conflict with those of the health care team, the fundamental responsibility of the team and the individual nurse practitioner will be to respect and facilitate the person's self-determination in making decisions.

Transformative, nurse practitioners as critical reflective practitioners will consider the situation from the patient's/client's viewpoint, avoid actions contrary to such viewpoints, actively elicit out client values and considered preferences, continually test their own understanding of the viewpoints by allowing the client a chance to correct misapprehensions, and only then will the practitioner be able to take the acceptable course of action (Brown, Kitson & McKnight, 1992: 54).

- **critical reflective practitioner**

A critical reflective nurse practitioner challenges the process, searches for opportunities, inspires a shared vision, enables others to act and models the way. Critical reflective

practitioners induce change, innovation, growth and empowerment of the self and others. Critical reflective practitioners are agents of transformation in that they model vision, encourage self-development, empower *the self* and others, and create meaning through open communication and trust. Characteristics of the critical reflective transformational practitioner include the following, see text box 5.5.

In contrast to the characteristics summarized in text box 5.5,

uncritical, non-reflective [*auto-pilot*] practice is characterized by:

- thoughts subject to the practitioner's ego, desires, social conditioning, prejudices, or irrational impressions.
- thinking which is egocentric, careless, heedless of assumptions, relevant evidence, implications, or consistency.
- thinking which habitually ignores epistemological demands in favor of its egocentric commitments (Paul, 1990 [b]:32).

The nurse/midwife as critical reflective practitioner role models the characteristics or traits of mind listed in text box 5.6.

The traits of mind are applicable to all domains or modes of

Text box 5.5. Characteristics of the critical reflective transformational practitioner

- challenges processes, assumptions, theories, ideologies
- not discouraged by personal failure; persistence
- openness to learn from others; intellectual humility; flexibility
- high drive and energy levels
- pro-active; innovative; vision; curiosity; recognise intuitive thought processes
- self-confident; intrinsic motivation; assertive; self-aware; regulation through choice; self-corrective; self-disciplined
- positive regard for others; tolerates ambiguity and work toward resolution; suspends judgement
- focused and purposeful
- meets epistemological demands regardless of vested interests or ideological commitments
- consistent in application of intellectual standards
- reasons multilogically
- verifies, corroborates, and justifies claims, beliefs, conclusions, decisions and actions

Text box 5.6. Traits of mind needed for Critical Reflective Practice

- Intellectual Humility
- Intellectual Courage
- Intellectual Empathy
- Intellectual Integrity
- Intellectual Perseverance
- Faith in Reason
- Intellectual Sense of Justice

(Paul, 1990 [b]: 54)

knowledge and nursing practice. It also results in development of a genuine moral integrity and not only conformity. Nurse practitioners/midwives who function in an autopilot or uncritical manner, rationalize and defend a position or existing bias in an atomistic and sophistic manner, in that their thinking and practice are concerned with technical reasons, limiting their independent practice ability. Strong, sense critical reflective, practitioners are concerned with a set of integrated macro-logical skills, insight and the development of emancipatory reason. They strive to find reasons for problems, issues, practices and to find defensible answers. They search for additional knowledge and systematically review existing knowledge in their aim to promote positive client outcomes.

The knowledge generated through critical reflective practice is essential for description, explanation, prediction and control of nursing phenomena. It is therefore important that the professional nurse practitioner as the agent (leader in the nursing unit), initiates and encourages critical reflective practices and role models critical reflective practice.

Nursing is a service and caring profession which effects changes in the client's biopsychosocial environment to promote health, learning, and growth. The transformative, critical reflective nurse practitioners are supportive and therapeutic in their interaction with the patient/client to explore his or her needs, feelings, and goals. They facilitate the patient's/client's positive adaptation as a unique individual to the stress that he or she is experiencing. Critical reflective nursing care can be given in any setting and the goal being to maximize the patient's/client's positive interactions with his or her environment, level of wellness and degree of self-actualization (Sundeen, Stuart, Rankin & Cohen, 1994: 2).

Through the process of critical reflective practice the professional nurse engages the patient/client as a partner in health care by, using an assessment based on the patient's/client's total life structure. The nurse practitioner does not separate and treat the biological or psychosocial components in isolation but focuses on their interplay and their effect on the patient's/client's total life process.

5.5.2.1.2. Conceptual definition: the professional nurse practitioner as agent

The professional nurse practitioner is a clinical practitioner, nursing unit manager, critical reflective role model in the practice situation, transformational leader and innovator.

He/she is an individual who functions in an integrated biopsychosocial manner and who role models the specific behaviour of critical reflective practice in his or her quest for self-regulated, independent, empowered, and caring practices.

5.5.2.1.3. Statements for the professional nurse practitioner as agent of critical reflective learning/practice

The following statements are derived from the conceptual framework by means of deductive reasoning:

- The professional nurse practitioner is an individual who functions as a critical reflective being in an integrated biospsychosocial manner. The professional nurse practitioner interacts wholistically with the internal and external environment through conscious use of critical reflective withdrawal.
- Effective or conscious use of critical reflective skills enables the professional nurse practitioner to facilitate quality nursing care and caring attitudes in other nurse practitioners (such as student nurses).
- The critical reflective nurse practitioner has the necessary self-knowledge, skill and experience to practice as an independent clinical practitioner, manager of nursing, transformational leader and innovator.
- The variety of dimensions of the professional nurse practitioner (clinical practitioner, manager of nursing, transformational leader and innovator) is not regarded as separate entities but as interdependent and interrelated functions of critical reflective practice.
- The professional nurse practitioner as agent role models the behaviour patterns of critical reflective practice, including critical self-awareness, conscious critical reflection on and while practicing.
- The professional nurse as critical reflective practitioner uses theory in the form of concepts, principles, and processes to guide their observations and understanding of the phenomena which are the focus of their interventions. Understanding resulting from critical reflection on practice both precedes and serves as a basis for

determining the nursing actions to be taken.

- The professional nurse as critical reflective practitioner (agent) is supportive of a nurturing environment which characterizes growth, autonomy, and self-actualization. In an environment of respect and acceptance of others the practitioner directs his or her energies toward self-definition, constructive relationships and positive control over the practitioner's life and destiny.

5.5.2.2. The educator as transformative intellectual

- the educator as *transformative intellectual*(agent) underscores the vitality of critical reflective learning as the sole means to clearer understanding, developed skills, and an improved ethic of intellectual freedom. The educator as critical reflective agent unites the language of critique with the language of possibility (Aronowitz & Giroux, 1985: 37) and is aware that learner and practitioner growth means being able to use knowledge for the liberation of both the individual and the society. To empower learners as developing transformative intellectuals means to educate for critical reflection. Through exposé and critique of ideology, practices and theories, critical reflection during teaching forces into consciousness the nature and meaning of conventions used to organize reality.

The transformative educator admits that uncompromising, uncontested knowledge enslaves the beholder of phenomena in educational/practice settings

to mindless adherence to the status quo and precludes warranted innovation and change because it does not allow the learner to examine the phenomena of education and practice. Such an educator sees critical reflection as a significant step toward developing an antidote for auto-pilot functioning and reliance on others.

The transformative educator also role models the characteristics summarized in text box 5.5. and traits of mind listed in text box 5.6.

5.5.2.2.1. Conceptual definition: the transformative educator as agent

The transformative educator as critical reflective practitioner role models professional maturity in showing commitment to improve practice. Such an educator engages

in continuous observation, critical thinking and reflection in order to challenge all preconceived ideas - including principles, theories, policies and "right" ways of thinking and behaving. New ideas and creativity are seen as very important as they are at the root of student-centered teaching and individualized care. The transformative educator being concerned with empowerment of individual learners as responsible agents in the world encourages critical reflection during teaching and learning .

5.5.2.2.2. Statements for the educator as agent

The following statements are derived from the conceptual framework by means of deductive reasoning. The critical reflective educator as transformative educator

- is concerned with empowerment of individual learners as autonomous and responsible agents in the world;
- strives to develop a positive self-concept in learners as learners with a positive self-concept will more likely engage in exploration of alternative ideas;
- is open to alternate ways of knowing and practicing. By being open the educator facilitates acquisition of insights or recognition of the meaning of findings not be readily apparent by using scientific procedures only;
- allows learners to search for ideas, manipulate knowledge and experience, try various approaches, break rules occasionally and explore for ideas in unusual places;
- enables learners to alter self-limiting beliefs (habits of mind) by encouraging self-responsibility (internal locus of control);
- initiates regulation by choice in learners, in that he or she is flexible and suspends assent toward a given statement, established norm or mode of doing things;
- encourages reflective withdrawal which enables the learner to step back from an incident, a conversation, a reading, something heard or seen and to reflect on it thus enabling learners to reenter the situation with understanding;
- uses critical reflective learning techniques/strategies consciously to create, build upon, reform, modify, and redesign learner beliefs and behaviour;
- recognizes that critical reflective thinking is potentially emotionally disruptive. In doing this the educator consciously provides a supportive environment.

Whether or not learners and nurse practitioners examine the language, conventions, attitudes, and actions of the workplace is largely dependent upon the environment, educators and other facilitators. If learners and practitioners function within the

unquestioned views of education and practice throughout their professional experience, they become the "cement for the status quo." (Armaline & Hoover, 1989: 47). Learners have an affinity for viewing the profession in the same manner as practicing educators and registered nurse practitioners do.

Emphasis on professional experiences without thoughtful consideration of ideology, its theories, its language and actions are necessarily reproductive, ideologically and theoretically bound professional conduct. This is antithetical to empowerment and critical reflective conduct. *Transformation* (change) is only possible if the individual (registered nurse practitioner, educator and the nursing service/health service) realize the need to go beyond the usual (habitual) thinking to reconfigure the norm (be critical, reflective and creative).

5.5.2.3. Essential elements (characteristics and functions) of the transformative intellectual

The registered nurse practitioner and educator as *agents* of critical reflective practice and transformation:

- empower themselves and others;
- inspire by modeling the ideal;
- energize themselves and others;
- challenge thought processes;
- learn from experience;
- respond constructively to criticism;
- reward critical thinking, reflection and creativity;
- model the need for innovative and imaginative thinking;
- value the need for reflective self-criticism, principled thinking, reflective scepticism, and regulation through choice;
- energize intellectual autonomy;
- realize the need to go beyond habitual thinking and to reconfigure the norm;
- implement behaviour of transformational leadership: self-consciousness (awareness), trust, communication, vision and empowerment.

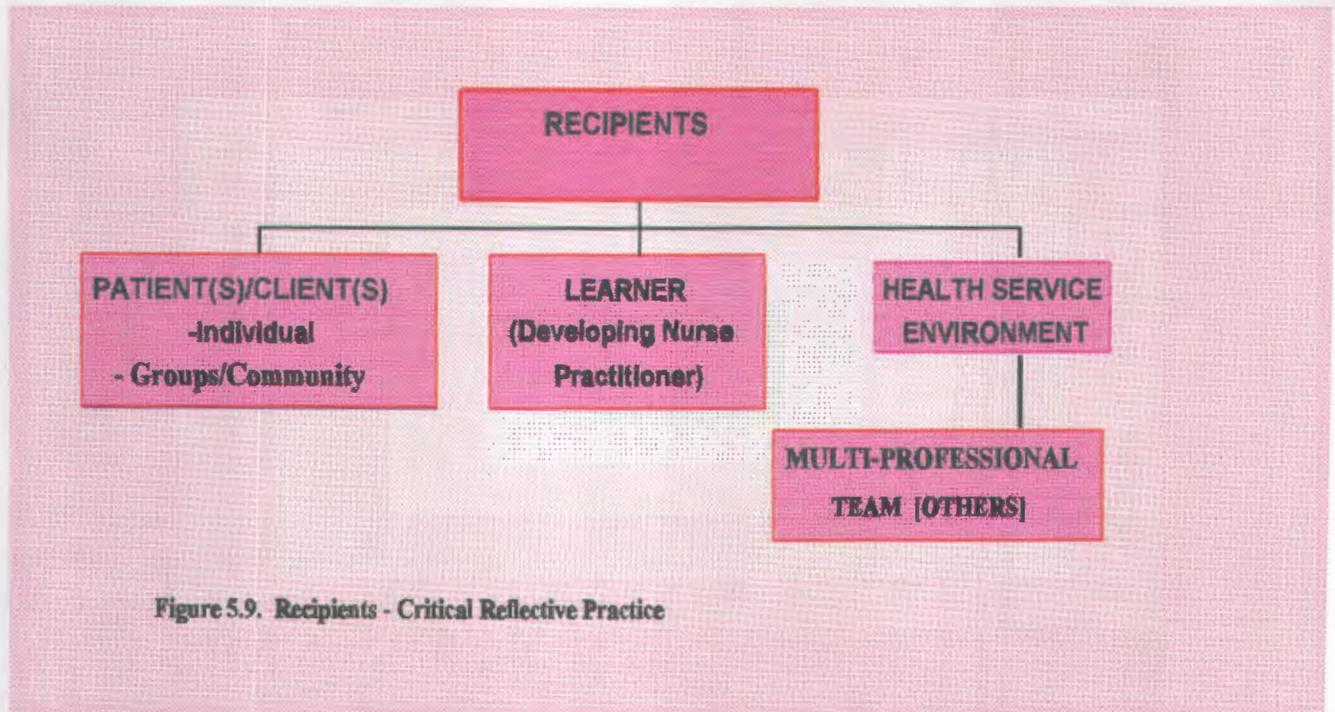
The agent of critical reflective practice is a person who plans thoughtfully, acts deliberately, observes the consequences of action systematically and reflects critically on the situational constraints and the practical potential of the strategic action being considered (Carr & Kemmis, 1986: 40). As agent of critical reflective practice involvement of the *transformative intellectual* with the recipient (learner/client/other) is characterized by dialogue, reasoning and communication. Within such a relationship the agent-recipient interaction is characterized by *critical reflection with* each other. The intended outcome therefore is critical reflective interaction between the *transformative intellectual* and the recipient by means of dialogue, reasoning and communication which stimulates critical reflective thinking, quality health care and facilitation of deep, holistic and lifelong learning.

As role model of critical reflective practice the agent should enact the role in an open, observable manner and hold a definite viewpoint regarding the importance of critical reflection on practice. Role modelling of the need for critical reflective practice requires *enthusiasm*. The agent must be enthusiastic to provoke a receptiveness and willingness on the part of the recipient. Enthusiasm can be used to refute theories that must be known because of their widespread acceptance, or simply to justify completion of knowledge.

5.5.3. Recipient

Who receives the activity of critical reflective practice?

According to Dickoff, et.al. (1968:423), the recipient is the receiver of the activity. The recipient of critical reflective practice is the patient/client, community or health service environment, other health care personnel and learner (developing nurse practitioner) [see figure 5.9.].



The learner as the future registered nurse practitioner develops a *professional soul* under the guidance and direction and/or indirect supervision of the *transformative intellectual*. The registered nurse practitioner involved in critical reflective practice positively influences the recipients in that he or she:

- models the uniqueness of the nurse as a health team member, sharing and coordinating the health care and growth of patients/clients with her colleagues.
- continuously clarifies the meaning of professional conduct and the nature of the client's present needs and goals with the patient/client.
- actively defines nursing functions and is prepared to challenge the existing practices, structure, and power relationships with the purpose of quality nursing care for the client.

- accepts responsibility for providing care to the client.

This is reflected in the code for nurses that summarizes the nurse practitioner's responsibility. See text box 5.7. The summarized responsibilities were chosen by the inquirer because they are congruent with the inquirer's viewpoint on what a code for the nursing profession should include. Meeting the requirements of the code is only possible within critical reflective nursing practice. Nurse practitioners functioning in *auto-pilot mode* will not be able to adhere to the code.

The professional nurse practitioner as agent does not implement nursing care in isolation but is responsible to ensure nursing care congruent with the needs of the patient/client and the care of other health care professionals. Only by *conscious acceptance* of the need for critical reflective practice will the professional nurse practitioner accept responsibility for appropriate patient/client and colleague consultation.

Text box 5.7. Code for Nurses

- The nurse provides services with respect for human dignity and the uniqueness of the client unrestricted by considerations of social or economic status, personal attributes, or the nature of the health problems.
- The nurse safeguards the client's right to privacy by judiciously protecting information of a confidential nature.
- The nurse acts to safeguard the client and the public when health care and safety are affected by the incompetent, unethical, or illegal practice of any person.
- The nurse assumes responsibility and accountability for individual nursing judgements and actions.
- The nurse maintains competence in nursing.
- The nurse exercises informed judgement and uses individual competence and qualification as criteria in seeking consultation, accepting responsibilities, and delegating nursing activities to others.
- The nurse participates in activities that contribute to the ongoing development of the profession's body of knowledge.
- The nurse participates in the profession's efforts to implement and improve the standards of nursing.
- The nurse participates in the profession's efforts to establish and maintain conditions of employment conducive to high-quality nursing care.
- The nurse participates in the profession's efforts to protect the public from misinformation and misre-presentation and to maintain the integrity of nursing.
- The nurse collaborates with members of the health professions and other citizens in promoting community and national efforts to meet public health needs.

(Source: American Nurses' Association, Code for nurses with interpretive statements, 1976, Kansas City, MO)

5.5.3.1. The influence of *the self* on the recipient(s) of professional care/education

If a professional nurse practitioner or educator is ignorant of his or her *own self*, it is highly likely to be threatening to the recipient's of his or her practices (care/education). A professional nurse practitioner/ educator who is more aware of the breadth and depth of his or her own real self is in a much better position to empathize with clients, the community, other health care professionals and learners.

Only within the context of critical reflective practice will the professional nurse/educator be able to examine his or her own behaviour/actions and see how it appears to the recipients.

The self, according to Sundeen, et.al. (1994: 63), operates much like a "drawbridge." It can "raise the beams and separate us from others as unique individuals, or it can lower its defenses and join us with other people around us." *The self* is a complex mechanism, very difficult to assess. As an individual, the nurse practitioner may never completely know his or her inner self. However, the processes involved in critical reflection on practice can result in more conscious knowledge of *the self* and its effects on nursing practice/education and its recipient's.

A nurse practitioner's/educator's view of *the self*, is not only a collection of the views, expectations and desires of others. Each individual practitioner/educator can observe his or her own behaviour (practice) and form own opinions about it through the process of critical reflection on and in practice. The nurse practitioner's ability to be open to and accept new ideas and new situations can enhance self-concept and caring ability. Positive self-concept is directly related to being a provider of high quality care/education. Thus self-concept also influences the recipient, as an openness to people - relating to others intimately - is the final characteristic of the individual with a healthy self-insight (Sundeen, et.al., 1994: 85).

A firm understanding and acceptance of personal feelings, reactions and practice will allow the transformative nurse practitioner/educator to acknowledge the differences and uniqueness of others (recipients). By role modelling critical self-reflection,

the professional nurse practitioner/educator can facilitate learners' self-awareness, increase their level of functioning, stimulate more self-direction, and enable them to cope more effectively with the stressors of nursing and life. *Authenticity* in relationships must be learned. It involves being truthful and open to exploration of personal thoughts, needs, emotions, values, defenses, actions, communications, problems, and goals (Sundeen, et.al., 1994: 87).

5.5.3.2. Communication between agent and recipient

Ruesch & Bateson (1968, quoted in Sundeen, et.al., 1994: 94) define *communication* as "all the procedures by which one mind may affect another." These procedures include not only verbal messages but all human behaviour, including the arts. Satir (1983) limits communication to nonverbal as well as verbal behaviour within a social context. Like Satir, Cherry (1978, quoted in Fox, 1989: 148) elaborates on the social function of communication. He believes that within communication are found the observable manifestations of a relationship. If people "communicate, they can understand each other's feelings or attitudes." Robbins (1993: 327) defines communication as "the transference and understanding of meaning." It is only through transmitting meaning from one person to another that information and ideas can be conveyed.

In addition, the dynamic, ongoing process of communication is viewed- in this conceptual framework - as the vehicle for establishing a relationship between the agent and recipients. Not only is communication involved in conveying information and influencing another through a relationship, communication *is* the relationship. If there is no communication, there cannot be a relationship. A basic principle of communication is that the verbal and nonverbal levels, the literal content and the metacommunication should all be saying essentially the same thing. If they are, the communication is termed congruent (Sundeen, et.al., 1994: 106).

Critical reflective nurse practitioners are aware of the congruency of their own communications. Critical reflective nurse practitioners' recognize the importance of *active listening*: listening with intensity, empathy, acceptance, and a willingness to take responsibility for completeness. Empathy demands both knowledge of the speaker and flexibility on the listener's part. The active listener suspends own thoughts and feelings and

adjusts what is seen and felt to the speaker's world. An active listener demonstrates acceptance in that he/she listens objectively without judging content. The challenge for the active listener is to absorb what is being said and to withhold judgement on content until the speaker is finished. The active listener takes responsibility for completeness by doing whatever is necessary to get the full intended meaning from the speaker's communication (Robbins, 1993: 341).

Sundeen (1994) has outlined a communication pattern that is essential for the fulfillment of nursing goals. Called *relating*, this pattern is: An experience, or series of experiences, characterized by meaningful dialogue between two people (agent and recipient) . . . wherein each experiences openness, closeness and understanding of each other . . . Relating is characterized by purposeful, reciprocal communication. What is discussed (between the agent and recipient) is relevant and appropriate.

To use primarily the *relating pattern*, a transformative nurse practitioner/educator must have a high self-esteem or a feeling of adequacy, competency, and trust in his or her ability to assist another. The individual must also have a knowledge of personal areas of weakness, the ability to reveal those weaknesses when necessary and to recognise the resources available to compensate for weaknesses. This is characteristic of a critical reflective practitioner. However, because the relating pattern is reciprocal, both agent and recipient must be willing to share meaningful dialogue. The relating pattern of communication occurs within a supportive environment in which all participants can communicate freely (Sundeen, 1994: 113).

Auto-pilot practice results in nontherapeutic communication techniques. It hinders effective communication and the establishment of a helping nurse-client relationship. Nontherapeutic/communication technique in this conceptual framework is grouped into two types: nontherapeutic techniques of omission, and nontherapeutic techniques of commission (see text box 5.8.).

Nontherapeutic techniques of omission

The nontherapeutic technique that is most damaging to relationship formation between agent and recipient is *failure to listen*.

Failure to listen represents, according to Sundeen, et al. (1994: 127), an inability to place the needs of *the self* secondary to the needs of others. Because the higher level of listening - introspection - requires the nurse practitioners'/educators' active participation in the communication process, any factor which decreases the energy available for the interaction also decreases the ability to listen.

Failure to probe is also a nontherapeutic technique that represents an omission. A *probe* is any discourse used by the agent and recipient to increase the depth of mutual understanding and to generate richer appreciation of the recipient's perspective by the agent. Failure to probe is characteristic of an uncritical, non-reflective practitioner/educator who fails to use the communication techniques of seeking clarification and consensual validation (Sundeen, et al., 1994: 127). Kesler (1977: 70), lists various examples of failures to probe: eliciting vague descriptions, getting inadequate answers, following standard forms too closely and not exploring the interpretation of others.

Nontherapeutic techniques of commission

These are characterized by the undesirable behaviour of the nurse practitioner/educator as opposed to the previous techniques comprising the failure to behave in the desirable manner. *Being judgmental* involves a gamut of responses essentially telling the recipient that "you must think as I think," to be accepted. Judgmental statements include such responses as "You shouldn't do that," and "You should do . . ." They tend to place the nurse practitioner's/ educator's values, beliefs, and perceptions above those of others (recipients). All approving or disapproving statements imply that the nurse practitioner/ educator has the right to pass judgement on the behaviour of others. Brown & Keller (1973) has postulated that anxiety generates a judgmental attitude. Persons who have achieved self-acceptance do not need to judge others.

Text box 5.8. Nontherapeutic communication techniques

1. *Nontherapeutic techniques of omission* represent the agent's failure to perform.
2. *Nontherapeutic techniques of commission* represent the agent's performance in an undesirable form.

Evaluation of nurse practitioner-client communication needs to answer three important questions:

- [1] Who are the participants?
- [2] What are they saying?
- [3] Is their purpose being accomplished?

Some of the information necessary to answer these question has been stated before in this conceptual framework. This includes self-knowledge. Self-knowledge about strengths, weaknesses, and habitual ways of responding. In addition the agent needs knowledge of the ways in which recipients respond. Critical reflection on practice will produce a more accurate description of the participants (agent and recipients). The agent and the recipient however, are not isolated entities. Part of defining participants requires examination of the context of the communication:

- *What are they saying?* Essentially, through the process of critical reflection on communication, this question asks for the meaning of the verbal and nonverbal messages of the participants. To attach meaning to their messages a number of factors need to be considered such as imitation, culture and pattern of organization.
- *Is their purpose being accomplished?* The importance of having specific behavioural goals has been stated. When critical reflective practitioners/educators evaluate their own communication, it is done in terms of mutually acceptable goals (agent and recipient).

Communication serves as an interpersonal function in the establishment, maintenance, and termination of the professional nurse-client/colleague and educator-learner relationship.

5.5.3.3. The agent-recipient relationship

Rogers (1961) has defined the helping relationship as one in which at least one of the parties has the intent of promoting growth, development, maturity, improved functioning and improved coping in the life of the other. These same terms could be used to describe the focus of critical reflective practice.

Aiken & Aiken (1973: 863) consider the essential features of positive interpersonal

relationships, and emphasise the "need for empathic understanding." In addition, they identify dimensions of "positive regard, genuineness and concreteness or specificity of expression." They also mention "appropriate levels of self-disclosure, spontaneity, confidence, intensity, openness, flexibility and commitment" as important but less well-defined components of *caring*.

Care is a simple word. But the concept it stands for turns out to be more complex. The Collins Cobuild Essential English Dictionary (Fox, 1989: 110) defines care as "If you **care** for someone or something you look after them and keep them in a good state or condition." "To **care** for someone also means to love them." "If you do something with **care**, you do it with great attention because you do not want to make any mistakes or cause any damage."

To be charged with the care of someone or something is to be responsible for the well-being of that person or object." (Brown, et.al. , 1992: 30). Care involves another party, - the recipient, who could be the patient/client, student nurses and other health care professionals - within the context of this conceptual framework. A capacity for caring is part of human nature. To become good at caring one has to make a choice to actualize and develop that capacity (Roach, 1984). *Auto-pilot practice*, in this conceptual framework is seen as superficial caring which mostly include physical body care and comfort. It is possible for nurse practitioners/ educators to take *care* of a *recipient* without a caring attitude. It is possible to *take care* of a patient's/client's needs by using exacting nursing techniques or of learner needs by using exacting educational techniques, without feeling any real concern for either patient/client or learner [recipient] (Barnum, 1994: 70).

Professional nurse practitioners/educators need to identify what caring is and what it is from the points of view of recipients and the agents. Styles (1982: 231) combined two senses of caring:

"Nursing is nurturing, nourishing, fostering, caring. Nursing is caring: both the attitude and the activity. Nursing is caring by promoting health and self-reliance for all. Nursing is caring for those who need to be nurtured in relation to their health status, whenever, as long, as frequently as they need it, until that need is removed or revised by recovery, independence or death. This caring responds to needs ranging broadly between the extremes of information and incentive for maintaining wellness to emotional support and technical assistance for

sustaining life and providing comfort. As nurses, our MOTIVATION is caring; our SERVICES are caring and managing; our fundamental TOOL is knowledge, both tacit and explicit; the PRODUCT of the services is health - its maintenance and restoration to highest level of attainment - and physical and psychological comfort."

In this conceptual framework the view of Styles is seen as necessary as "the uniqueness of the world of nursing stands on its appreciation of caring and holism." (Lawler [1991], quoted in Gray & Pratt, 1994: 230)

Authors seldom analyze caring in its emotive form, or interpret it as an act of will. Instead, they see caring as a predisposition. When speaking of nursing behaviour, authors usually describe care as *taking care of* which is action oriented. In this conceptual framework the word "care" includes the practitioner's/educator's concern and emotional involvement and is seen to be on a higher level than the action of "taking care."

The intention of the professional practitioner/educator is an important part of his or her effectiveness. An act done with caring could have a different outcome than the same act done without caring. The thoughts and feelings preceding and accompanying each act are less apparent parts of practice/education; yet, because they set the stage for each act, they are the real determiners of the results the agent achieves.

In this conceptual framework critical reflective practice is seen as the invisible act of caring, the secret of the helping art of nursing embodied in "conscious," careful nursing practice. If nurse practitioners recognise the need for and importance of critical reflective practice and discipline themselves to harness their purpose and philosophy, they will not only enrich their nursing practice but will also experience the enduring satisfaction of the recipients of their acts of caring. If the nurse practitioner is to "focus on the person rather than the syndrome," she must develop a "healthy symbiosis of the art and science of nursing within herself." (Rawnsley, 1980: 244)

Rawnsley (1980: 244-245) uses the term *concern* in discussing caring, and sees concern as a nurse practitioner's primary business. Watson (1988:33) maintains that "caring is the essence of nursing and the most central and unifying focus for nursing practice." Although some persons may consider the affective dimension to be instinctive (and unlearnable) *the inquirer's* viewpoint is that its appreciation must be cultivated.

Noddings (1984: 16) argues that caring involves an "engrossment" or "motivational displacement" whereby the transformative agent moves away from his or her own viewpoint and looks at things from the viewpoint of the other person (recipient) and makes the other person's motives his or her own. There must be willingness in the agent to move from self-centeredness to other-centeredness. Both the agent and the recipient seek integration in the relationship through constant and repeated affirmation of each person's unique self and their dependence upon each other for recognition. The caring relationship, as used in this conceptual framework, assumes the coming together of and mutual positive regard between the agent and the recipient. This ensures that maintenance of the integrity and dignity of the recipient (the one cared for) is part of caring.

The ethical dimension involves *choice*. The nurse practitioner/educator as transformative agent, has a choice to be a critical reflective practitioner - thus a caring practitioner - or to function in *auto-pilot* which reduces caring to a set of services offered to the recipient, or a collection of actions to be done.

5.5.3.4. Conceptual definition: recipient

The recipient of transformative critical reflective practice is the patient/client, community or health service environment (developing nurse practitioner and other health care personnel).

5.5.3.5. The patient/client as recipient of transformative critical reflective practice

Patients/clients as recipients are active participants in personal nursing care, as they initiate, plan, and actively participate in their own care. As a consumer of nursing services and health care practices clients have a right to critical reflective nursing care.

5.5.3.6. The learner (student nurse) as recipient of transformative, critical reflective teaching

The learner is an active participant in critical reflective teaching and learning, in that he or she initiates, plans and actively participates in teaching and learning. As future professional the learner has a right to a critical, reflective and creative educational and practice environment. Educational practice which allows for critical reflection on learning and practice

results in a transformational process of *intentional learning*. Intentional learning, according to Novak (1992: 209) involves the "structures which give meaning to experience." The learner experiences learning as an interactive process aiming at insight into reality and construction of a personal realistic-interpretive philosophy (Gravett, 1993: 60). The learner is thus enabled to manage the learning process personally and control it in a critical reflective manner. The learner who constructs knowledge intentionally will consciously control learning *metacognitively* (see 3.3.17: metacognition).

"Meta-learning is evident when the learner matches strategy with motive and task to produce a desired outcome (Biggs, 1988: 129). The transformative, critical reflective practitioner/ educator gives "birth to the construct of metacognition - people's knowledge and monitoring of their own cognitive states and processes." (Resnick, 1989: 9) *Intentional learning* implies taking conscious responsibility for one's own learning in that learning is approached in a thoughtful manner - seeking personal meaning. The agent of critical reflective learning:

- discourages a superficial approach to learning; and
- encourages a deep learning approach through constructive meta-learning: self-evaluation, self-criticism, active involvement and self-management.

The learner as recipient of critical reflective practice is actively involved in the learning process, reflection and critical thinking. The learner thus, has personal choice and the right to choose.

5.5.3.7. Statements for the recipients of transformative, critical reflective practice/education (and role modelling)

The following statements are derived from the conceptual framework by means of deductive reasoning.

■ The client as recipient of critical reflective practice

- i. continuously clarifies with the professional nurse practitioner the client's behaviour, needs and goals
- ii. copes more effectively with the stressors of maintaining health, of sickness and of life as

a result of open exploration of thoughts, needs, emotions, values, defenses, actions, communication, problems and goals

- iii. is willing to participate in meaningful dialogue as a result of the practitioner's concern, emotional involvement and caring attitude

■ **The learner (student nurse) as recipient of critical reflective practice**

- i. continuously clarifies with the professional nurse practitioner/educator:
 - personal behaviour, needs and goals; and
 - clients/peers behaviour, needs and goals
- ii. copes more effectively with the stressors of the educational and practical environment as there is open exploration of thoughts, needs, emotions, values, defenses, actions, communication, problems and goals
- iii. is willing to participate in meaningful dialogue, critical thinking, reflection, creative thought (and risk-taking) as the result of a practice/educational environment characterized by concern, emotional involvement and caring
- iv. recognizes the importance of conscious acceptance of the need for critical reflective learning and practice. Thus, accepts responsibility for appropriate consultation with clients, peers and others
- v. active innovator and learns to value the need for reflective self-criticism, principled thinking, reflective scepticism, and regulation through choice
- vi. learns from experience
- vii. learns to alter self-limiting beliefs (habits of mind), as he/she is encouraged to develop an internal locus of control

■ **The community/health service environment and other health care personnel as recipients of critical reflective practice**

- i. share in the positive effects of critical reflective practice, because the critical, reflective nurse practitioner:
 - ▶ models the uniqueness of the nurse as health team member

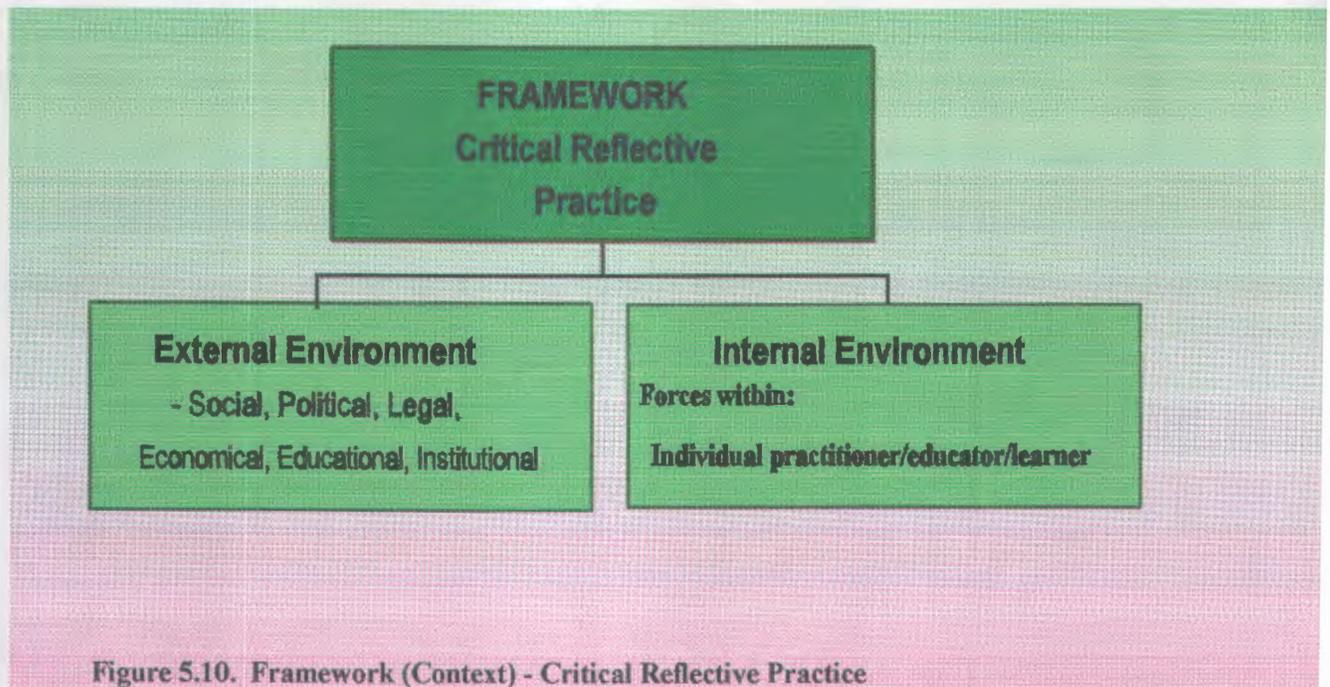
- ▶ shares and coordinates the health care and growth of clients with them
- ▶ continuously clarifies personal behaviour and the nature of the client's present needs
- ▶ actively defines nursing functions in a responsible, thoughtful manner
- ▶ challenges existing practices, structures and power relationships if it is not beneficial to quality health care
- ▶ accepts personal responsibility for community and patient care
- ▶ recognizes the need for openness to criticism from others
- ▶ respect the need for diverse points of view and theories
- ▶ energizes those involved in health care to accept the need for self-responsibility, self-evaluation, critical thinking, reflection and creativity

5.5.4. Framework (Context)

In what context is critical reflective practice taking place?

5.5.4.1. The context for critical reflective practice

Dickoff, et.al. (1968: 423) define the framework as the context in which the activity is taking place. According to Wiedenbach (George, 1990: 173), the framework is a complex of extraneous factors and circumstances which are present in every situation. Nursing as a system has boundaries that separate their internal components from the rest of the world. The external environment for nursing is the portion of the world that exists outside that boundary. Of particular interest as nursing's external environment, is the part of the world that is in direct exchange of energy and information with nursing as a system (King, In: George, 1990: 203). Therefore, environment within this conceptual framework consists of: (1) each individual nurse practitioner's/educator's personal system (*internal environment: the self*), and (2) the totality of patterns existing *external* to nursing and the individual nurse practitioner/educator. Critical reflective practice in nursing is influenced by each individual's internal and external environment (see figure 5.10.).



- **The internal environment (*the self*)**

The self is a composite of thoughts and feelings that constitute the individual practitioner's/educator's awareness of individual existence, his/her conception of *who* and *what* he/she is. According to King (George, 1990: 195), "a person's self is the sum total of all he can call his." *The self* (internal environment) includes, among other things, a system of ideas, attitudes, values and commitments. *The self* is a person's *total subjective environment*. It is a "distinctive center of experience and significance." (King, In: George, 1990: 195). *The self* constitutes a person's inner world as distinguished from the outer world consisting of all other people and things.

The core of critical reflective practice is *caring*. Caring is dependent on a critical reflective environment (culture) that enables the individual nurse practitioner and developing nurse practitioner to look at and listen to *the self*. To look and listen to the self is often too difficult without the help of a *role model* (*transformative intellectual* or *significant figure*) who has learned how to hold up a critical reflective mirror to invite others to look, reflect, and critically listen to *the self*. A critical, reflective environment enables individuals to make *conscious* decisions based on understood and accepted feelings, knowledge and motivations.

- **The external environment**

The external environment/community of the nursing unit has significant social, political and economical implications for nursing. Major changes have occurred in the external environment (community) of the nursing unit. The Reconstruction and Development Programme of the African National Congress (ANC., 1994) has social, political and economical implications for health services (nursing services), educational institutions and the South African community. Reconstruction & Development Programme will involve the complete transformation of the health care system (ANC., 1994: 43-45). This transformation includes review of all relevant legislation, institutions, organizations, management practices, norms and standards. The Primary Health Care Approach focuses on community participation, empowerment, accountability, collaboration and cost-effectiveness (ANC., 1994: 46-47).

Regarding human resources for the health care system, the Reconstruction & Development Plan [RDP] (ANC., 1994:47-50) proposes a programme of retraining and reorientation of existing health workers. The RDP also stresses the need to train new health care professionals in the Primary Health Care Approach and in the management of Primary Health Care. The RDP proposes the complete transformation of health services and educational programmes. It suggests the need for a different kind of health care practitioner, as concepts and actions such as democracy, transparency, transformation, empowerment, human rights, and accountability are part of the philosophy of the current South African society.

All these variables in the external environment result in uncertainty in the health care and educational systems, and therefore requires critical reflective practice, teaching and learning in order to facilitate the development of practitioners who can meet the demands of quality health care.

Knowledge of the context of nursing is necessary in view of the fact that insight into actions and interactions is only possible within the context in which it is happening. Specific human actions also, are only understandable within the context in which it is happening, and the personal frame of reference of those involved in the actions.

According to Kotzè (1979: 151) and Van Huyssteen (1981: 91) nursing actions always is time-space and culturally oriented. Nursing care is practiced in hospitals, clinics, institutions and the community. Time-space context is shared with other members of the multi-professional team. However, the cultural context of nursing practice is specific due to its legal and ethical framework. Nursing actions are anchored in the cultural bondage of humans in relationship and the unique culture of nursing (Botes, 1989: 105).

The intentions of nursing are found in aspects of health and wholeness. Nursing is multidimensional in that it focus on prevention, maintainment of, and recovery of health (Poggenpoel, 1989: 28). Nursing is also bounded by current societal values and value-orientation (Smith, 1992; Lindegger, 1982; Viljoen, 1989), and should therefore thoughtfully rethink and rediscover the functions of values. *Values* can according to Smith (1992: 12) be defined as: " . . . oorwegend gevoelsmatige belewinge van voorkeur ten opsigte van dit wat vir 'n persoon betekenisvol, belangrik en waardevol is."

Values serve as guideline for effective goal realization in nursing. Effective goal realization in nursing is only possible within the context of critical reflection on practice. Role models of critical reflective practice recognize community values (societal values, as well as those of the nursing community). Current societal values, such as *empowerment* of individuals to accept self-responsibility for their lives are taken into account by the transformative, critical reflective practitioners/educators in that they energize others to take self-responsibility.

Critical reflective practice is seen as empirically relevant to both the *external environment* (health service system and educational system) and the *internal environment* of the nursing system and the individual nurse practitioner/educator/learner (*subjective environment*). The concepts and assumptions underlying this inquiry may generate new ideas about health care practices (including nursing practice), educational practices and caring.

5.5.4.2. Statements for the context as framework

The following statements are derived from the conceptual framework by means of deductive reasoning:

- Transformative, critical reflective practice requires recognition of both the internal and external environment of health care services.
- There is a dynamic interaction between the internal environment (within the individual and the nursing unit) and the external environment (community).
- Change in the health services and community requires critical reflective thinking in practice and during teaching and learning.
- Critical reflective practice is a social act, as it involves dialogical action.
- Critical reflective practice enables the registered nurse practitioner/educator to stay within the legal and ethical requirements of nursing/education.
- Critical reflective practice enables the registered nurse practitioner/educator to use their knowledge and skills to the benefit of society (external environment).

5.5.5. Dynamics

"Dynamics is the energy source of the activity." (Dickoff, et.al. , 1968: 422) In this framework the dynamics are the motivating factors demanding critical reflective practice. Already indicated is the internal and external environment (discussed in 5.7.1.) and the impact of the agent (critical reflective practitioner/educator on the recipient(s) (5.6.5.). To accommodate all the changes and expectations in health care and nursing the transformative professional nurse practitioner/educator strives toward:

- personal growth in critical, reflective and creative thinking;
- empowerment of future health care professionals as transformative intellectuals; and
- patient autonomy (self-responsibility and self-determination).

The critical reflective practitioner/educator is motivated by knowledge that transformation/change is more acceptable if:

- those who are affected participate in the change process
- those who implement change are helped to gain the required skills for implementation (critical thinking, reflection and creative thinking)

The *transformative intellectual* therefore energizes and supports others (clients/learners/

other health care professionals) to think critically, reflectively and creatively. Through communication and role modelling the critical reflective practitioner/educator allows all recipients to become stakeholders and participants in the planned change/transformation of health care practices. As a role model of critical reflective and creative thinking, the transformative practitioner/educator changes the way people think about what is desirable and necessary. In this type of environment people are committed to move toward achieving a vision.

A transformative, critical reflective practitioner/educator challenges processes, searches for opportunities, inspires a shared vision, enables others to act, models the way and encourages. Such practitioners/educators are motivated by more than the compliance of others. They recognize the needs and values of others and are motivated by change, innovation, growth and empowerment of *the self* and others. This results in positive effects for all involved as choices consistent with collective values are offered (Koerner, Bunkers & Nelson, 1993: 3).

The transformative, critical reflective practitioner/educator is motivated by personal ability to:

- create vision in others;
- empower others; and
- create meaning through critical thinking and reflective process.

5.5.5.1. Vision as phenomenon

Vision is an ideal to aim for (Rabey, 1994: 31). Vision is 'imaginative insight into a subject or problem; foresight and wisdom in planning.' (Pollard, 1994: 897) It is "a mental picture of a possible situation or state of affairs, in which you imagine how things might

be different from the way they are now." (Fox, 1989: 1627-1628) The *transformative intellectual* is motivated by his/her ability to create vision in others in such a way that they will follow the vision because they see the need for it, accept ownership of it and be committed to achieve it. The critical reflective practitioner/educator seeks to *transform*, to create a vision of *how* caring practices might be. He or she allows others to:

- create, explain and implement their vision, thus to
- encapsulate their individual and others' aspirations and intentions.

The energy source behind transformative, critical reflective practice is:

- the recognition of the importance of intellectual humility, intellectual courage, intellectual empathy, intellectual integrity, intellectual perseverance, faith in reason and an intellectual sense of justice;
- the practitioner's/educator's concern for and emotional involvement in *care* for, growth of and *empowerment* of others;
- the ethical norms and values of the nursing profession; and
- the need for *expert* nursing practice.

Facilitation of lifelong critical reflective learning and practice requires *motivation*. Firstly, motivation within the registered nurse practitioner/educator (agent) to provide an environment open to and facilitating critical reflective learning and practice. Secondly, motivation within the recipient (patient/client, learner/others) to benefit from critical reflection.

5.5.5.2. Motivation as phenomenon

Motivation: "If you **are motivated** something, especially an emotion, causes you to behave in a particular way." "If you **motivate** someone, you make them feel determined to do something." "Your **motive** for doing something is your aim or purpose in doing it." (Fox, 1989: 508) Motivation, according to Schiffman & Kanuk (1994: 94) can be described as "a thriving force within individuals that impels them to action." Motivation is the individual's *desire* to show the behaviour (critical reflective thinking) and might be thought

of as the *will do* factor influencing the display of critical reflective behaviour. Motivation is a state of "need-induced tension that exerts as a 'push' on the individual to engage in behaviour that he or she expects will gratify a need, and thus reduce tension." (Schiffman & Kanuk, 1994: 94) Whether gratification is actually achieved depends on the course of action being pursued. The courses of action that the nurse practitioner/learner pursue and their specific goals are selected on the basis of their thinking processes and previous

learning/experience.

Steers & Porter (1983) identify three major components of motivation (see text box 5.9.). Emphasizing the three factors (summarized in text box 5.9.), motivation for critical reflective practice is defined as *conditions which influence the arousal and maintenance of behaviour relevant to critical reflective thinking.*

Text box 5.9. Three major components of motivation

- **Energizing component.** This is the force or drive present in an organism which leads to some behaviour.
- **Directing component.** The directing function guides the behaviour in a particular direction.
- **Maintaining or sustaining component.** Motivation is maintaining or sustaining the behaviour once it has occurred.

(Steers & Porter, 1983)

Causes and reasons for critical reflective practice or lack of critical reflective practice may be different. There are different reasons for behaviour at different times (McCormick & Ilgen, 1995: 269) and people do differ in what they desire or value. Differences in motivation occur among individuals and within individuals across time and across situations.

The goals selected by individuals depend on their personal experiences, physical capacity, prevailing cultural norms and values, and the goal's accessibility in the physical and social environment. In this conceptual framework an individual's own perception of himself or herself also serves to influence the specific goals selected. The knowledge and skills which the practitioner/learner owns, would like to own, or would not like to own are often perceived in terms of how closely they are congruent with the person's *self-image*. The nature and persistence of an individual's behaviour are often influenced by expectations of success or failure in reaching certain goals. Expectations are often based on past experience. The effects of success and failure on goal selection have strategy implications for the health care environment, nursing and education.

The individual who cannot cope with the multiple requirements of health care practice and learning may react with aggression, rationalization (defense mechanisms people

sometimes adopt to project their egos from feelings of failure when they do not attain their goals) and other defense mechanisms which include regression, withdrawal, projection, autism, identification, and repression (see text box 5.10)., for a summative explanation of the defense mechanisms). The arousal of any particular set of needs or goals (for example, to become a critical reflective practitioner) at a specific point in time may be caused by internal stimuli found in the individual's psychological condition, emotional or cognitive processes, or by stimuli in the external environment. However, the set of needs or goals at a particular time are often

determined by specific cues in the environment (internal or external environment). Individuals working, learning or living in a complex and highly varied and challenging environment experience many opportunities for need or goal arousal. Controversely when their environment discourages challenge or is emotionally depriving fewer needs, aspirations or goals are activated.

The external environment (working and learning environment) of the practitioner/learner can be either a positive or negative influence in meeting the identified needs, as needs and goals are interdependent and change in response to the individual's physical condition, environment, interaction with other people and experience.

The external environment should influence both the direction and intensity of individual

Text box 5.10. Defense mechanisms

- **Aggression.** Individuals who experience frustration may resort to aggressive behaviour in attempting to protect their self-esteem.
- **Rationalization.** Sometimes individuals redefine a frustrating situation by inventing plausible reasons for being unable to attain their goals. Or, they may decide that the goal isn't worth pursuing. Rationalizations are not deliberate lies, since the individual is not fully aware of the cognitive distortion that occurs.
- **Regression.** Individuals react to frustrating situations with immature behaviour.
- **Withdrawal.** Frustration is often resolved by simply withdrawing from the situation (physically or psychologically).
- **Projection.** An individual may redefine a frustrating situation by projecting blame for personal failure on other objects or persons.
- **Autism.** Autistic thinking, refers to thinking that is almost completely dominated by needs and emotions, with little effort made to relate to reality.
- **Identification.** Individuals resolve their feelings of frustration by subconsciously identifying with other persons or situations they consider relevant.
- **Repression.** Individuals may "forget" a need or goal; that is they force it out of their conscious awareness.

choice and stimulate the practitioner/learner to seek the information required to evaluate alternatives and make a choice. Internal rewards are obtained by the individual practitioner/learner if he/she *learns* (knowledge of results) that he/she *personally* (experienced responsibility) has performed well on a task that he/she *cares* about (experienced meaningfulness). The more these three psychological states are present, the higher will be the practitioner's/learner's motivation, performance, and satisfaction., thus, strengthening self-esteem, self-actualization and self-efficacy (Robbins, 1993: 217). High levels of performance through critical reflection on practice/learning are seen in this conceptual framework as partially a function of an absence of obstacles constraining the practitioner/learner.

The previous discussion covered the:

- agent (transformative, critical, reflective nurse practitioner/educator);
- recipient (client, health service environment, multi-professional team and the learner [developing nurse practitioner]); and
- framework/context (external environment and internal environment).

5.5.6. Procedure

For purposes of discussion of **procedure** the inquirer concentrates on the learner (developing nurse practitioner) as the recipient of *transformative critical reflective role modelling* and as future transformative critical reflective practitioner.

What is the guiding procedure or technique or protocol of the activity?

According to Dickoff, et.al. (1968: 423) "the procedure includes the guiding procedure, technique or protocol of the activity." The procedure for critical reflective practice includes the implementation of specific behaviour (by the agent/role model) and supportive guided reflective strategies in the quest to facilitate individual (practitioner/learner) and nursing practice transformation. The transformative agent (critical reflective nurse practitioner and educator) intentionally creates a context (environment) that is constructive for critical reflective thinking, learning and practice. The purpose of using specific behaviour, positive context and guided reflective strategies

are to facilitate **lifelong** critical reflective learning and practice.

Various aspects regarding intentional provision of a context constructive for critical reflective thinking, learning and practice have been identified. The following discussion concentrates on the learner (developing nurse practitioner) as the recipient of transformative, critical reflective behaviour (role modeled by the agent) and utilizer of guided reflective techniques. Behaviour is "the way in which something or someone acts or functions." (Fox, 1989: 65). A behaviour is "what" the agent implements for successful facilitation of critical reflective thinking, learning and practice. Needed behaviour, previously stated, include: increasing self-awareness, building trust through communication, developing vision and empowering. By implementing these specific behaviours the *transformative intellectual* strives for successful transformation from *auto-pilot functioning* to *critical reflective functioning*.

It is explicitly said that:

- a prerequisite for critical reflective thinking, learning and practice is a transformative, critical reflective agent (role model).
- the recipient's (developing nurse practitioner's) internal environment (*conscious/subjective environment*) is the core for critical reflective thinking and learning.
- the external environment should enable the recipient to look and listen to *the self* and others. This happens through the agent's utilization of specific behaviour and guided reflective strategies enabling the recipient to become conscious of *the self* and others - to have a *learned conversation* with *the self* and *with* others.

If these requirements are met the developing nurse practitioner will recognize the need for **lifelong** critical reflective thinking, learning and practice and will internalize a *critical reflective spirit* enabling the individual to role model and allow critical reflective behaviour in others.

5.5.6.1. Intentional creation of a context (environment) constructive for critical reflective thinking, learning and practice

By reflecting back on the previous chapter (chapter 4) the following components (guiding procedures/techniques) were identified as crucial to facilitate a context conducive to critical reflective thinking, learning and practice:

- **Modelling.** Learners (developing nurse practitioners) cannot be expected to develop positive modes of thinking and learning if these traits of mind are not modeled by a transformative, critical reflective practitioner/educator. The *transformative intellectual* models *self-consciousness* (see 5.4.1.), *creative thinking* (see 5.4.3.), *vision* (see 5.8.1.), *caring* (see 5.6.3.), *reflective scepticism* (see p.295), *reflective self-criticism* (see p.291), *dialectical thinking* (see p. 291), *principled thinking* (see p. 292), *praxis* (see p.279), encourages self-development, *motivates* (see 5.8.2.) and *empowers* (see p.289) others, and creates meaning through open *communication* (see 5.6.2.) and trust. Characteristics to be modeled are listed in Text box 5.5. & 5.6. and essential elements of modelling in 5.5.3. The *transformative intellectual* (agent) models all modes of thinking (see Text box 5.2.). The personal example - the *transformative agent's* actual conduct - is the real key to influencing others. The *agent's* technique alone will not energize critical reflective thinking and conduct in others. He or she needs to inspire the learner through openness, trust *empathic listening* and respect for the learner's uniqueness:
 - **Empathic listening** is the highest form of listening. It involves listening with the intent to understand. Empathic listening allows the *transformative agent* to "get inside another person's frame of reference." (Covey, 1994: 240) It involves more than registering, reflecting or even understanding what is said. Empathic listening is powerful in that it provides the *transformative agent* with accurate data to work with. When the *transformative agent* listens with empathy to the learner, he or she gives that person *psychological air*. After that vital need is met, the *transformative agent* can focus on facilitating of critical reflective thought and learning in the learner. Seeking to understand the learner before the *transformative agent* prescribes, is difficult.

- ▶ **Trust** is earned by being in touch with learners. It is not enough for the *transformative intellectual* to understand the need, concerns and aspirations of the learner. The understanding must be demonstrated. Trust is a prerequisite for critical reflective thinking and learning as no learner will share ideas, thoughts and feelings with a person who is not trusted. Trust develops over time and requires consistent caring behaviour from the *transformative intellectual*. Trust is increased by the agent being congruent (doing what he/she says, not leaving gaps between what is said and what is done), constant (staying on course and creating no surprises for the learner), reliable (available when needed, providing the necessary support and encouragement) and showing integrity (honoring commitments and promises) (Gunden & Crissman, 1992: 8). Without trust vision is not possible!

Respect, kindness, honesty and keeping commitments increase the level of trust between the *transformative intellectual* and the learner. Trust generates openness, mutual learning, *empathic communication, critical reflection and reflective learning*.

- **A changed learning and practice environment.** Learners must be exposed to an environment which allows dialogical thinking, philosophical discussion and critical reflective learning and practice. Knowledge and skill must become the objects of *interrogation/exploration, inquiry, confrontation and extrapolation*. Such an environment allows the learner to monitor and regulate his or her thinking processes and behaviour and results in meta-cognitive flexibility.
- **Definite standards for thinking and practice needs to be established.** The transformative, critical reflective nurse practitioner/educator needs to establish definite standards for thinking and practice. Learners should continuously be reminded of their responsibility to express themselves clear, specific, accurate, relevant, consistent, logical, deep, complete, and in open-minded reasoning. Learners must earn the right to confidence in personal beliefs and theory.

- **Essential conditions for critical, reflective thinking and creative learning are that learners should:**

- ▶ learn that *reflective self-criticism* (see p. 291) is possible and necessary. The human capacity of *self-consciousness/awareness* (see p. 271) needs to be examined for the learner to determine whether his/her paradigms are reality- or principle-based or if they are a function of conditioning and conditions (Covey, 1994: 67). *Self-paradigm* is seen as the most fundamental paradigm in this inquiry as it affects not only the learner's attitude and behaviour, but also his or her relationship with others;
- ▶ accept *responsibility* to choose. The learner needs to admit that behaviour is a product of personal choice, based on values, rather than a product of conditions. Highly proactive people recognize that responsibility. Behaviour depends on personal decision not conditions. Feelings can be subordinated to values and critical reflective thinking.

Proactivity and personal management can be expanded through *imagination* (see 3.1.20.) and *conscience*. Through imagination the learner visualizes the uncreated world of potential lying within him or herself. Through conscience, the learner comes in contact with universal principles. *Principles* are deep, fundamental truths and generic dominators (Covey, 1994: 122). The personal power that comes from principle-centered practice is the power of a self-conscious (aware), knowledgeable, proactive individual, unrestricted by attitudes, behaviour and actions of others, or by circumstances and environmental influences.

Freedom to choose fosters *proactivity* in learners. It means that the learner takes the initiative for his or her own life and learning. In making such a choice the learner is no longer reactive. Reactive people are often affected by their physical environment.

Proactive individuals are value driven; and if their value is to produce quality work through critical reflective, and creative thought processes they subordinate the influencing environment to their thought processes.

- ▶ accept a situation of which they have real experience with and interests them enough to develop a question about it (a *trigger experience*);
 - ▶ suspend problem solving and methodological thinking (during the critical, reflective and creative listening phase);
 - ▶ observe and respect personal thinking processes (be *in touch* with how their own minds are working);
 - ▶ trust *the self* and where it is in the process of listening. The learner needs to discover the importance of reaching his or her personal *listening hole* and having *a learned conversation with the self* (see p. 294); and
 - be willing to take risks. Learners must be taught the importance of *self-talk*, a process of proceeding through the underbrush of uncertainty, the uniqueness of the situation and the problem to find a solution or resolution.
- **Deliberate support.** The *Transformative, critical reflective agent* deliberately provides a supportive environment for development of critical reflective practice in learners. Being a critical reflective and creative practitioner the agent is conscious of the personal, to envisage the risks that they are in for, if they are to manage it. Part of the purpose of the *transformative, critical reflective agent* is to counteract the risks involved in being a critical, reflective and creative thinker. The developing nurse practitioner (recipient) must be helped to look beneath the surface of events and attitudes, to develop the sense of *agency* (see p. 73) necessary for ethical and professional conduct.
 - **Synergy.** Synergy is the essence of *transformative leadership*. Simply defined, it means that *the whole is seen as greater than the sum of its parts*. It is principled-centered leadership. The *transformative agent* who recognizes the importance of synergy, catalyzes, unifies, and "unleashes the greatest power within people." (Covey, 1994: 262). Such an agent, according to Covey (1994: 263) *empowers* in that he or she becomes a 'pathfinder' that opens new possibilities for others.

The *transformative, critical reflective agent* is open to new possibilities, new alternatives, new options. As such he or she models the belief that all parties involved in critical, reflective learning will gain more insight and growth. Valuing differences is the essence of synergy - the intellectual, the emotional, the psychological differences between people.

The *transformative, critical reflective agent* admits that real change comes from inside.. "It doesn't come from hacking at the leaves of attitudes and behaviour with quick fix personality ethic techniques." (Covey, 1994: 317) Real change/transformation comes from striking at the root - the fabric of the learners thought, the fundamental, essential paradigms, which give definition to the learner's character and create the lens through which the learner sees the world. *Self-consciousness (awareness)* energizes *self-criticism* and increases the learner's ability to become increasingly effective in *conscious* critical reflective thinking and creativity.

5.5.6..2. Intentional use of "deep" learning approaches which promotes the use of critical reflective and creative processes

Abstract and propositional skills do not occur naturally, they must be taught, practiced, refined and reinforced. The cognitive and affective skills necessary to engage in critical reflective thinking, learning and practice should be developed. No single method is sufficient to enhance critical, reflective and creative behaviour in the classroom or practice situation. Transformative, critical reflective nurse practitioners and educators should not only stress cognitive techniques, but also recognize the important role that affective domain plays during critical reflective and creative thinking.

Individual *consciousness* (see 5.4.1.) and control over affective aspects of critical, reflective thinking are necessary. Critical, reflective learning results from confrontation with an experience. The *living through* of an experience should involve the learner's total personality, as an experience (*trigger event*) cannot be understood by fragmentation or isolation. The chosen teaching or facilitative methods should emphasize the uniqueness of human experience, the influence of the specific context and the affective aspects of the individuals experiences. Learners should be encouraged to explore, question, doubt and criticize their own perceptions and those of others and to discover their own meanings from these experiences. Learners need to reach the point where they get comfortable with dialogical issues in a rational manner.

Various strategies associated with critical-reflective, and creative process are woven into chapter four (see 4.10.). In this conceptual framework the inquirer decided to concentrate on *guided reflective strategies*, which enable the learners to reflect *with* other people and discover *meaning* with others. Guided reflective strategies are seen as a mutually enabling process which results in dialogue and revelation of *the self* to one another. The role of the *transformative intellectual* is to guide learners toward the interpretation of personal and shared meaning.

Guided reflective technique is purposeful and goal-directed. It begins with the goal to reconstruct individual and social experiences as a basis for understanding attitudes and emotions which shape present knowledge of practice, and a basis for incorporating new ideas and information. This process of reconstruction requires the learner to collect comprehensive descriptive accounts of his or her experiences. Moments of critical *reflection-in-action* and retrospective *reflection-on-action* (see 3.1.12) are powerful in that they are recorded for further analysis. This analytical process enables the learner to revisit the experience in the light of guided questions (guidelines), new understanding and changed perspective.

5.5.6.3. Guided Critical Reflective Strategies

A high-level of *self-consciousness* (see 5.3.1.) is seen as necessary for development of critical reflective thinking and learning. The transformative, critical reflective agent deliberately uses critical reflective strategies to make the learner (recipient) *conscious* (aware) of *the self*, others and the uniqueness of context (the situation). Within this conceptual framework the following guided reflective strategies are seen as potentially powerful for developing of critical reflective thinking and learning ability:

- **Journal writing (diary)**

The importance of a journal has been discussed in detail in the previous chapter (see 4.10.2.). The *transformative intellectual* as facilitator of critical reflective thinking and learning deliberately uses journal writing to help learners break their habitual modes of thinking as it enables the writer to look back, to reconsider, to make explicit what often remains implicit. This strategy enables the learner to keep an ongoing record of his or her actions, feedback, beliefs, assumptions and theories. The record can be compared with those of peers enabling the individual to become aware of similarities or differences. Journal writing in this inquiry is seen as an anchor from which to make further explorations as it

allows *reflective withdrawal* and *reentry*.

A structured journal focusing on particular experiences is fundamental to the concept of critical reflection, as it enables the learner to see themselves over a series of similar experiences and to understand the factors influencing his or her potential. Guidance in critical reflection on practice through journal writing can make learners more *conscious* of the qualities and skills they already have, and give them purpose and direction.

- **Critical Incident Technique**

Critical incident technique has been discussed in detail in the previous chapter (see 4.10.3.). A critical incident is any observable activity sufficiently complete in itself to allow inferences and predictions to be made about the person performing the act. To be critical an incident must occur in a specific situation where the purpose of the act seems fairly clear to the observer and where its consequences are sufficiently definite to leave little doubt concerning its effects.

In this inquiry, critical incident reports are seen as a sound basis for making inferences in terms of critical reflective behaviour, attitudes and feelings. Critical incident technique is included as it provides learners with the opportunity to share concerns, experiences and feelings. This may result in increased *self-knowledge* which, in turn may enhance sensitivity to others.

Critical incident reporting is also a technique of breaking down the distance between the learner and *transformative intellectual*. The technique requires the ability to deal with the unexpected, to reduce tension and to capitalize on the incident by using it to facilitate learning and transfer of learning.

The process of critical reflection on incidents should involve three interrelated phases. The *transformative intellectual* should enable the learner to:

- **identify the assumptions that underlie the learner's thoughts and actions;**
- **scrutinize the accuracy and validity of the assumptions in terms of how they connect to, or are discrepant with the personal experience of reality.** The learner needs to compare personal experience with experiences of others in similar contexts; and

- **reconstruct assumptions to make them more inclusive and integrative.**
- **Critical reflective exercises**

The *transformative intellectuals* recognize the need for critical reflection on media reports, journal articles, textbooks and other important written media such as Acts of Law. They provide a variety of opportunities for drawing analogies and *bridge building*. Assignments (critical reflective exercises) based on television reports, radio reports and the printed media present a challenge to learners' habitual way of thinking. In providing such exercises, the *transformative intellectual* develops insight in the learner from fact that some articles appearing in print or on the news are not objective. This can help the learner to develop a *reflective scepticism* about the printed word and consciousness about the distorting power of television.

A central task of the *transformative intellectual* is *bridge building* between new concepts and ideas and the learners' previous knowledge. *Analogies* and *metaphors* (see 4.11.5.) can enable the learner to move from concrete experiences to more abstract modes of thinking.

Building bridges between everyday concrete ideas and more abstract, academic concepts foster critical, reflective thinking.

- **Collective Consciousness Raising**

Consciousness raising (see 4.11.6.) is a process of remembering and trying to understand an experience to gain insight into the experience so that it can become concrete and meaningful.

The simultaneity of remembering and understanding that occurs always constitutes *critical (self-) reflection*. Understanding is seen as both a process of **completion** and of **opening the view** on a terrain of unexplored interpretations and action possibilities (Hart, In: Mezirow, 1990: 55).

Prerequisites for effective, collective consciousness raising are:

- the members of the learning group must be able to feel safe in expressing their personal concerns;

- the *transformative intellectual* has to be able to assume and identify with the perspectives of all participants in the learning situation; and
- at some point gain a theoretical distance to personal experience.

Collective consciousness raising involves *opening up, sharing, analyzing, and abstracting*.

- **Post-clinical Conference**

A well conducted post-clinical conference is an essential strategy for developing critical reflective thinking and learning which they enhance and maximize experiential learning (see 4.10.7.). Post-clinical conferences are included in this inquiry as they require sharing of data, reflective observation, abstract conceptualization, active experimentation and synthesized learning.

Use of this method requires the *transformative intellectual* (critical reflective nurse practitioner/educator) to become familiar with the links between the experiential learning cycle, nursing process and conceptual framework. Conscientious attention to the completion of the experiential cycle (see 4.7.4.) can be effective in assisting learners to become critical, reflective and creative thinkers - who derive meaning from all aspects of their clinical experiences.

- **The Topic/Form Grid**

The topic/form grid is a strategy that could be used by *transformative intellectuals* to help learners use diverse forms of writing to enrich critical, reflective and creative thinking (see 4.10.11.). This strategy is included as it enables learners to become more conscious of the contextuality of experiences, issues and writings. The topic/form grid is a kind of metaphor for learning itself as learners become aware of multiple options and can make choices based on individual options. Learners are stimulated to think critically, reflectively and creatively.

- **"Six hats" Technique**

The "six hats" technique (see 4.10.12.) is put forward in this inquiry for its usefulness in situations in which a particular course of action needs to be considered. With this technique

the *transformative intellectual* ensures that all possible perspectives are included during group discussion: the factual, optimistic, pessimistic, creative and emotional perspective. The discussion ends in clarification of criteria and practical recommendations. The technique, in addition aids in perspective clarification and expansion of personal perspective as the *transformative intellectual* encourages learners with narrow views to cultivate broader perspectives.

- **Socratic Questioning/Discussion (Dialogical Discussion)**

In the Socratic Technique *transformative, critical reflective agents* wonder aloud about the meaning and truth of learners' responses to questions (see 4.10.1.). The *agent* models a reflective, analytic listener who actively considers alternative points of view, actively tries to reconcile differences of viewpoint and actively tries to determine what learners think and, more importantly whether what they think is actually so. Through the deliberate use of Socratic techniques learners develop a sense of intellectual discipline and thoroughness. They learn to appreciate the power of critical, reflective thinking.

The *transformative intellectual* mostly uses three (3) forms of Socratic techniques, namely spontaneous, exploratory and issue-specific techniques (see 4.10.1. for a broad description). Six (6) categories of Socratic questions can be used, including: questions: (1) of clarification; (2) which probe for reasons and evidence; (3) which probe assumptions; (4) about viewpoints/perspectives; (5) which probe implications/consequences; and (6) which further enquire questions about initial questions.

Guided critical reflective techniques, such as those discussed, allow a flexible approach

to learners as the *transformative intellectual* attempts to match the teaching and learning strategy to the individual learners needs. The chosen strategies should allow self-direction, autonomy, self-evaluation, responsibility, collaboration and the development of *self-consciousness*, self-knowledge, self-esteem and openness. This results in an environment characterized by challenge, openness, risk-taking, reflective scepticism, mutual acceptance and playfulness. The *transformative intellectual* facilitates critical, reflective and creative thinking by providing freedom to:

- question/challenge;
- think aloud;
- reflect;

- experiment;
- hypothesize;
- imagine;
- choose; and
- act.

5.6. Conclusive remarks

Chapter 5 stresses critical, reflective practice as an instrument of conscious self-realization. Learning processes can have a positive effect on critical, reflective thinking. As an instrument of conscious self-realisation, learning is not only a principle of development but also a principle of self-realization. Critical, reflective practice is promoted by the learning processes preceding it. Not every type of learning leads to critical, reflective thinking and conscious self-determination.

"The ideal of using the present simply to get ready for the future contradicts itself. It omits, and even shuts out, the very conditions by which a person can be prepared for the future. We always live at the time we live and not at some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in future. This is the only preparation which in the long run amounts to anything." (Dewey, 1933: 49).

Despite the relative proliferation of diverse reflective teaching methods and curricula, it remains difficult to put ideas about critical, reflective learning and teaching into practice.

A number of issues in conceptualizing and promoting critical reflection were identified in the previous chapters. The individual's ability to analyze and evaluate critical practice as well as the context in which it occurs was emphasized. The inquirer sees this individual element as very important, but evidence exists that critical, reflective practice requires a supportive environment to maximally develop and flourish.

Transformative intellectuals such as critical, reflective educators and nurse practitioners, must teach by example. The development of critical, reflective and creative thinking in learners entails much more than merely the acquisition of thinking skills. It involves the:

- cultivation of a positive disposition towards the development of critical, reflective thinking;
- creation of conditions conducive to the development of critical, reflective thinking and practice;
- cultivation of virtues emanating from critical, reflective thinking and practice; and
- teaching, role modelling and assessment of critical, reflective skills (Rossouw & Lamprecht, 1995: 521).

The development of critical, reflective thinking for practice requires a comprehensive approach. People tend to invest their time only in those things they consider worthwhile. Therefore the process of developing critical, reflective thinking and creative skills can only get on track once a strong conviction about its importance has been established.

The inquirer has constructed a model [diagram] (see Figure 5.11.) to facilitate critical reflective practice based on previous chapters and the conceptual framework. The model (diagram) will be refined (if indicated) after peer review and after the phase of implementing selected strategies to raise self-consciousness and critical, reflective thinking. Chapter 6 includes a discussion of the application and evaluation of the selected techniques, data regarding participants' attitudes and feelings towards the techniques and possible limitations in the selected techniques observed.

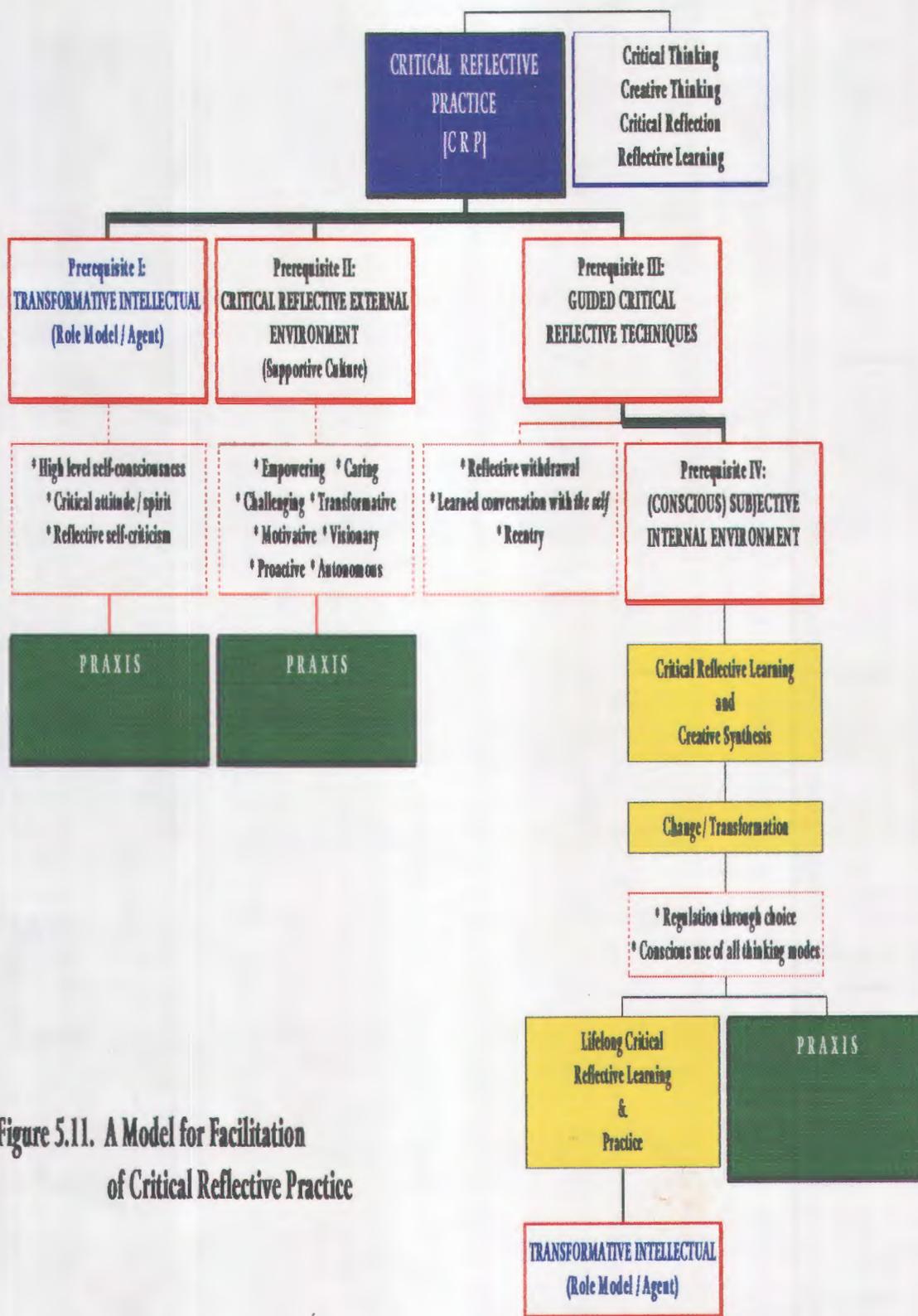


Figure 5.11. A Model for Facilitation of Critical Reflective Practice

Chapter 6: Application & Evaluation of selected Guided Critical Reflective Techniques

6.1. Introduction/rationale

The purpose of this stage of the inquiry was to:

- apply and evaluate selected guided, critical and reflective techniques,
- assess participants attitudes and feelings regarding the selected techniques and
- identify possible limitations therein and changes needed for future application.

The inquirer discussed fourteen (14) guided, critical-reflective techniques/methods in chapter 4 (see 4.10.). Three (3) techniques/methods were selected to be tested (applied and evaluated) in this phase, namely:

- i. Socratic & Learning Through Discussion (dialogical) techniques;
- ii. Critical Reflective Exercises:
 - ▶ Critical reflective exercise: Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996), and
 - ▶ Critical reflective exercise: Journal Article ("Babies from a plastic womb: the end of childbirth as we know it."); and
- iii. Critical Incident Technique.

Annexure XVII (p. CXX) & XVIII (p.CXXI) provides an explanation of the different symbols and codes used in chapter 6.

6.2. Participant selection and orientation

6.2.1. Socratic & Learning Through Discussion (Dialogical) Method

During January 1997, being responsible for Nursing Education III, the inquirer explained

Socratic and Learning Through Discussion (dialogical) method and its objectives to the post-basic students. The explanation included orientation regarding the:

- ▶ different types of Socratic and Learning Through Discussion (dialogical) methods that would be used;
- ▶ possible benefits for participants;
- ▶ possible risks involved;
- ▶ requirements for participation; and
- ▶ what was to be expected from the inquirer (see chapter 4: 4.10.1., Annexure II, p. XXXIX & Annexure III, p. XLIII).

The inquirer explained that Socratic and LTD (dialogical) method:

- could only be used during class discussions if all registered post-basic students (n = 10) agreed to participate.
- required that time should be devoted to evaluation of group and individual behaviour, and mastery of the course material (e.g., a module) [see Annexure III, p. XLIII for continuous evaluation criteria].

The inquirer explained that it is necessary that at least the last ten (10) minutes of the discussion be devoted to diagnosing and evaluating group and individual mastery of the material. Nonfunctional or disruptive individual behaviour in the overall Socratic and LTD. (dialogical) process had to be confronted and discussed. Supportive and cooperative behaviour, which enriched and developed critical, reflective thinking also had to be acknowledged and encouraged. The necessity for all students to accept responsibility to participate in and share their evaluation of individual and group performance was emphasized.

During the introductory explanation it was made clear that

- summative feedback would be requested from every participant, at the end of the academic year, to evaluate the methods used and that

- the data would be used in the inquirer's thesis. After orientation the inquirer requested the students to discuss the request for their participation as a group and to make a decision. The total post-basic student group agreed to participate.

6.2.2. Critical Reflective Exercises

6.2.2.1. Critical Reflective Exercise through the use of Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996)

During June 1997 the inquirer explained the purpose of critical, reflective exercises to three (3) groups of students (including post-basic degree and post-graduate students) and requested volunteers to come forward to participate in the critical, reflective exercise. Seven (7) students came forward that is one (1) B Cur (I et A) I student; three (3) B Cur (I et A) III students; one (1) B Cur Hons. student; and (2) M Cur students. The inquirer provided each participant with:

- i. Act No.92 of 1996: Choice on Termination of Pregnancy Act, 1996 (Annexure IV, p. XLV), and
- ii. guidelines which will enable critical reflection on Act No. 92 of 1996 (see Annexure V, p. L).

The guidelines were seen to be necessary, as the literature (on critical reflection) revealed that critical reflection is difficult and even impossible, without the necessary support and guidance by a more experienced facilitator.

6.2.2.2. Critical Reflective Exercise: Journal Article ("Babies from a plastic womb: the end of childbirth as we know it.")

On completion of the critical, reflective exercise on Act No. 92 of 1996, **three** (n=3) participants (^{p2}, ^{p3}, ^{p4}), agreed to participate in a critical, reflective exercises based on a journal article published in *Nursing News*, "*Babies from a plastic womb: the end of childbirth as we know it?*" (Reuter, October 1997: 53.) [Annexure VI, p. LII]

Participants received guidelines for critical reflection on the selected article (Annexure VII, p. LIII).

6.2.3. Critical Incident Technique

During May 1997, the inquirer explained the purpose of the inquiry and Critical Incident Technique to the potential participants (post-basic degree and post-graduate students). The explanation included orientation regarding:

- ▶ Critical Incident Technique and the guidelines to be used for recording and analyzing the incidents;
- ▶ possible benefits for participants;
- ▶ possible risks involved;
- ▶ rights of participants;
- ▶ requirements for participation;
- ▶ utilization of recorded incidents by the inquirer; and
- ▶ what was expected from the inquirer (see chapter 4: 4.10.3; Annexure VIII, p. LIV & Annexure IX, p. LVII).

Seven ($n = 7$) students agreed to participate and keep record of Critical Incidents, and analyse it (table 6.3: participant composition, Annexure XI ^{p2}, p. LXVII & Annexure XII ^{p3}, p. LXXIX: examples of incidents recorded and analysed by participants).

6.3. Rationale for selection of the specific guided critical, reflective techniques

6.3.1. Socratic & Learning Through Discussion (Dialogical) Method

Socratic & LTD. (dialogical) method was selected for inclusion in the inquiry, as the inquirer had used this methods since 1993. The inquirer used a combination of, the two techniques allowing students to: (1) take responsibility for their own learning and peers learning ; (2) develop and evaluate their thinking compared to the thinking of other students; (3) learn a sense of intellectual discipline and thoroughness. Students learn: to appreciate the necessity for critical reflective and creative thinking; that all thoughts can be pursued in at least four directions: (1) their origin; (2) their support; (3) their conflicts with other thoughts; and (4) their implications and consequences (chapter 4: 4.10.1).

The inquirer applied all forms of Socratic questioning and discussion (spontaneous, exploratory and issue-specific). A combination of Socratic & LTD. (dialogical) method fosters cooperative learning and therefore, dialogical and dialectical thinking as students inevitably have different points of view to be argued out.

6.3.2. Critical Reflective Exercises

6.3.2.1. Critical Reflective Exercise based on Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996)

The inquirer selected Act No. 92 of 1996 (Choice on Termination of Pregnancy Act, 1996) as a possible topic or issue for critical analyses by students. This was necessary as personal experience with students and practitioners revealed that individuals tend to resist reading Acts and, if they did read it, it was read in a superficial manner. Inclusion of the specific Act was seen to be necessary as current students will have to decide consciously whether they will participate in termination of pregnancy on request. To make an informed decision thorough knowledge of the content of the Act is needed.

Act No. 92 was seen as a teaching vehicle to help students recognize personal emotional and cognitive feelings. The inquirer hoped that it would enhance learner interest, create subsequent learning or interest in other relevant Acts, and increase retention.

6.3.2.2. Critical Reflective Exercise: Journal Article ("Babies from a plastic womb: the end of childbirth as we know it.")

The rationale for inclusion of the article in the inquiry is that when familiar objects, such as articles, are used in different or new ways, it captures learners' attention. Questions of clarification, based on the specific article, provide practice in drawing inferences, making judgements and identifying and applying criteria. Participants engage in a process of critical, reflective inquiry and scrutiny and, as a result, become aware of their personal feelings, viewpoints and assumptions, as well as those of so-called experts.

6.3.3. Critical Incident Technique

The critical incident technique is viewed by various authors (for e.g., Brookfield, 1990; Crouch, 1991; Smith & Russell, 1991) as a flexible technique which can be modified and adapted to any area of study. It is seen as a sound basis for making inferences in terms of training requirements and effective behaviour and attitudes. Critical incident technique is seen as a sound basis for the identification of important job or study related elements and of the stressors and conditions which impair performance. It can be used to study, promote and assess attitude development in nurse education. Critical incident technique gives students time and freedom to share concerns, experiences and feelings (Smith & Russell, 1991).

The technique, however, is not an easy one (chapter 4: 4.10.3.). The inquirer, decided to include critical incident technique in this study with the purpose of assessing participants' attitudes toward the technique and its possible application in future. As the nursing practice situation is characterized by negative and positive *trigger events* (critical incidents), its inclusion seemed logical.

6.4. Comparison of data regarding the selected methods as applied and evaluated

Table 6.1. and 6.2. provides a short comparison of data on all the critical reflective methods and exercises used in the inquiry, and Table 6.3. compares the composition of participants' involvement in the different methods/exercises

Table 6.1. Participants' attitudes toward critical reflective methods/exercises

METHOD	NUMBER OF PARTICIPANTS	ATTITUDE 	ATTITUDE 	ATTITUDE  +  (Uncertain/Mixed feelings)
Socratic & LTD (dialogical)	n=10	80,0%	10,0%	10,0%
Critical Reflective Exercise: Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996)	n=7	71,4%	14,3%	14,3%
Critical Reflective Exercises: Journal Article	n=3	66,7%		33,3%
Critical Incident Technique	n=7	Indicated in specific incidents.	No absolute negative attitude reported.	Indicated in specific incidents.

Table 6.2. Critical reflective method vs. problems experienced.

METHOD	PROBLEMS EXPERIENCED BY PARTICIPANTS
Socratic & LTD (dialogical) method (n=10)	<ul style="list-style-type: none"> • Time consuming (10,0%: one (1) participant) • Peer pressure (10,0%: one (1) participant) • Exposure of <i>the self</i> (20,0%: two (2) participants) • Being questioned (20,0%: two (2) participants) • Defending assumptions/viewpoints/beliefs: (20,0%: two (2) participants) • Continuous evaluation (after completion of specific course material) (30,0%: three (3) participants) • Adjusting to Socratic & LTD (dialogical) method (70,0%: seven (7) participants)
Critical Reflective Exercise Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996) (n=7)	<ul style="list-style-type: none"> • Emotional involvement (43,0%: three (3) participants) • Time consuming (14,3%: one (1) participant)
Critical Reflective Exercises: Journal Article (n=3) <i>"Babies from a plastic womb: the end of childbirth as we know it?"</i>	<ul style="list-style-type: none"> • Emotional involvement (66,7%: two (2) participants) • Time consuming (33,3,%: one (1) participant)
Critical Incident Technique (n=7)	<ul style="list-style-type: none"> • Time consuming (43,0%: three (3) participants)

Table 6.3. Composition of participants regarding different methods/exercises.

Method/Exercise	B Cur (I et A) I	B Cur (I et A) III	B Cur Hons	M Cur
Socratic & LTD (dialogical) (n=10)		(n=10)		
Critical Reflective Exercise: Act No. 92 of 1996 (Choice of Termination of Pregnancy Act, 1996) (n=7)	(n=1)	(n=3)	(n=1)	(n=2)
Critical Reflective Exercises: Journal Article (n=3)		(n=3)		
Critical Incident Technique (n=7)	(n=1)	(n=3)	(n=1)	(n=2)

6.5. Socratic Method & Learning Through Discussion (LTD.)

6.5.1. Period of use

Socratic and LTD (dialogical) method was used (for the purpose of this inquiry) from February 1997 to October 1997 during Nursing Education III group discussions. Discussions were scheduled for once a week, on a Wednesday from 07h45 to 13h00.

6.5.2. Instrument used to obtain summative feedback from participants

A semi-structured questionnaire (developed by the inquirer) was used to obtain the necessary feedback. The inquirer decided to use a questionnaire, as it: (1) ensured anonymity and (2) could be completed in less than ten minutes by participants. The questions were limited, as the participants were already studying for the end of the year examinations.

By providing anonymity the inquirer expected the participants to be more open and candid. Feedback on Socratic and LTD. (dialogical) method took place on October 13, 1997, after completion of all Nursing Education III modules. The questionnaires were handed out in class and collected on completion. It required feedback on: (1) the Socratic & LTD. (dialogical) methods used and (2) the educator (inquirer) who implemented the method (Annexure I, p. XXXIV).

6.5.3. Discussion of findings

((Please note that statements/motivations/comments made by *participants* have been included in this chapter precisely as written by the participant, thus, it was not edited))

The participants (n=10) were requested to indicate:

■ **whether they have previously participated in Socratic or LTD (dialogical) study and learning methods:**

- *In previous periods of study, have you ever participated in Socratic or LTD. (dialogical) study and learning methods?:* The data revealed that nine (90,0%) had **never** participated in the methods and one (10,0%) had participated **previously**.

■ **their personal feelings regarding the Socratic and LTD. (dialogical) methods used during Nursing Education discussion periods:**

- *"I personally feel positive/negative/uncertain (mixed feelings).":* The data revealed the following (table 6.1., p. 347): Eight (80,0%) participants reported **positive** feelings, one (10,0%) reported **negative** feelings and one (10,0%) reported **uncertainty/mixed** feelings towards Socratic and LTD (dialogical) methods.

The participants had to provide a short rationale/motivation for their feelings:

- Participants (80,0%) with **positive** feelings toward Socratic & LTD. (dialogical) method provided the following rationale/motivation (M):

- M1: *"It enlarges an individuals mind – learn to be assertive, support the statement an individual has said."*
- M2: *"It forced me to become conscious of my habitual thinking and personal strengths and weaknesses."*
- M3: *"It made me to be a creative thinker and to go back to material to internalize it."*
- M4: *"Because it made me feel responsible for my learning."*
- M5: *"Because the Socratic/dialogical methods include teacher, and student participation it is easy for the students to identify their problems and the teacher can help where there is a need."*
- M6: *"It made me conscious of peers feelings, thus, resulted in respect for others opinions and values."*
- M7: *"It forced me to actively participate in the class, thus I did find it easier to recall the knowledge during tests."*
- M8: *"Socratic questioning and LTD. made me conscious of the necessity to think answers through, to motivate my viewpoints and to respect others."*

- The participant (10,0%) who indicated **negative** feelings, provided the following rationale:

- *"Some peers took dominance of the discussion and if one asked for clarification she would be told that she was delaying the group, however, others would soon call that dominating figure to order."*

- The participant (10,0%) who indicated **uncertainty/mixed** feelings, provided the following rationale:

- *"I find the methods time-consuming and emotionally demanding, however, I also benefited in that I was forced to cover a topic thoroughly."*

■ **whether they would recommend Socratic & LTD. (dialogical) methods to other learners:**

- Eight (80,0%) participants indicated **yes**; one (10,0%) indicated **no**; and one (10,0%) indicated **uncertainty/mixed feelings** (see table 6.1., p. 354).

The participants had to provide a short rationale/motivation for their answers:

- Participants (80,0%) who indicated that they **will recommend** Socratic & LTD. (dialogical) method provided the following rationale/motivation^(M):

- M1: *"Because I found this method to be very effective because you share ideas under supervision, thus there is a mediator to clarify points' unlike where discussion is done out of the class."*
- M2: *"Because the examples given in class make an individual not to forget easily."*
- M3: *"It will increase participation in the learners and possibly motivate them."*
- M4: *"I found it easy to master the content."*
- M5: *"Because it limited competitiveness between learners and forces' them to respect each others strength, weaknesses and different experiences. It makes you admit weak viewpoints!"*
- M6: *"The methods prevent rote learning, thus result in insightful learning and effective recall of knowledge when needed. This results in positive self-esteem!"*
- M7: *"I will recommend the methods because it improves the relationship between lecturer and learners, resulting in a comfortable learning environment in which no one is afraid to voice personal feelings and viewpoints."*
- M8: *"Because Socratic & LTD. methods make the subject content interesting- thus, motivates one to attend discussion sessions."*

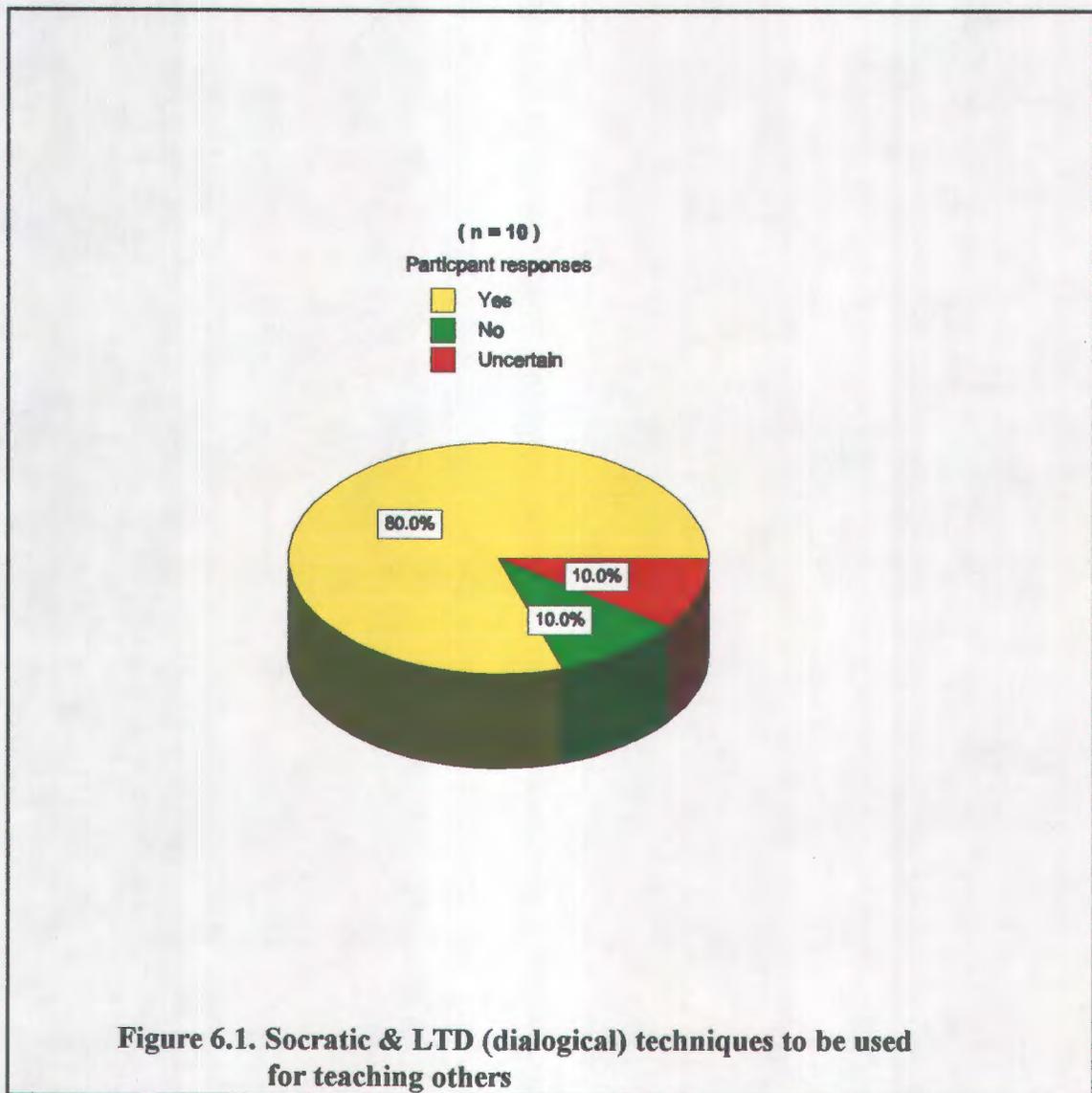
- The one (10,0%) participant who indicated **uncertainty/mixed feelings** whether to recommend Socratic & LTD. (dialogical) methods to other learners provided the following rationale/motivation:

- *"Sometimes it was fulfilling, yet at other times it yielded to frustration and embarrassment."*

- The one (10,0%) participant who indicated that she **would not** recommend Socratic & LTD. (dialogical) method provided no rationale.

■ **whether they would use Socratic & LTD. (dialogical) techniques to teach others:**

- *"I will use Socratic/LTD (dialogical) techniques to teach others."* Figure 6.1. reflects the participant's feedback.



- The eight (80,0%) participants who indicated that they **would use** Socratic & LTD.(dialogical) techniques to teach other learners, provided the following rationale/motivation^(M):

- ^{M1:} *"In using the techniques to teach others, they will learn the techniques and thus, will be able to use it in their teaching efforts."*
- ^{M2:} *"So that they learn to tolerate others and respect other person's point of view."*
- ^{M3:} *"I fully support the system. It forces individual understanding of an article or subject knowledge in order to internalize it."*
- ^{M4:} *"I think through these methods I will be able to identify the problems of the learners immediately during discussion of each topic."*
- ^{M5:} *"I support the methods as it provides opportunity to learn from experience, to recall previous knowledge, to share knowledge and to question the opinion's/ viewpoints of 'experts' and others."*
- ^{M6:} *"The methods force students to become involved in discussions and thus prevent coming unprepared to class."*
- ^{M7:} *"Socratic and LTD. (dialogical) methods result in realistic self-knowledge and expectations. You have to admit that what you become depend on yourself and not others (such as the lecturer)."*
- ^{M8:} *"I will use the method to teach others as I personally find the lecture method boring and a waist of time. Lecture method mostly result in rote learning and limited effort from students."*

- The one (10,0%) participant who indicated **uncertainty/mixed feelings** as to whether she would use Socratic & LTD. (dialogical) techniques to teach other learners provided the following rationale/motivation:

- *"I favor a mixture of teaching techniques so that every student at times gets the favourite technique and sometimes have to put up with the least favorable."*

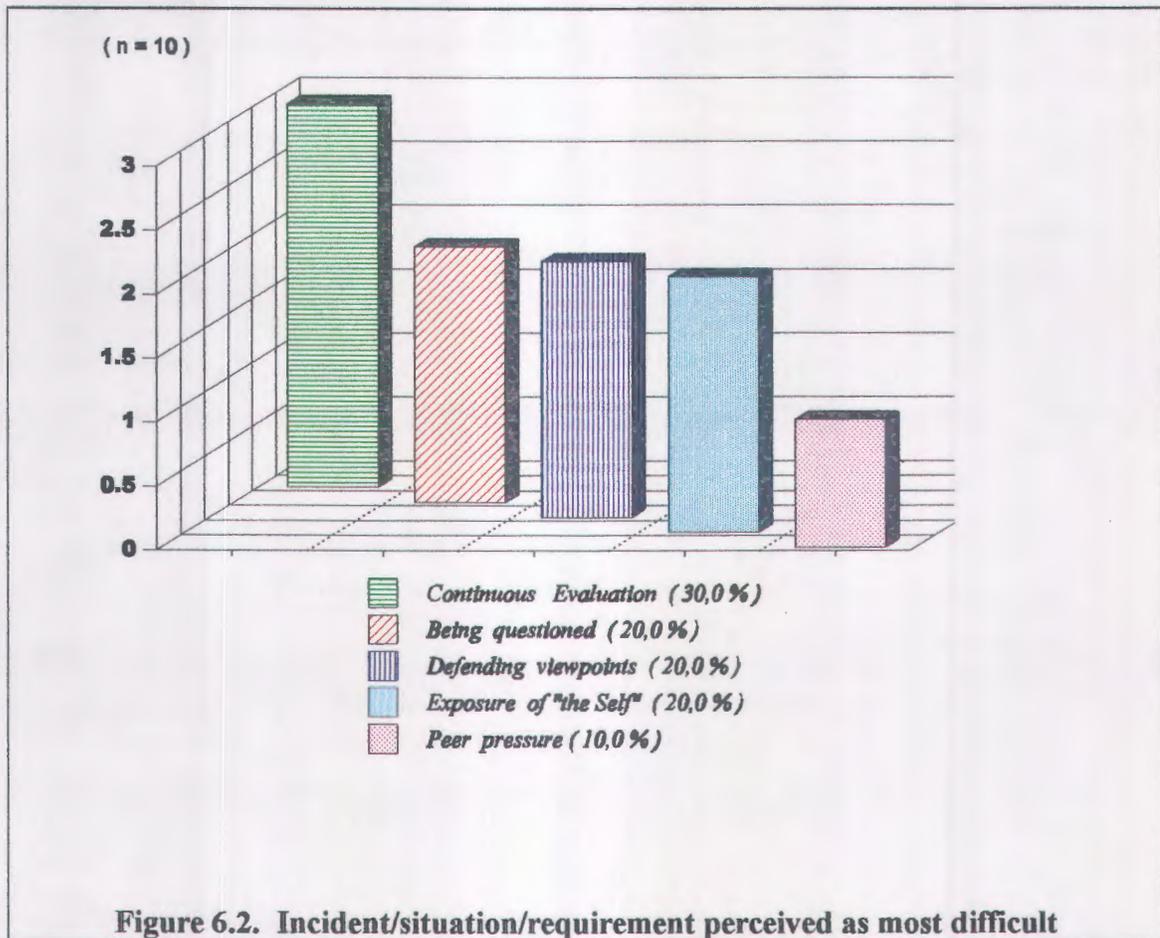
- The one (10,0%) participant who indicated that she would **not use** Socratic & LTD. (dialogical) techniques to teach other learners, provided no rationale/

motivation for her answer.

■ **whether they would prefer to be taught through Socratic & LTD. (dialogical) methods in future:**

- Two (20,0%) of the participants provided a **negative** answer in that both indicated no. Eight (80,0%) participants indicated yes.

The participants (n=10) were requested to list what (the incident/situation requirement) they perceived as most difficult during Socratic & LTD. (dialogical) discussions (figure 6.2.):



The participants (n= 10) provided the following feedback regarding the educator (inquirer) who facilitated Socratic discussion/questioning and LTD. (dialogical) techniques. The participants had to indicate:

- whether the educator **continuously**
 - *considered alternative opinions/beliefs/assumptions sympathetically*: **Yes: six (60,0%) participants. No: four (40,0%).**
 - *challenged students to think critically*: **Yes: eight (80,0%) participants. No: two (20,0%) participants.**
 - *motivated students to reflect on previous learning*: **Yes: ten (100%) participants.**
 - *challenged students to engage in reflective self-criticism*: **Yes: nine (90,0%) participants. No: one (10,0%) participant.**
 - *accepted criticism or challenge from students positively*: **Yes: eight (80,0%) participants. No: two (20,0%) participants.**
 - *motivated students to recognize **trigger experiences***: **Yes: seven (70,0%) participants. No: three (30,0%) participants.**
 - *motivated students to use **trigger experiences** as a starting point for critical reflection and learning*: **Yes: seven (70,0%) participants. No: three (30,0%) participants.**
 - *modelled critical, reflective thinking*: **Yes: nine (90,0%) participants. No: one (10,0%) participant.**
 - *motivated students to recall circumstances during which a belief was formed*: **Yes: eight (80,0%) participants. No: one (10,0%) participant. No**

answer: one (10,0%) participant.

- *expected students to inspect the possible implications of a specific viewpoint/belief/assumption/theory: Yes: nine (90,0%) participants. No answer: one (10,0%) participant.*
 - *expected students to paraphrase opposing points of view: Yes: Seven (70,0%) participants. No three (30,0%) participants.*
 - *probed (assessed) students thinking on a variety of issues: Yes: ten (100%) participants.*
 - *expected students to study the meaning of difficult concepts in depth: Yes: nine (90,0%) participants. No answer: one (10,0%) participant.*
 - *expected students to stay focused during discussions: Yes: ten (100%) participants.*
 - *expected students to reflect on those subjects relevant to the issue/topic under discussion: Yes: nine (90,0%) participants. No answer: one (10,0%) participant.*
- **whether the educator managed to make students conscious of the need for critical, reflective thinking and learning:**
- **Yes: 10 (100%) participants.** Seven (70,0%) of the participants provided a short rationale/motivation for their answer. Three (30,0%) failed to provide a rationale/motivation ^(M).
 - ^{M1:} *"Whenever she teaches, she comes being fully prepared - giving relevant answers/ examples and continuously probe for motivation/examples/explanations."*
 - ^{M2:} *"The educator forced us to defend or explain personal viewpoints to admit habitual thinking, to listen to peers, to compare different experts viewpoints and then select an*

acceptable one."

- M3: *"The educator managed to make us conscious of the need for critical reflective thinking and learning, through explaining and clarifying to make the students see the item through another angle/view."*
- M4: *"She encouraged us to clarify personal value systems, inquire into that of peers, to listen attentively to each other, to be slow to judge and to defend our personal viewpoints if indicated."*
- M5: *"I was made to understand that knowledge acquired in one topic can be applied in various situations, provided it is thought through and applied in such a way as to fit by use of valid motivation."*
- M6: *"The educator always exposed us to both the positive and negative sides of a viewpoint/issue/decision. She exposed us to different author's viewpoints and also expected from us to take S.A. society into consideration before formulating a personal viewpoint."*
- M7: *"She managed to make me conscious of the need to take responsibility for my own actions/learning and to critically reflect on consequences decisions taken. She forced me to critically reflect on what I am saying and writing, in that she never credited test answers that were not appropriately motivated or explained – telegram style was unacceptable."*

6.5.4. General remarks revealed by the data

Five (50,0%) participants recorded general remarks (R):

- R1: *"I generally enjoyed the classroom sessions and more especially I feel even more responsible than before."*
- R2: *"At the end of the first module and following modules I found myself mastering the content. It was excellent I recommend Socratic & LTD. (dialogical) method for future use."*
- R3: *"It has been a good year of self-discovery in which one was made to feel the importance of self-directed learning, and how much it yield to long lasting knowledge that is easily retrieved and applied to various situations, as it is manipulated by using one's insight. The educator was using open door policy and always welcoming to deal with all issues and questions."*
- R4: *"The methods kept students focused in class. They were actively participating, unlike when the lecturer was the only participant."*
- R5: *"I really wish to continue with you (the educator) in future. You've been the best teacher/facilitator I've ever had."*

6.5.5. Inquirer remarks

The inquirer observed during the first two (2) months of implementation of Socratic & LTD. (dialogical) techniques that the participants found difficult to adapt to the techniques:

- Some participants found it difficult to provide a rationale for their answers, opinions or viewpoints. Being requested to do so, the participants reacted by not voicing their opinions or viewpoints. The inquirer overcame the problem by directing questions to the specific participants.
- From time to time individual participants failed to come prepared to discussions, however, the rest of the participants confronted the problem by either objecting or by showing their disapproval with such conduct.
- At first individual participants objected to being exposed to different authors or experts viewpoints (literature), as this required more reading and study time. The inquirer, however, observed that feedback (verbally in class and tests) no

longer mirrored rote learning. Individual answers and motivations were now unique to the person, in that the individual critically selected and summarized content from different authors.

- Participants had to be reminded of previous learning and other subject content relevant to the course material under discussion.
- At first participants tended to ignore difficult or abstract concepts unknown to them, or requested the inquirer for clarification. The inquirer, however, continuously asked for explanation/ clarification of such concepts and refused to spoon-feed participants. This resulted in participants looking up such concepts before discussion periods and use of dictionaries in class.
- Individual participants found (find) it difficult to clarify their value priorities to peers and admitted that they themselves previously have not reflected on it critically.
- Participants had to be reminded on a regular basis to summarize completed course material (modules), to evaluate group input, individual input and educator participation. Individual participants, initially, tended to react to criticism in a hostile and emotional manner. With time, these negative reactions became the exception.
- Individual participants tended to be competitive in their conduct, however, except for one participant this type of behaviour was less observed during the second semester.

It is the opinion of the inquirer that many observed problems can be contributed to the fact that the participants, had previously only been exposed to formal lecture method and transparencies.

6.6. Critical reflective exercises

6.6.1. Critical reflection on Act No.92 of 1996: Choice on Termination of Pregnancy Act, 1996.

6.6.1.1. Discussion of findings

Seven (n=7) participants completed the exercise on Act No. 92 of 1996 (see table 6.3., p. 349: for participant composition and Annexure X to XVI, p. LX - CXIV: for examples of completed exercises). At the end of the exercise, the participants were requested to "*critically reflect on the exercise and answer the following questions frankly:*" (see Annexure V: 9.1. - 9.3., p. L). The data revealed:

- Participant's feelings about the exercise:

- Five (71,4%) of the participants felt **positive** about the exercise, one (14,3%) participant had **mixed** feelings and one (14,3%) felt **negative** (see table 6.1., p. 353).

-The participants had to provide a rationale for their feelings:

- The five (71,4%) participants (P) who indicated **positive** feelings provided the following rationale/motivation:

- ▶ P²: "*It was a form of brainstorming. Firstly, it made me to read the Act of which I don't think I could have done on my own. It actually made or forced me to internalize the Act and try to find out both the positive and negative implications of the Act.*" (see Annexure XI P², p. LXXIV: lines 74-78)
- ▶ P³: "*Thankfull - it forced me for the first time to study the Act carefully (not many of us will study an act if not requested to). The guiding questions helped me to think about and read it carefully: to think about the implications of the Act in a more objective manner; look at possible ethical implications in a less emotional manner; admit limitations in my own knowledge and skills.*" (see Annexure XII P³, p. LXXXV: lines 68-73)
- ▶ P⁴: "*I feel good as it gave me an opportunity to read the good and bad subsections that can be analysed within the Act.*" (see Annexure XIII P⁴, p. XCVI: lines 71-72)

- ▶ P6: "Good." (see Annexure Xv P6, p. CXIII: line 64)
- ▶ P7: "The exercise was nice because it really needs your inner feelings . . ." (see Annexure XVI P7, p. CXVIII: line 40)

- The one (14,3%) participant who indicated **mixed** feelings provided the following rationale:

- ▶ P1: "The good thing is that the exercise outlines all important aspects pertaining to the Act 92 of 1996." "The exercise was done in the middle of the year when many learners are in the middle of a workload." (see Annexure X P1, p. LXVI: lines 56-59)

- The one (14,3%) participant who recorded **negative** feelings provided the following rationale:

- ▶ P5: "It was very difficult because I really never thought about abortion much . . ." (see Annexure XIV P5, p. CV: line 51)

- The seven (n=7) participants (P) who had to indicate what was *positive*(☺) and what was *negative* (☹) about the exercise/experience:

- ▶ P1:
- ☺ "The good thing is that the exercise outlines all important aspects pertaining to Act 92 of 1996.
 - ☹ "The exercise was done in the middle of the year when many learners are in the middle of a workload."

[See Annexure X P1, Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. LXVI: Lines 56-59]

- P2 ☺ "... it is the first-time for me going through this Act so thoroughly ever since it has been passed, and I have gained insight concerning this Act. I have also realized the need to read more . . . before I make any decision."

☹ ((Nothing indicated))

[See Annexure XI P2, Critical reflective exercise: Choice of Termination Of Pregnancy Act, Act No. 92 of 1996, p. LXXIV: Lines 79-84]

► P3:

- ☺ "I am now forced to think about this Act and its implications carefully, before going back to practice as midwife."
- ☹ "I became conscious of my mixed feelings regarding the Act and its implications, and had to admit to myself that I feel insecure that I will be able to practice abortion procedures in a safe manner. I also do not know if I am emotionally prepared to become involved in 'high risk' and 'demanding' (psychological demanding) situations."

[See Annexure X II P3, Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. LXXXV: Lines 76-82]

► P4:

- ☺ "It gave me a chance to express my feelings as far as the act is concerned"
- ☹ ((rationale not clear)) "It gave me the impression that some- where up in the highest government positions, people at grass roots level were not considered for their right to autonomy. This made me feel bad about the exercise."

[See Annexure X III P4, Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. XCVI: Lines 73-76]

► P5

- ☺ "I saw what I really believed in . . ."
- ☹ "... but I felt very exposed and scared of my very conservative believes . . . as I was very progressive."

[See Annexure X IV P5, Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. CV: Lines 55-56]

► P6:

☺ *"Freedom of expression of views, values and aspirations."*

☹ ((nothing indicated))

[See Annexure X V ^{P6} , Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. CXIII: Lines 65-66]

► P7:

☺ ((irrelevant answer))

☹ ((irrelevant answer))

[See Annexure XVI ^{P7} , Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. CXVIII - CXIX: Lines 42- 44]

- The seven (n=7) participants (P) had to indicate whether *they learnt anything new about about themselves and the issue:*
- ◆ themselves (*yourself*) and the issue :

► P1:

(*yourself*): *"Yes." " . . . I don't enjoy reading Acts as they are written with small letters, too clustered and a lot of references and sometimes talk very difficult language."*

(*the issue*): *"Yes. I've learnt that it is possible for people to be given the latitude to kill innocent babies and actually encouraged to sleep arround and not use contraceptives because they know that the final and destructive method is available to them. I've also learnt that democracy is nonsense many times because it allows nonsense because it's human rights."*

[See Annexure X III ^{P1} , Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. LXVI: Lines 62-71]

▶ P2:

(yourself): "I came to realize that this is true (about the Act) and at one stage or another I will be faced with the situation whereby I am supposed to decide whether to terminate a pregnancy or not."

(the issue): "I was not even aware that the "minor" has the right to decide or make a decision for themselves on the issue. I did not know that the names of candidates are not supposed to be included in the prescribed information."

[See Annexure X I P², Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, p. LXXIV - LXXV: Lines 85-91]

▶ P3:

(yourself): "Yes, that I will need to clarify issues for myself before contact with potential abortion requests. The exercise made me conscious of the fact that you need to think many nursing actions through carefully, and should not only accept what others are saying or requesting!"

(the issue): "Knowledge of the content of the Act is not enough, I need to know and read more about abortion and its implications."

[See Annexure X II P³, Critical reflective exercise: Choice of Termination of Pregnancy Act, Act No. 92 of 1996, LXXXV - LXXXVI: Lines 83-89]

▶ P4:

(yourself): "Yes. I am for "pro life" . . ."

(the issue): "Yes. The government considers every citizen be free, irrespective of his/her theoretical knowledge and intellectual maturity."

[See Annexure X III P⁴, Critical reflective exercise: Choice of Termination Of Pregnancy Act, Act No. 92 of 1996, p. XCVII: Lines 77, 80-81]

P5:

(yourself): "Yes. That I only believe that abortions should be provided only to the 12th weeks and that minors who are 13 years and below cannot make an informed decision . . . according to me this is frightening as I always believed I was liberal."

(the issue): "That midwives can perform an abortion. I always thought it was a medical procedure. That also shows very well how ignorant I am."

[See Annexure X IV ^{P5}, Critical reflective exercise: Choice of Termination Of Pregnancy Act, Act No. 92 of 1996, p. CV: Lines 57-62]

P6:

(yourself): "Yes, learning to state my views, and values openly without any inhibitions, and ability to think critically on an issue, which is a burning issue in the land presently."

(the issue): "More clarity on the Act and its implications on the client, and the nursing professional, and clarification of the human rights of women."

[See Annexure X V ^{P6}, Critical reflective exercise: Choice of Termination Of Pregnancy Act, Act No. 92 of 1996, p. CXIII: Lines 67 - 70]

P7:

(yourself): ((irrelevant answer))

(the issue): "Yes I have learned that now midwives are protected by the act to help women and their scope of practice was clearly defined ."

[See Annexure X VI ^{P7}, Critical reflective exercise: Choice of Termination Of Pregnancy Act, Act No. 92 of 1996, p. CXIX: Lines 45 - 47]

6.6.2. Critical reflective exercise: Journal Article

6.6.2.1. Discussion of findings

The data confirmed that participants (n=3) did read the article more carefully, by following the provided guidelines. As a result participants became aware of their personal feelings and viewpoints (Annexure XI ^{P2}, p. LXXVI; XII ^{P3}, p. LXXXVII & XIII ^{P4}, p. XCVIII).

The participants were requested to:

- **reflect on their feelings regarding the exercise**

Two (66,7%) participants reported positive and negative feelings about the exercise, and **one (33,3%)** participant did not answer the question. The two participants wrote the following:

^{P3}

- **Personal feelings about the exercise:** *"Positive, as it forced me to read the article more carefully. Following the guidelines provided for the exercise I was forced not to form an opinion based on superficial reading - which I tend to do."*

What was positive/negative about the exercise?

- **positive:** *"Deep reading. I read an article that I otherwise would not read, thus I became conscious of changes in medical science that needs ethical debate. The exercise forced me to think about potential implications."*
- **negative:** *"The exercise is time consuming as you really have to think about the article."*

[See Annexure XII ^{P3}, Critical reflective exercise: Journal Article, p. LXXXIX: lines 34-41]

P4

- **Personal feelings about the exercise:** *"Positive, as I had to think carefully about the implications of a plastic womb."*

What was positive/negative about the exercise?

- **positive:** *"The exercise forced me to do introspection regarding my feelings towards a plastic womb. I think that the issue of reproduction will be violated in that norms and values of different cultural groups will not be respected. Personally I am not prepared to participate in production of plastic womb babies."*

- **negative:** *"The exercise took more than two hours to complete."*

[See Annexure XIII ^{P4}, Critical reflective exercise: Journal Article, p. XCIX: lines 49-54)

- **indicate if they did learn anything new about themselves and the issue**

- Two (66,7%) participants (n=3) provided rationales, while one (33,3%) participant did not answer the question:

^{P3} (about myself): *"Yes, that I feel uncomfortable with medical discoveries such as a plastic womb. The exercise made me conscious of the need for nurses and other groups in society to question medical scientists, and to take notice of what they are doing before it is too late!"*

(about the issue): *"Yes, that everything in life has its positive and negative side. Even a plastic womb! Therefore, careful consideration is necessary - even if my first reaction is rejection."*

[See Annexure XII ^{P3}, Critical Reflective exercise: Journal Article, p. LXXXVIII: lines 42- 49]

^{P4} (about myself): *"Emotionally I felt challenged as well as surprised that there are scientists who are still attempting to become "God the Creator." "Yes, that I am more pro-life than pro-choice."*

(about the issue): ((no specific rationale provided))

[See Annexure XIII ^{P4}, Critical reflective exercise: Journal Article, p. XCIX: lines 55-56, 59]

6.7. Critical Incident Technique

6.7.1. The period of record keeping and analysis

The period of record keeping and analysis started in June 1997 and the critical incidents to record and analyse depended on the individual participant's, decision . The number of incidents recorded and analysed are therefore, specific to each individual participant. Incidents selected were recorded in a semi-structured journal (workbook). Single incidents were recorded in good time to allow critical analysis by the participant.

After the writing the incident the participant had to reflect on (analyse) it, according to given guidelines and broad questions (Annexure VII, p. LIII & Annexure IX, p. LVII). Participants submitted their reports immediately after recording and analysing the incident. The inquirer immediately typed it into the specific file (using a personal computer) of each participant. In order to protect the identity of the participant and other actors involved, the inquirer substituted personal names with codes or abbreviations. Thereafter, the original handwritten report and a copy of the typed incident were returned to the participant. This was done to allow the participant to correct errors and to verify interpretations and to conduct informal conversations with the participants.

6.7.2. Inquirer remarks

The seven (n=7) participants wrote accounts of incidents in their own lives (personal, work, study). The incidents are thus indisputable sources of data representing their existential realities. The critical incident reports and analyses (by participants) are data sources which provide insight into the participants assumptive worlds.

After the participants started to record and analyse the critical incidents, informal conversations with the inquirer revealed that it was experienced as time-consuming. It also became clear that incidents, although recorded (mostly) on the same day as experienced, were only analysed much later. After recording the first incident and analysing it, two (2) participants (see table 6.4: P⁴ & P⁷, p. 371) failed to record any further incidents. Both participants, however, continued with participation in other critical reflective exercises. Other participants (P², P³, P⁵ & P⁶) limited their critical incident reporting and analyses to two incidents, except one (1) participant (P¹) who wrote and analysed eight critical incident reports. Informal conversation with the participants revealed that personal problems, academic requirements and part-time or full-time work prevented them from recording and analysing more incidents.

One participant P¹, at the time of keeping critical incident reports, experienced serious personal problems (marriage, financial and study related) which may explain the need to record eight (8) incidents, the nature of which reflects extreme emotional involvement and use of the critical incident technique for personal catharsis and support finding.

6.7.3. Discussion of findings

Table 6.4. reflects the number and nature of incidents recorded and analysed by the seven (n=7) participants. The last incident recorded and analysed was dated 12 October 1997.

Table 6.4. Number of, and nature of critical incidents recorded and analysed

Participant (P) (n=7)	Incidents Recorded & Analysed	Nature of Incidents
1	8	Course/study related (4) Personal (4)
2	2	Work related
3	2	Work related
4	1	Work related
5	2	Work related (1) Personal (1)
6	2	Work related
7	1	Work related
	Total: 18	Work Related: 9 Course Related: 4 Personal: 5

The seven (n=7) participants had to record, after each incident report and analysis:

- *how they feel about the exercise and what was positive and what was negative about the exercise* (see Annexure IX, p. LVII : No. 5).

((Critical Incident Report = CIR))

P1:

CIR¹: " *I have mixed feelings: I feel positive, in that it enabled me to verbalize my anger. I feel negative, in that this report will not be read by the guilty parties.*"

[See Annexure X^{P1}, Critical Incident report 1, p. LXI: lines 20-22]

CIR²: " *I have mixed feelings as this exercis once again highlited all the bad things that happens in nursing.*"

[See Annexure X^{P1}, Critical Incident report 2, p. LXIII: lines 28-29]

P2

CIR¹: *"The exercise enabled me to look at the incident once again, and to recognize that I still feel disappointed about how the incident were treated. I also, think I could have acted in a more assertive manner."*

[See Annexure XI ^{P2} , Critical Incident Report 1, p. LXVIII: lines 57-59]

CIR²: *"Yes, I did benefit from the exercise. It allowed me to look in a more objective manner at the incident."*

[See Annexure XI ^{P2} , Critical Incident Report 2, p. LXXI: lines 75-76]

P3

CIR¹: *"I have mixed feelings. The exercise made me conscious of my vulnerability as a human being, and my lack of experience in patient counselling. It made me conscious of the fact that I need to distance myself from previous, negative experiences with death in my own family."*

[See Annexure XII ^{P3} , Critical Incident Report 1, p. LXXX: lines 42-46]

CIR²: *"Positive! In that it enabled me to look more objective at the incident myself, and distance myself (emotionally from it)."*

[See Annexure XII ^{P3} , Critical Incident Report 2, p. LXXXII: lines 34-36]

P4 **CIR¹:** *"Positive."*

[See Annexure XIII ^{P4} , Critical Incident Report 1, p. XCIII: line107]

((Only one incident reported and analyzed by participant))

P5

CIR¹: *"I feel positive, in that the exercise reminded me of my tendency to react in a very emotional manner when I feel that I am being exploited. By reporting and analyzing the incident I looked at it in a more objective manner. This enabled me to do self-evaluation."*

[See Annexure XIV ^{P5}, Critical Incident Report 1, p. CII: lines 31-34]

CIR²: *"I feel positive, about the exercise because after reading the completed report I know that I have acted correctly by not getting involved in my brothers' marriage and personal problems."*

[Critical Incident Report 2 not included in Annexure, due to the personal nature of the incident]

P6

CIR¹: *"Although it took time, I think it is an necessary exercise as it helped me to think about the happenings of the specific day. As a result, I could assess my actions and finally decide that I did act correctly in reminding the registered nurse of her responsibilities. The negative part, of the exercise is, that it takes a lot of personal time to record and analyze the incident in detail. I think on first have to get used to the idea of recording incidents and looking at them more carefully."*

[See Annexure XV ^{P6}, Critical Incident Report 1, p. CVII: lines 64-71]

CIR²: *"Positive." "Allows me to grow."*

[See Annexure XV ^{P6}, Critical Incident Report 2, p. CX: lines 81 and 84]

P7

CIR¹: *"Positive. It provided me with opportunity to share a difficult and potentially threatening experience. It enabled me to reflect on the situation, and to look at it in a more objective manner. It enabled me to evaluate my decisions taken and my actions."*

[See Annexure XVI ^{P7}, Critical Incident Report 1, p. CXVI: lines 100-103]

((Participant recorded and analyzed only one (1) incident))

6.8. Reflection of inquirer after application of the methods used to develop critical reflective learning

The written feedback of the participants on the selected methods confirmed the literature findings that guided, critical reflective techniques could be used to identify underlying assumptions, beliefs, theories, viewpoints and the thinking modes used.

Annexure XVII (p. CXX) & XVIII (p. CXXI) contains symbols and codes developed by the inquirer, for the purpose of identification and analysis of underlying assumptions, beliefs, theories, viewpoints and the type of thinking modes used by participants.

The examples of identification of underlying assumptions, beliefs, theories, viewpoints and thinking modes used, included in Chapter 6, are limited due to the scope of the inquiry (thesis):

- **Identification of *auto-pilot* ^(APT) thinking or conduct:**

^{P2}: "*Because their was a standing order for convulsions in our hospital which state that in case of an epileptic fit, any adult patient must be given Valium 10mg *q* stat . . . I did like wise.*"

[See Annexure XI ^{P2} , Critical Incident Report 2, p. LXIX: lines 8-11]

- **Identification of assumptions, beliefs/viewpoints or theories**
(*ASSUMP*; *VIEWP*; *THEO*) .

^{P1}: "*I don't know but could diagnose some inferiority complex.*" (*ASSUMP*)

[See Annexure X ^{P1} , Critical Incident Report 1, p. LX: line 10]



((Participant assumes/believes that Act 92 of 1996, gives . . .)) *"the latitude to kill innocent babies . . ."* and encourage people to *"sleep around and not use contraceptives . . ."*
(ASSUMP/VIEWP)

[See Annexure X^{p1}, Critical reflective exercise: Choice of Termination of Pregnancy Act, p. LXVI: lines 66-68]

^{p2}: ((Participant reflecting on the incident believes . . .)) *"My skin colour."* ((contributed to this incident and . . .)) *"I was the only black among Whites . . ."* (ASSUMP/VIEWP/THEO)

[See Annexure XI^{p2}, Critical Incident Report 1, p. LXVIII: lines 46, 41]

((Regarding Act 92 of 1996, the participant assumes/believes or is of the opinion that . . .)) *"Many women may use this ((termination of pregnancy)) as another method of family planning."* *"Teenagers may feel free to practice unsafe sex . . ."* *"This may lead to increased sexually transmitted diseases . . ."* *"Economic status of a country will be boosted . . ."* *"The dignity and status of women will be protected."* (ASSUMP/VIEWP/THEO)

[See Annexure XI^{p2}, Critical reflective exercise: Choice of Termination of Pregnancy Act, p. LXXII: lines 8,9,11,15 and 18]

^{p3}: *"Cancer . . . presents images of suffering (physically and psychologically . . ."* *"A diagnosis of cancer implies pain, deformity, disability, helplessness and death."* (ASSUMP/VIEWP/THEO)

[See Annexure XII^{p3}, Critical Incident Report 1, p. LXXIX: lines 2,3 and 4]

"The minister of health care (Dr. Zuma) pushed the bill ((Act 92 of 1996)) through in parliament."
(ASSUMP/VIEWP) *"Socialistic influences from e.g. Cuba."* ((Essential factor contributing to government drawing up the Act)) (ASSUMP/VIEWP/THEO)

[See Annexure XII^{p3}, Critical reflective exercise: Choice on Termination of Pregnancy Act, Act No.92 of 1996, p. LXXXIII: lines 13 and 17]

^{P4}: " . . . if woman had the knowledge and are living under such circumstances of poverty, why do they attempt to become pregnant?" (VIEWWP)

[See Annexure XIII ^{P4} , Critical reflective exercise: Choice on Termination of Pregnancy Act, Act No.92 of 1996, p. XCIV: lines 9-10]

((The participant assumes that practitioners will get . . .)) " . . . a negative labelling like 'child ripper.' " . . . as well as putting a bad label to all professionals involved." (VIEWWP/THEO)

[See Annexure XIII ^{P4} , Critical reflective exercise: Choice on Termination of Pregnancy Act, Act No.92 of 1996, p. XCV: lines 39, 44] (VIEWWP/THEO)

((The participant assumes that babies in plastic wombs will be exposed to too much light)) "Plastic womb uteruses are not safe as they can be exposed to too much light which can damage their eye sight at a later stage." (ASSUMP/VIEWWP/THEO)

[See Annexure XIII ^{P4} , Critical reflective exercise: Journal Article, p. XCVIII: lines 7-8]

((The participant has a theory that a plastic womb will result in a population explosion)) "Population explosion is foreseen . . ." (ASSUMP/VIEWWP/THEO)

[See Annexure XIII ^{P4} , Critical reflective exercise: Journal Article, p. XCVIII: line 27]

- **Identification of reflective learning** (RL):

^{P2}: " . . . it was only after the incident that I realized that there is a difference between an epileptic fit and convulsions, and that it is important to know the cause before you treat." "I think I need to know more about drugs and their actions." "If the internal policy/standing order is vague I need more clarification." (RL)

[See Annexure XI ^{P2} , Critical Incident Report 2, p. LXX: lines 46-48,]

^{p2}: ((Participant indicates ^{RL} in that she reports self-insight and the need for more knowledge regarding Act No. 92 of 1996)) *"I feel very bad and I am really going to implement this procedure . . ." "I think I really need more information . . ." "I also realized the need to read more about . . . before I make any decision."* ^(RL)

[See Annexure XI ^{p2} , Critical reflective exercise: Choice of Termination of Pregnancy Act, p. LXXII & LXXIVI: lines 47, 49, 83]

^{p3}: ((Participant indicates ^{RL} and self-insight in that she reports)
"The exercise made me conscious of my vulnerability as a human being, and my lack of experience in patient counselling. It made me conscious of the fact that I need to distance myself from previous, negative experiences with death in my own family." "It complicates my relationship with Ca. patients! In that I find it difficult to work with them in an objective manner." ^(RL)

[See Annexure XII ^{p3} , Critical Incident Report 1, p. LXXX: lines 43-46, 47-48]

"Yes, that I feel uncomfortable with medical discoveries such as a plastic womb. The exercise made me conscious of the need for nurses and other groups in society to question medical scientists . . ." ^(RL)

[See Annexure XII ^{p3} , Critical reflective exercise: Journal Article, p. LXXXVIII: lines 42 -44]

- **Identification of bias** ^(Bias):

^{p4}: ((Participant seems to be biased towards sexual workers)) *"I will not terminate a pregnancy if: It is due to a client who is trying to enjoy the issuing of the Act, for e.g. delinquent adolescence who are sexual workers not even registered."* ^(Bias)

[See Annexure XIII ^{p4} , Critical reflective exercise: Choice of Termination of Pregnancy Act, p. XCVI: lines 64-66]

- **Identification of effects of incident on *the self*** ^(S-AW):

P1: "*I felt insulted, demoralized before the learners, terribly undermined . . .*" "*I feel discouraged . . .*"
"I feel positive about the situation because I maintained my professionalism." "*I was very depressed.*" ^(S-AW) ((Participant voice mixed feelings regarding incident))

[See Annexure X ^{P1} , Critical Incident Report 1, p. LX: lines 13-16]

P2: "*. . . I could have acted in a more assertive manner.*" ^(S-AW)

[See Annexure XI ^{P2} , Critical Incident Report 1, p. LXVIII: line 59]

"I am still having guilty feelings. I have contributed to the death of a patient." ^(S-AW)

[See Annexure XI ^{P2} , Critical Incident Report 2, p. LXX: lines 51-52]

P3: ((Regarding the issue of cancer the participant indicates self-awareness in that she recorded that she feels)) "*Emotionally uncomfortable! Guilty! Depressed! Helpless!*"
"Anger towards medical staff for not being frank with Ca. patients." ^(S-AW)

[See Annexure XII ^{P3} , Critical Incident Report 1, p. LXXX: lines 30-33, 49]

"The cost of being a member of a caring profession was too high! The emotional burden too much to bear." "*I felt a loss of idealism towards my profession . . .*" ^(S-AW)

[See Annexure XII ^{P3} , Critical Incident Report 2, p. LXXXI: lines 18-19, 28]

^{P5}: "I have learned that I am very emotional." (S-AW)

[See Annexure XIv ^{P5}, Critical Incident Report 1, p. CII: line 24]

6.9. Limitations identified during application and evaluation of the selected guided, critical-reflective techniques

- Participation in the application and evaluation of the selected techniques depended on the willingness of individual students from different senior groups (B Cur [I et A] I; B Cur [I et A] III; B Cur Hons & M Cur). A limitation of using these individuals as participants was that three (n=7) of the B Cur [I et A] III participants studied full-time and worked on a part-time basis; the one B Cur Hons participant and two M Cur participants studied on a part-time basis and worked full-time. Consequently participation was difficult as the selected exercises were time-consuming.

Contact between the inquirer and participants was thus limited that incident reports and other exercises could not be submitted on completion. The problem was worse in the case of the three (3) participants who stayed and worked in Lesotho. Although participant feelings and attitudes toward the selected techniques could thus be assessed, the feedback received was not fully used to promote the growth and self-insight of participants.

- The inquirer would preferably have included participants entered for the B Cur III & IV course, it was impossible due to their practical requirements. Being unable to include participants from these groups is seen as a limitation because:
 - B Cur students could especially benefit from exposure to guided, critical-reflective and creative techniques. The techniques should ideally be introduced as part of the course requirements to entrants and used till completion of the course. Only then will students see the techniques as

enabling tools that will help them to grow and critically reflect on experiences, rather than additional requirements to the course.

- ▶ the selected techniques were only tested by senior students (already qualified as nurses) whose working and learning experiences differ from those of junior learners in a programme leading to registrations as a nurse.
 - ▶ the senior students (B Cur [I et A] I & III; B Cur Hons & M Cur) as registered nurse practitioners are more settled in their ways of thinking and practising. Yet the completed critical, reflective exercises (see Annexure X-XVI, p. LX-CXIV) confirms the need to also develop critical, reflective and creative abilities in registered practitioners. The practise situation would in addition, benefit from critical, reflective exercises.
- As critical reflective techniques are not part of the course requirements or general teaching methods, participants viewed their application and evaluation of the methods as a personal favour to the inquirer. This may have influenced their participation and their feedback.
 - Application and evaluation of the selected techniques were limited in time, except for the Socratic & LTD (dialogical) method, . Ideally the methods/techniques should be applied and evaluated over the duration of a specific course. This, however, will require all educators to receive in-service training in and willingness to use the suggested methods (chapter 4, 4.13.: 248).
 - The inquirer, occasionally, found it difficult to keep an emotional distance when reading the reported incidents. The inquirer attempting to overcome this problem, discussed her personal feelings with peer reviewers rather than immediately (after reading the reports) having a conversation with the specific participant. The feelings experienced by the inquirer confirm the literature reports that critical, reflective exercises and techniques are potentially emotionally threatening to both the educator/facilitator and other participants.

- The B Cur (I et A) III learners (n=10) who participated in the Socratic & LTD (dialogical) technique/method found it difficult to concentrate for the scheduled time: 07h45 to 13h00. It may be due to the fact that Socratic & LTD (dialogical) technique requires concentration, participation and personal involvement from every individual. The inquirer observed that lecturing, questioning and discussion could only be kept on an optimal level for plus minus three (3) hours at a time, whereafter a break of at least half an hour was needed.

6.10. Conclusive remarks

This chapter comprises an overview of the guided, critical-reflective techniques applied and evaluated, the participants' attitudes and feelings towards the selected techniques, the problems experienced, observations and reflections made by the inquirer on the completed exercises and the examples of how codes and symbols could be applied to analyze completed exercises for further use (such as follow-up interviews with participants). Due to time constraints, the inquirer was unable to utilize the completed exercises to further interview participants. The application of codes and symbols to the completed exercises, however, confirmed literature suggestions that guided, critical-reflective exercises can expose participants' assumptive worlds, theories, feelings, opinions, bias and attitudes.

This phase of the inquiry confirmed that it is difficult to put ideas about critical, reflective learning and teaching into practice despite the relative proliferation of diverse critical, reflective teaching methods. Application of the selected techniques confirmed its usefulness for identifying important job or study related elements and the stressors and conditions which impair individual functioning.

The following chapter, Chapter 7, is a continuation of Chapter 5 in which a preliminary model for facilitation of critical reflective practice was developed (see figure 5.11., p. 340).

Chapter 7: Construction of a model for facilitation of Critical Reflective Practice & Peer Review of the constructed model

7.1. Introduction/Rationale

The aim of chapter 5 was to construct a conceptual framework and preliminary model for facilitation of critical reflective practice. In doing that the inquirer attempted to show how the component parts of critical reflective practice and other component parts fit together. The conceptual framework and preliminary model was the inquirer's first attempt at making some explicit theoretical statements. Figure 5.11. provided a visual presentation of the model (chapter 5, p. 340). This model was derived from the conceptual framework by means of deductive reasoning, and revised for the purpose of chapter 7 after critique by the inquirer and senior promoters. Figure 7.1., provides a visual presentation of the model after revision.

The overall purpose of this inquiry is accomplished in this chapter, namely the construction and conceptualization of a model for facilitation of critical reflective practice and peer review of the model using specific guidelines. The model is based on assumptions derived from an in-depth analysis of the literature. The conceptual model evolved from empirical observations, intuitive insights of the inquirer and from deductions that combined ideas from several fields of inquiry. The conceptual model for facilitation of critical reflective practice is the formal presentation of the inquirer's personal image of critical reflective practice. The model for facilitation of critical, reflective practice postulates that health care practitioners has the inherent potential for change from *auto-pilot* practice to critical, reflective and creative practice. Such potential may be overt or latent, triggered by internal motivation or by certain environmental conditions.

It is suggested that practitioners or educators who wish to implement the model, read chapter three, four and five of this thesis in order to gain a deeper understanding of what facilitation of critical, reflective and creative thinking encompasses.

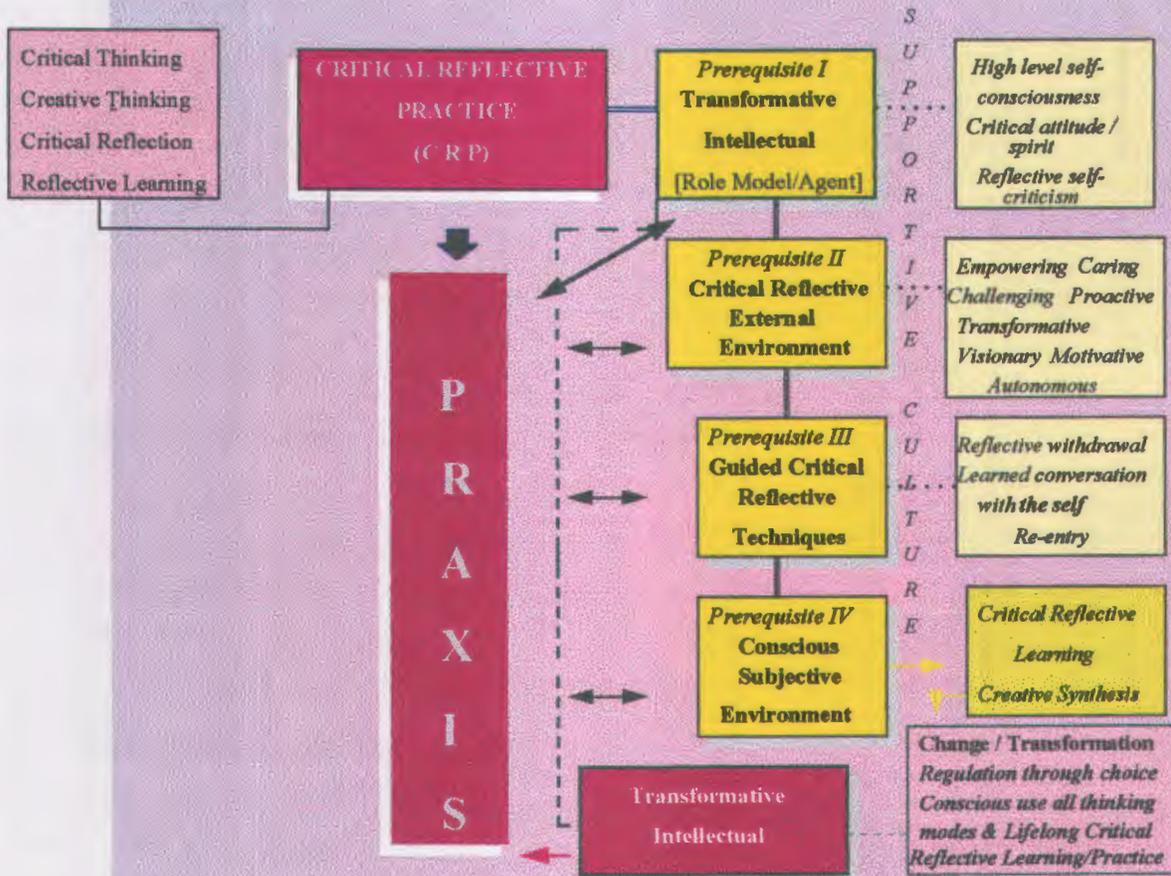


Figure 7.1. A Model for Facilitation of Critical Reflective Practice

7.2. Conceptual definition: Model

A model, according to Chinn & Kramer (1995: 216) is a general term referring to "symbolic representation of perceptual phenomena in words, numbers, letters, or generic forms. Models may provide a sense of understanding as to how theoretic relationships develop and are useful to illustrate various forms of theoretic relationships. Models can be presented as part of a theory or can be constructed to show links between related theories."

Models are "representations of the interaction among and between the concepts showing patterns." (George, 1990: 5). In a way, a model is a pictorial representation of a proposition. "Propositions are statements that explain the relationship between the concepts." (George, 1990: 5). A conceptual model, therefore, is defined as a set of concepts and statements that integrate them into a meaningful configuration.

The concepts of a conceptual model are highly abstract and general, thus, they are not directly observed in the real world nor are they limited to any specific individual, group, situation, or event. The propositions of a conceptual model also are abstract and general, thus, "they are not amenable to direct empirical testing." (Fawcett, 1984: 2) A model is described by Jacox (1974: 9) as an analogy or an example which makes it possible to visualize or to make more understandable something which cannot be directly observed. A model is the forerunner of a theory.

A conceptual model provides a specific frame of reference for members of a discipline, telling them what to look at and to speculate about. A conceptual model determines *how* the world is viewed and *what* aspects of the world are to be taken into account. Conceptual models thus have the "basic purpose of focusing, ruling some things in as relevant, and ruling others out due to their lesser importance." (Williams, 1979: 96). The utility of this conceptual model comes from the organization that it provides for thinking, for observations and for interpreting what is seen.

7.3. Theory

A theory is regarded as a set of definitions, concepts and relationship statements which project a systematic overview of specific interrelated manifestations. The aim is to

indicate mutual description, elucidation and prediction between the concepts (Chinn & Jacobs, 1987: 115).

To be regarded as a theory, the theory must comply with this definition and must also be a conceptual model which has been operationalized in practice and validated by research. The specificity of a theory requires that its concepts be more specific and concrete than those of a conceptual model. The concepts of a theory must be defined constitutively (theoretical definitions) and operationally so that the theory may be empirically tested. The propositions of a theory are also more specific than those of a conceptual model. They are meant to be tested and, therefore, to have empirical validity (Fawcett, 1984: 18-19).

Theories deal with a limited number of concepts and propositions and the components of the theory are therefore, specific and concrete.

7.4. The primary distinction between a conceptual model and a theory

The primary distinction between a conceptual model and a theory, in this inquiry, is seen as the level of abstraction. A conceptual model is a highly abstract system of global concepts and linking statements. A theory, in contrast, deals with one or more "specific, concrete concepts and propositions." (Fawcett, 1984: 26). A conceptual model is only **general guidelines**, which must be specified further by relevant and logically congruent theory before action can occur.

7.5. Background of the model

7.5.1. Overall aim/purpose

The purpose of the model is to facilitate critical reflective practice in students and nurse practitioners to enable them to become transformative intellectuals.

7.5.2. Rationale

Nursing as a profession requires commitment, maturity and ability to assess and synthesize a great deal of information consciously, quickly and accurately. Practitioners' need to be self-confident enough to be able to adjust and modify their understanding of theory, making use of theory in a way unique to the particular setting in which it occurs.

Knowledge of what the various disciplines say is not in itself sufficient, *knowledge through relationship* is necessary. Practitioners need to be empowered through critical reflective thinking skills to explicate their implicit theories.

Critical reflective skills enhance the ability to analyze issues and form judgements, find solutions and evaluate conclusions, to research and negotiate, and anticipate the actions of others. The process of critical reflective thinking is seen as the key to conscious awareness. The process involves reflective self-criticism - thinking about "one's own thinking, to make one's own thinking object of one's thoughts, to discover its limitations and weaknesses." (Paul, 1990 (b): 300) Self-criticism results in self-regulation - regulation through choice - an essential characteristic of autonomous practitioners.

If autonomy is the goal of professional education the key is to bring its facilitation from the unconscious (unplanned level) to the level of conscious awareness. As part of this process, adult learners must be taught to *abstract from* their immediate experiences in order to have a *learned conversation with the self*. Adult learners need to gain some distance from their own values and beliefs so that they can entertain more abstract modes of perception.

The task is to produce a changed environment for learning - an environment in which there is a new relationship between learners and their subject matter, and practitioners and their work situation - in which knowledge and skill becomes objects of interrogation, inquiry and reason. Experienced role models in nursing must guide or lead the developing nurse practitioner into reflective, critical philosophical discussions and must provide them with challenging ethical questions and dilemmas to think about. The role model (transformative

intellectual) must guide or lead the others to a point of being comfortable with and rational about dialogical issues.

The crucial point is that experienced role models in nursing practice must become aware of the variety of strategies available for cultivating affective traits of mind essential to higher order thinking. To educate the educator needs to attend to *what* learners think and value, otherwise the most powerful thoughts and values they possess - affecting all others - will be left untouched. A professional education in the area of values must expect from learners to embark on a process of value self-reflection and clarification, to provide enlightened action in the professional setting.

The real *fruits* of education are the thought processes and attitudes that result from the study of a discipline, not the information accumulated. Adult learners must actively struggle with real problems and issues - and see their role models doing the same, as attitudinal aspects of critical, reflective thinking are better practiced than preached. The choice is either to educate for excellence or to deliver graduates who are only capable of blindly following authority, acting without thought for the consequences of their actions.

The purpose of the model based on a heightened awareness of *the self* is to facilitate critical reflective practice in developing nurse practitioners. Only by thinking critically and reflectively, by making a *conscious* effort to meet challenges and problems, will health care professionals be able to meet community needs and expectations. The desired outcome is *transformative intellectuals* that will strive to empower others to become critical reflective learners and practitioners.

7.6. Theoretical assumptions for the model

The model for *facilitation of critical reflective practice* is based on experiential theory, creative thinking theory and critical, reflective thinking models (chapter 4).

The conceptual framework constructed in chapter five and the conceptual exploration in chapter three served as the starting point for the model. The following theoretical

assumptions are stated for this model:

- Health care practice in a rapidly changing environment necessitates critical reflective, creative and innovative thinking in order to render holistic, contextually-based care.
- Variables in the external environment result in uncertainty in the health care and education system, therefore, critical reflective practice, teaching and learning is required to facilitate development of the type of practitioner who can meet the demands of quality health care.
- A high level of *(self-) consciousness* is a prerequisite for critical reflective practice.
- Clear understanding and acceptance of *the self* enable optimal functioning of *the self* and others.
- Critical reflective practice is characterized by *praxis*(p. 409), which results in *authentic knowledge* and *autonomous action*.
- Knowledge generated through critical reflective practice is essential for description, explanation, prediction and control of nursing phenomena.
- The process of *empowerment* involves *transformative intellectuals* who are self-empowered through their critical reflective ability and are willing to empower others to discover and use their unique skills, knowledge, experience and creativity.
- The *transformative intellectual* (role model) emphasize the vitality of critical, reflective practice as the sole means to clearer understandings, developed skills, and improved ethics of intellectual freedom.
- Empowerment implies that the transformative intellectual takes actions that influence *impact, competence, meaningfulness* and *choice*.

- By being open to alternative ways of knowing and practising, the *transformative intellectual* may obtain insight or see meaning in findings not readily apparent by the sole use of scientific procedures.
- *Responsible action* is a continuous exercise of critical reflective thinking, creative imagination, discretion, judgement and the ability to make *conscious* decisions about one's practice.
- The critical reflective nurse practitioner as transformative intellectual, interacts wholistically with the internal and external environment through *conscious* use of *critical reflective withdrawal* and *reentry*.
- The *transformative* educator sees critical reflection as a significant step to develop an antidote for *auto-pilot* functioning and reliance on others.
- The *transformative* educator enables learners to alter self-limiting beliefs (habits of mind) by encouraging *self-consciousness*, *reflective withdrawal*, *reflective self-criticism* and *self-responsibility* (internal locus of control).
- The *transformative intellectual* recognizes that critical reflective thinking has the potential to be emotionally disruptive, and will thus, consciously provide a *supportive environment*.
- The *agent* of critical reflective practice is a person who plans thoughtfully, acts deliberately, observes systematically the consequences of action and reflects critically on the situational constraints and practical potential of the strategic action being considered.
- As *agent* of critical reflective practice, the *transformative intellectual's* involvement with the *recipient* is characterized by dialogue, communication, reasoning and acceptance. The agent-recipient interaction is characterized by critical reflection *with* each other.

- Role modeling of the need for critical, reflective practice requires *enthusiasm*. The *transformative intellectual* mirrors enthusiasm to provoke a receptiveness and willingness on the part of the *participant* (learner/others) to become involved in critical reflective practice.
- Through communication and role modeling the *transformative intellectual* allows recipients to become stakeholders and participants in planned *change/ transformation* of health care practices.
- The *transformative intellectual* is motivated by his/her ability to create *vision* in others in such a way that they will follow the vision because they see the need for it, thus, accept ownership of it and be committed to achieve it.
- The *transformative intellectual* actively defines nursing functions and is prepared to challenge existing practices, structures and power relationships.
- The *transformative intellectual* sees critical reflective learning and practice as the invisible act of *caring*, in that the secret of the helping art of nursing lies in conscious, careful nursing practice.
- Facilitation of lifelong critical reflective learning and practice requires *motivation*: motivation within the *transformative intellectual* to provide a conducive environment and motivation of the *recipient* to benefit from critical reflective learning.
- By implementing specific behaviours (increasing *self-consciousness/awareness*, building trust through *communication*, developing *vision* and *empowerment*) the *transformative intellectual* strives for successful *transformation* from *auto-pilot* functioning to *critical reflective functioning*.
- Educational practices which enables the process of critical reflection on learning and practice result in a *transformational* process of *intentional* learning. Intentional learning involves the structures which give meaning to experience.

- The learner who constructs knowledge *intentionally* will *consciously* control learning *metacognitively*.
- The learner as recipient of critical reflective conduct copes more effectively with the stressors of the educational and practice environment as there is open exploration of thoughts, needs, emotions, values, defenses, actions, communications, problems and goals.
- The learner as recipient of critical reflective conduct is willing to participate in meaningful dialogue, critical thinking, reflection, creative thought and risk-taking, in an environment characterized by concern, emotional involvement and care.
- The core of critical reflective practice is *caring*. Caring is dependent on a critical reflective environment (culture) which empower the individual to look and listen to *the self*. It is difficult to look and listen to *the self* without the support of a *transformative intellectual* who has learned to hold up a critical reflective mirror to invite others to look, reflect, and critically *listen to the self*.
- A *critical reflective environment* enables individuals to make *conscious* decisions based on understood and accepted feelings, knowledge and motivations.
- Guided reflective techniques enable the recipients to become conscious of *the self* and others and to have a *learned conversation* with *the self* and *with* others. Such techniques result in a *critical reflective spirit* in the individual enabling him/her to act as role model and to allow the critical reflective behaviour in others.
- Critical reflective practice and conduct are not installed in others by technique alone, it requires openness, trust, *empathetic listening* and respect for the learner's/practitioner's uniqueness. Empathetic listening is powerful in that it provides the *transformative intellectual* with accurate data to work with.
- The *transformative intellectual* needs to establish definite standards for thinking and practising. Learners and practitioners should continuously be reminded of their

responsibility to express themselves in reasoning that are clear, specific, accurate, relevant, consistent, logical, deep, complete, and open-minded.

- Synergy is the essence of *transformative leadership*. The whole is greater than the sum of its parts. It is principled-centered leadership, in that the *transformative intellectual* recognizes the importance of synergy, which catalyzes, unifies, and unleashes the power within people.

7.7. Description of the model

The model encompasses contextuality, visual presentation, concepts and interrelationships.

7.7.1. The context of the model

The context of the model is nursing practice and education. The model can however be implemented in any health care and educational situation which is responsible for preparation of professional carers (such as social workers). The model can be implemented in the lecture room or clinical (practice) field, in basic education, in post-basic courses, or as part of staff development in the service situation.

7.7.2. The structure of the model

The structure of the model gives overall form to the conceptual relationships within it, and represents the inquirer's perception of the reality of *facilitation of critical reflective practice*, the required conditions, the methods and outcomes. The visual presentation of the model is meant to improve insight into how ideas are organized and how structure flows from relationships between the ideas.

The central focus of the model is a *transformative intellectual* (prerequisite I), who within a *critical reflective external environment* (prerequisite II) enables conscious use of *guided critical reflective techniques* (prerequisite III), thus stimulating a *conscious subjective internal environment* (prerequisite IV) in learners/practitioners. The effect

of the interaction between the four prerequisites is *critical reflective learning* and *creative synthesis*, resulting in *change/transformation* which enables fulfilment of the main purpose of the model, namely *lifelong critical reflective learning and practice (praxis)*- and a *transformative intellectual (critical reflective practitioner)* who takes responsibility for *empowerment* of others to become critical reflective and creative practitioners.

7.7.3. Definition of the major concepts, related concepts and interrelationships

Main concept: Critical Reflective Practice

Critical-reflective practice requires the ability to consciously and purposefully withdraw (internally) from the situation, experience, or issue at stake in order to reflect and critically think about what has happened or what is or will be happening. Critical reflective practice is characterized by habitual inquisitiveness; well-informed and multilogical (dialectical) reasoning; open-mindedness; proactive thought; fairminded evaluation; honest self-evaluation; focused inquiry; persistence; empathy with diverse opposing points of view; devotion to truth against self-interest; willingness to take risks; deliberate and principled thinking about the thinking processes; insight into the social construction of the situation; creative synthesis; autonomous, responsible and informed action; and reflective learning. Critical reflective practice is portrayed by self-regulation, imagination, innovation, insight, moral integrity, courage and perseverance.

Critical reflective practice is thus more than thoughtful practice. It is practice that seeks to analyse the situations of professional performance so that they can become potential learning situations. Critical reflective practice is the utilization of good theory in practice in what must always be a situation of probability. The critical reflective practitioner is continuously trying to ensure that the outcome of any action is close to what is anticipated by the theory and the previous experience combined. Critical reflective thinking as praxis, requires action, involvement and risk taking.

- **Concepts which provide the building blocks for the main concept (Critical Reflective Practice)**

Figure 7.2. provides a visual presentation of all the *bins* which provide building blocks for the main concept (critical reflective practice).

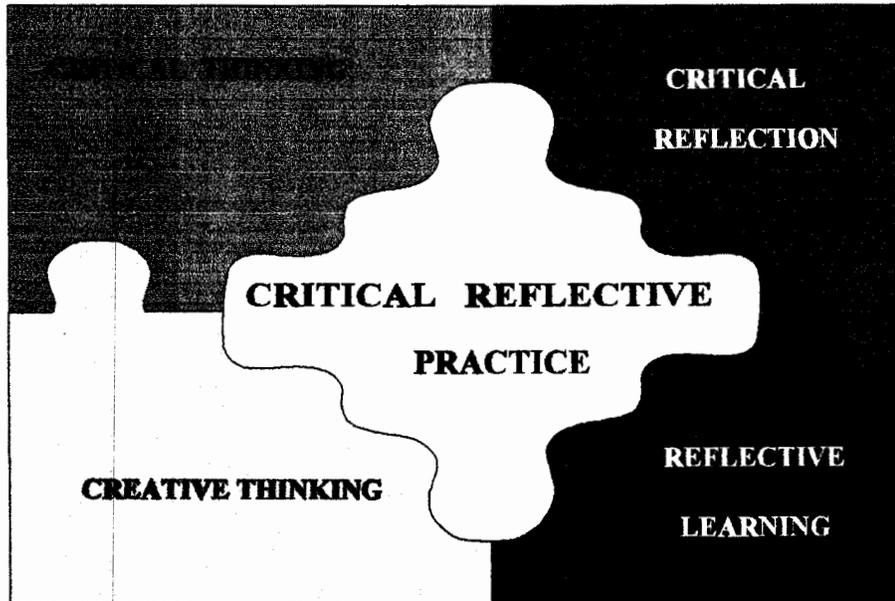


Figure 7.2. Building blocks (bins) for the main concept

Critical thinking

The ideal critical thinker is "habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fairminded in evaluation, honest in facing personal bias, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in selection of criteria, focused in inquiry, and persistent in seeking results that are as precise as the subject and the circumstances of inquiry permit." (American Philosophical Association, 1990:3)

Creative Thinking

The element of *creativity* in relation to critical reflective practice may be described as the ability to sense gaps or problems within known information; ability to see many relationships among elements; flexibility in thinking and reorganization of understanding to produce innovative ideas and solutions; testing ideas and modifying those ideas in a unique way; and communicating the results. *Creativity* within critical reflective practice conjures up several abilities rather than a single characteristic. It involves curiosity, imagination, discovery, innovation, invention, balance between divergent and convergent thinking, intuitive processes and contemplation of abstract philosophical issues.

Critical Reflection

The thinker involved in *critical reflection* challenges the validity of previous learning, questions the premises on which problems are posed or defined, is not concerned with the *how* or the *how-to* of action but with the *why* (the reason for and consequences), examines the realities of practice as experienced while assuming that much is not known, accepts that there is more than one equally acceptable response or answer, goes beneath the surface structure of the situation in order to reveal the underlying assumptions constraining open discourse as well as autonomous and responsible action. The critical reflective thinker is willing to take risks, to challenge the status quo to obtain a new perspective on existing knowledge.

Reflective Learning

The concept *reflective learning* will be discussed for the purpose of the model on page 399.

■ **Supporting Main Concepts**

Transformative Intellectual (Role Model/Agent)

The transformative intellectual is the person performing critical reflective practice. The *transformative intellectual* is an individual who is educated to rely less on personal fictions and conventional wisdom for personal and professional conduct and more on critical structures of knowledge considered in the context of ideological possibilities and probabilities.

In the context of nursing practice/education the *transformative intellectual* is a *critical reflective* nurse practitioner or educator who functions in an integrated biopsychosocial manner and who role models the specific behaviour of critical reflective practice in his or her quest for self-regulated, independent, empowered and caring practices. The *transformative intellectual* underscores the vitality of critical reflective learning and practice in that he/she sees critical reflection as a significant step toward developing an antidote for *auto-pilot* functioning and reliance on others.

The *transformative intellectual* as agent, is a critical reflective practitioner and role model of professional maturity in that he/she shows strong commitment to improve practice and learning. Such an agent engages in continuous observation, critical thinking and reflection in order to challenge preconceived ideas. The *transformative intellectual* is a *change agent*. The agent of critical reflective practice establishes his/her credibility through role modeling competence, objectivity, high ethical standards and critical reflective ability. The *transformative intellectual* is a catalyst who accepts responsibility for management of change activities. The *transformative intellectual* is self-empowered through critical-reflective processes (ability) and is therefore, willing to empower others to discover and use their unique skills, knowledge, experience and creativity.

Critical Reflective External Environment

The external environment for *facilitation of critical reflective practice* is the totality of patterns existing **external** to nursing and the individual learner/practitioner. It is the context in which the activity of *critical reflective practice* takes place and includes a complex of extraneous factors and circumstances which are present in every situation. The external environment (social, political, legal, economical, educational and institutional) has significant implications for nursing.

Contemporary expectations in the external environment (community) require *transformation* which includes review of all relevant legislation, institutions, organizations, management practices, norms and standards. This suggests the need for a different kind of health care practitioner and institutional (service) environment, as concepts and actions such as democracy, transparency, transformation, empowerment, human rights, and accountability are part of the philosophy of the current South African society. These demands can only be met within an external environment (service/educational) characterized by a *supportive culture* and *praxis*.

For the purpose of the model the *critical reflective external environment* is, defined as *a service or educational environment characterized by a supportive culture and praxis*. Within such an environment the recipient (learner/practitioner) is enabled to look and listen to *the self* and others, and is energized to transform from *auto-pilot functioning* to *critical reflective functioning*.

Guided Critical Reflective Techniques

Reflective learning occurs as a result of the process of *guided reflection*. *Guided reflection* is a combination of techniques intended to enable practitioners (learners) to reflect on their professional and personal conduct (experiences) in order to become increasingly effective (critical, creative and reflective). *Guided reflection* enables the practitioner to use experience and learn from experience in a structured and supported

way. This is necessary as critical reflection is a profoundly difficult process.

Guided critical reflective techniques include all strategies which enable learners/practitioners to reflect *with* other people and discover *meaning with* others. Guided critical reflective techniques are seen as mutually enabling processes that result in *dialogue* and *revelation of the self* to one another. It enables the learner/practitioner to become *conscious* of and keep an ongoing record of his or her actions, feedback, beliefs, assumptions and theories.

Guided critical reflective technique is purposeful and goal-directed. It begins with the goal of reconstructing individual and social experiences as a basis for understanding the attitudes and emotions which shape the present knowledge of practice, and for incorporating new ideas and information. The process of reconstruction requires the learner/practitioner to collect comprehensive, descriptive accounts of his/her experiences. Guided critical reflective technique is an anchor from which to make further explorations as it allows conscious *reflective withdrawal* and *reentry*. Guided critical reflective technique makes individuals more *conscious* of the qualities and skills they already have and gives them purpose and direction.

Examples of guided critical reflective techniques in this thesis are: Socratic Questioning & Discussion; Analogy & Metaphor; Debate; Critical Incident Reporting & Analysis; Six Hats Technique; Brainstorming; Journals; Critical Reflective Exercises (using media/journal reports); PMI (Plus (good), Minus (bad), and Interesting); The Topic/Form Grid; Guided Imagery (see chapter 4, p. 185).

Conscious Subjective Environment (Internal Environment)

The internal environment in the model consists of each individual learner's/practitioner's personal system (internal environment: *the self*). *The self* is a composite of thoughts and feelings that constitute the individual's awareness of individual existence, his/her

conception of *who* and *what* he/she is. The person's *self* is the "sum total of all he can call his." (King, In: George, 1990: 195)

The self (internal environment) includes, among other things, a system of ideas, attitudes, values and commitments. *The self* is a person's *total subjective environment*. It is a distinctive center of experience and significance which constitutes a person's inner world as distinguished from the outer world.

Critical Reflective Learning & Creative Synthesis

Critical reflective learning is the process of making a new or revised interpretation of the meaning of an experience to guide subsequent understanding, appreciation and action. It involves critical analysis and interpretation of an experience, openness to new information, acceptance of self-reality, a change in personal meaning, structure, resolution, review of past values in relation to the changed perspective and examination of the implications for future behaviour and others.

The key characteristic differentiating critical reflective learning from other types of mental activity (thinking or problem solving) is that the problem is conceptualized in relation to *the self*. Critical reflective learning often results in new knowledge, or a new perspective on existing knowledge which is relevant to improving standards of care. Critical reflective learning results in *creative synthesis* (consistency in thought and action). Having decided on the worth, accuracy, and validity of new ways of thinking, living or practicing, the person integrates these into the fabric of his/her life. Figure 7.3. reflects the process of critical reflective learning and creative synthesis:

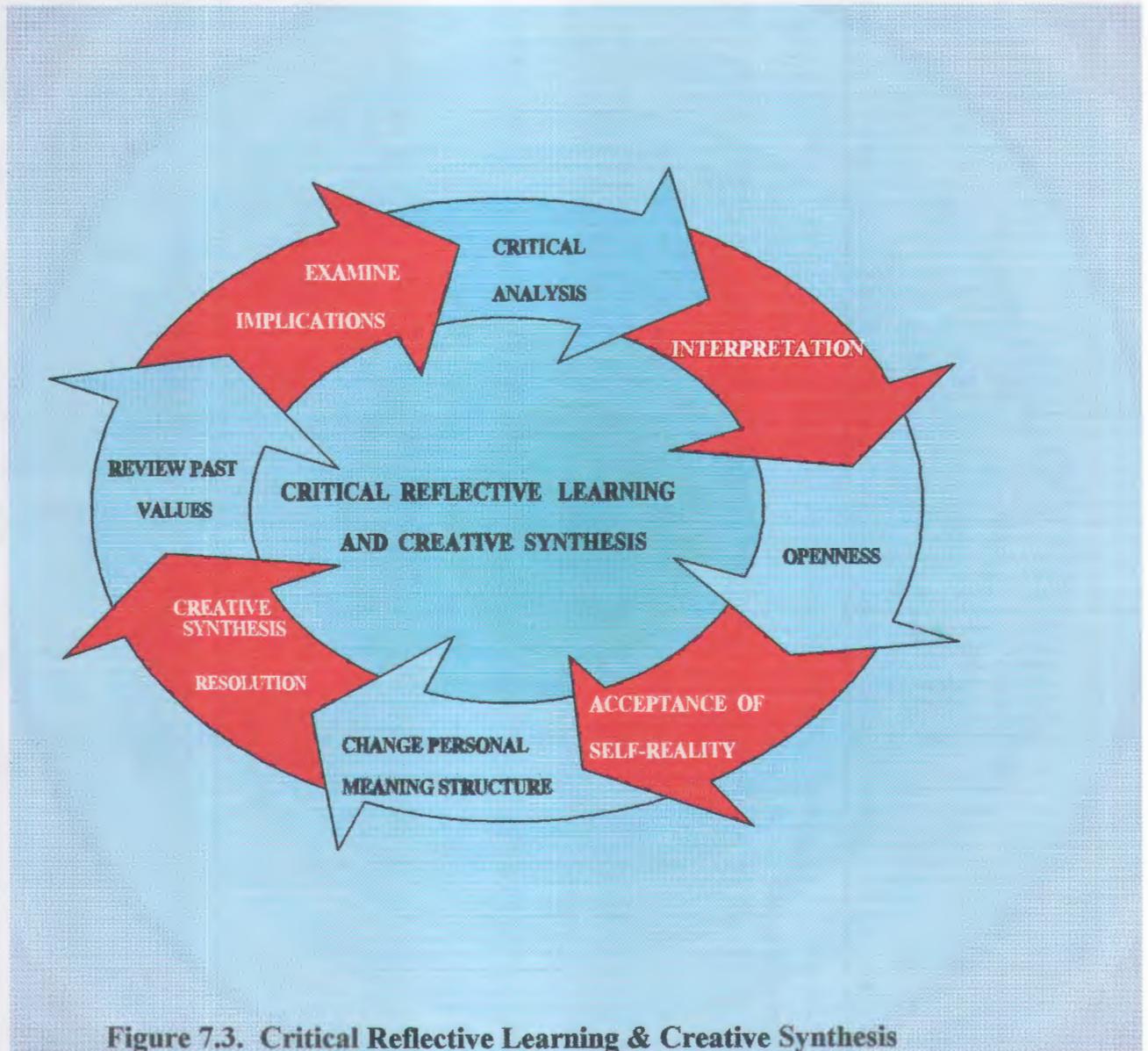
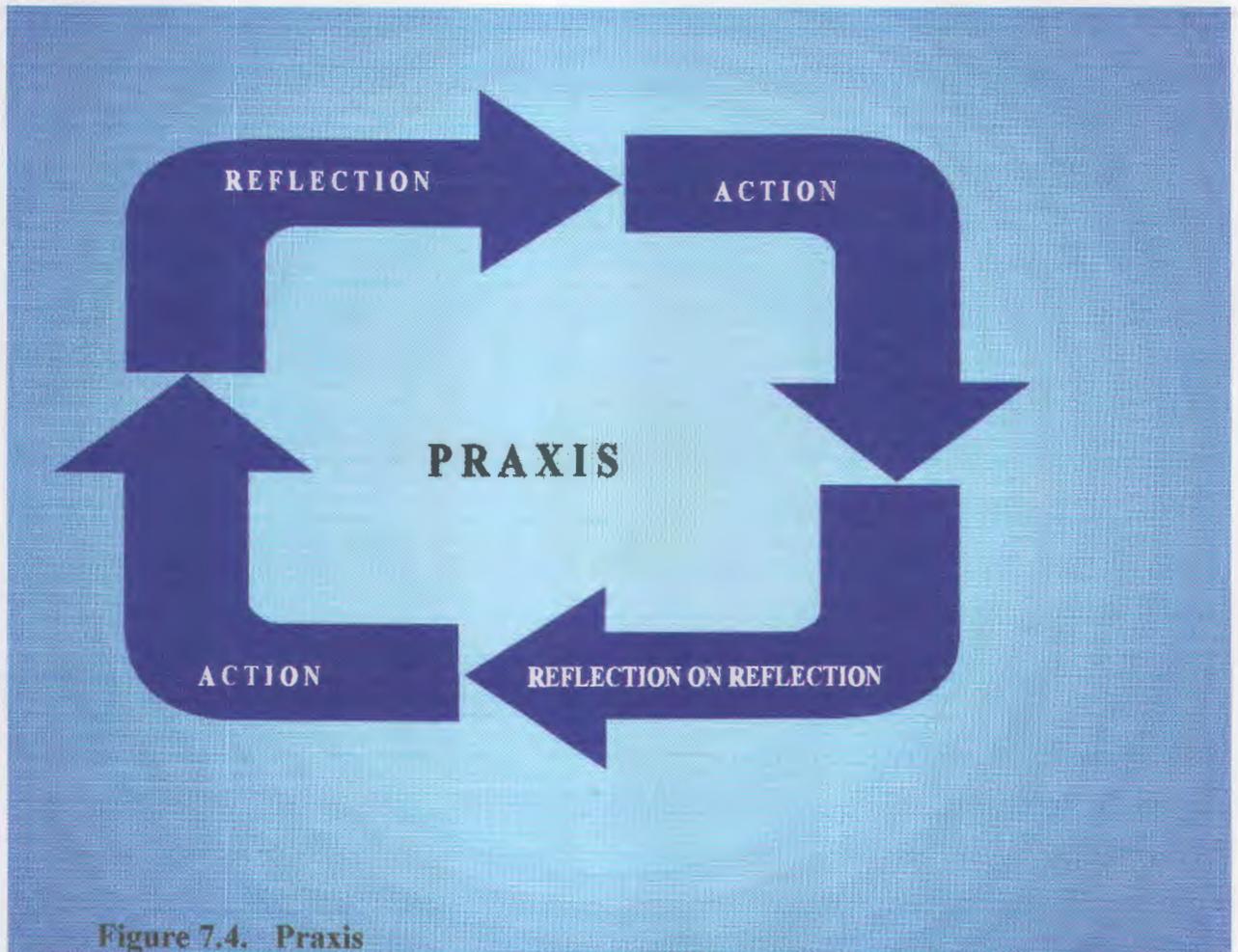


Figure 7.3. Critical Reflective Learning & Creative Synthesis

Praxis

Praxis is thoughtful reflection and action which occur in synchrony. Action is *informed* by reflection, and reflection is *informed* by reflection and reflection is *informed by action* (see figure 7.4.). Praxis involves a shift away from critical thinking as problem solving, to critical thinking as a process in which knowledge and action are *dialectically* related

through the process of *critical reflection*.



Praxis involves the two concepts of action and reflection. If the individual reflects on what he/she does it may modify his/her actions in the future. Action without reflection does not lead to informed, intentional behaviour: action by reflection can ensure that anything learned from the action can be carried to the next situation.

(Self-) Consciousness/Awareness

The self plays a critical role in the motivation to practice in a critical reflective manner and to learn from practice. The role of *the self* can be explicated as the source of the learner/practitioner's perceptions, affect and behaviour. The metacognitive, cognitive, and affective aspects of *the self* are subsystems of *the self* and under control of *the self* as *agent*. *The self* directs and/or oversees information processing, formulates intentions, makes choices, and generates motivation to engage in critical reflective activities.

Consciousness is awareness. It is understanding and experience of how thought, consciousness, and mind work together. A high level of *self-consciousness* is a prerequisite for critical reflective practice as it allows the individual a more objective perspective. *Self-awareness* enables the learner/practitioner to examine the way he/she sees *the self* (self-paradigm). A learner/practitioner with a positive self-concept will be more likely to engage in exploration of ideas, which may conflict with personal views. A positive self-concept results in *reflective self-criticism* which requires provisional or hypothetical detachment from personal viewpoints. The learner/practitioner, through guided critical reflective technique and role modeling, should be empowered to become aware of personal identity, acts, thoughts, feelings, assumptions and motives. *Self-consciousness* results in integration of the aspects of one's being, commitment to choices and authentic relationships. Figure 7.5. shows the interconnected components of *self-consciousness* (see 5.3.1. for a thorough discussion of the concept and its interconnected components).

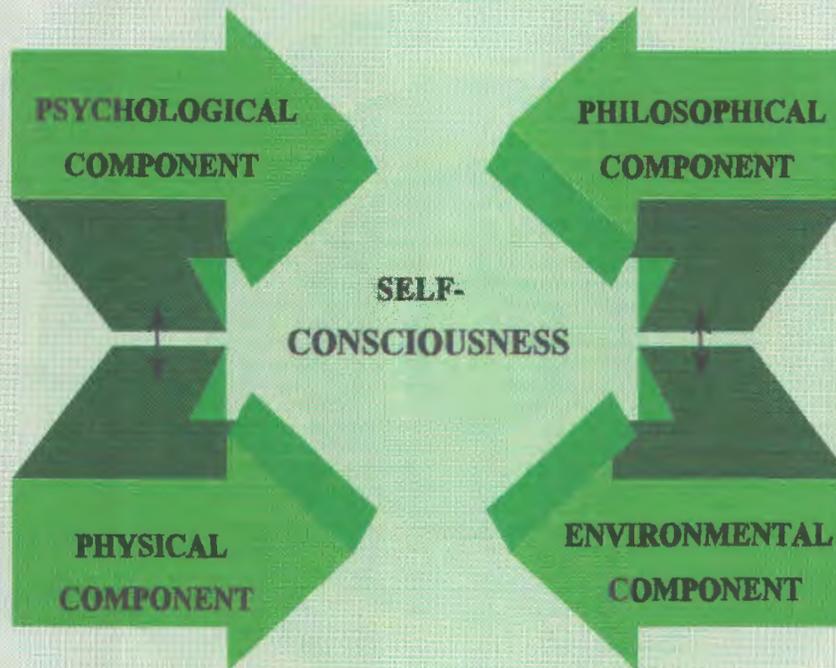


Figure 7.5. Interconnected components of Self-consciousness

Critical Reflective attitude/spirit

A *critical reflective attitude* or *spirit* shows willingness to conform judgement and action to principle. The *transformative intellectual* has integrated a host of *rational passions* with his or her assessment skill. Together these constitute and instantiate the critical attitude. Rational passion is characterized by a drive for clarity, accuracy and fairmindedness, a fervor for getting to the bottom of things and for listening

sympathetically to opposing points of view, a compelling drive to seek evidence, an intense aversion to contradiction, sloppy thinking, inconsistent application of standards and a devotion to truth against self-interest.

A critical reflective attitude or spirit is characterized by *reflective scepticism* in that the *transformative intellectual's* thought involves a certain scepticism, or suspension of assent toward a given statement, established norm or mode of doing things.

Reflective (Self-) Criticism

Self-criticism derives from a desire within the individual to free *the self* from the constraints of conventional (habitual) thinking. Critical reflection involves a highly introspective inquiry involving the process of observation of *the self* and critical reflective thinking about *the self* with a view to *action*. By engaging in observation and critical reflective thinking about *the self* it is possible for the individual to challenge all preconceived ideas, principles, theories, policies and "right" ways of thinking and behaving. Through self-criticism the individual weighs-up, evaluates and decides upon the validity of something.

Reflective self-criticism requires provisional or hypothetical detachment from the personal viewpoints, through the process of *reflective withdrawal* and *re-entry*. Self-criticism involves a *learned conversation* with *the self*.

■ Relating concepts

Empowerment

To *empower* learners/practitioners as *transformative intellectuals* means to educate for critical reflection. *Empowerment* is a process which increases learners/practitioners intrinsic motivation. Empowerment involves taking actions which affect *impact*, *competence*, *meaningfulness* and *choice* (see chapter 5, p. 285 for a detailed discussion).

People are empowered by involving them in their work and learning through a process of *inclusion*.

Empowerment is composed of two specific conceptual components: (1) a cultural change process: this means defining new, or revising and reaffirming existing values; and (2) a paradigm shifts: this means changing what an organization believes about itself and how it thinks and acts. There should be a move from organizational domination to person participation through the process of critical reflective practice - thus, partnership. The paradigm shift results in commitment, as the learners'/practitioners' actions are freely chosen, owned, and critiqued without any requirement to do so.

Empowerment enables *autonomy*. Actions that *empower* others include: delegating authority, using participative decision making, encouraging self-management, lessening formalization, creating a supportive culture and encouraging goal setting. Empowerment involves sharing of power and authorizing learners/practitioners to think critically, reflectively and creatively. It is a process of focusing on the needs of others and encouraging self-responsibility by altering self-limiting beliefs (habits of mind).

Transformation intellectuals are emancipatory in that they are concerned with empowerment of individuals as autonomous and responsible agents in the world.

Caring

In this model critical reflective practice is seen as the invisible act of *caring*, in that the secret of the helping art of nursing and education lies in *conscious*, careful nursing practice and education for critical reflective practice. Caring involves an engrossment or motivational displacement whereby the *transformative intellectual* moves away from his or her own viewpoint and looks at things as though from the viewpoint of the other person (recipient) and make the other person's motives his or her own. Caring involves willingness in the *transformative intellectual* to move from self-centeredness to other-centeredness.

The caring relationship, in this model, assumes the meeting together and mutual positive regard between the *transformative agent* and the recipient (learner/other). This ensures

that such factors as maintaining the integrity and dignity of the recipient (cared for) will be part of caring. The core of critical reflective practice is *caring*. Caring is dependent on a critical reflective environment (culture) that enables the individual nurse practitioner and learner to *look and listen to the self*.

Challenging

A critical reflective external environment *challenges* in that the *transformative intellectual* rejects uncompromising, uncontested knowledge and skill, and mindless adherence to the status quo. The transformative intellectual challenges learners and practitioners to obtain insight or see meaning in findings that may not be readily apparent by use of scientific procedure only. A challenging external environment invites learners/practitioners to "prove and justify" something (Thompson, 1996: 217).

Proactive

A critical reflective external environment in which there is freedom to *choose* fosters *proactivity* in learners/practitioners. Proactive individuals are value driven; and if their value is to produce quality work through critical reflective and creative processes they subordinate the influencing environment to their thought processes. Proactive learners/practitioners create or control a situation by taking the initiative (Thompson, 1996: 1089). Highly proactive individuals have the ability to choose their response, they do not blame circumstances, conditions, or conditioning for their behaviour. Their behaviour is a product of the motivation within the environment and their own *conscious choice*.

Transformative

A transformative environment is characterized by activities that are intentional and goal directed. The activities are goal intentional and goal directed in that it has as purpose the deliberate transformation of the individual (psychologically, physically, cognitively and socially) in striving for personal and professional development. Within the transformative environment the *change agent* underscores the validity of critical reflective practice and use persuasive messages to develop competence, objectivity, high ethical standards and a changing attitude toward nursing practice.

A transformative environment energizes the need to transform from *auto-pilot mode* to *critical reflective mode*. Auto-pilot mode is uncritical, unconscious practice, which is characterized by routine actions that are potentially dangerous. A transformative environment opens challenges for the learner and practitioners so that they *consciously* notice what they think, feel and do. This results in a sense of *agency*, in that the individual conceives *the self* as being in possession of an ultimate power of decision and action.

Visionary

Vision is a mental picture of a possible situation or state of affairs. The *transformative intellectual* enables learners/practitioners to *imagine* how things might be different from the way they are. The transformative intellectual is motivated by his/her ability to create vision in others in such a way that they will follow the vision because they see the need for it - accepting ownership of it and is committed to achieve it.

Motivative

A critical reflective external environment *motivates* learners/practitioners to develop a critical reflective spirit. Motivation is a state of need-induced tension which manifests as a 'push' on the individual to engage in critical reflective learning and practice. Motivation for critical reflective practice is defined as conditions which influence the arousal and maintenance of behaviour relevant to critical reflective thinking.

Autonomy

In the model *intellectual autonomy* entails a commitment to analyzing and evaluating beliefs on the basis of reason and evidence, to question when it is rational to question, to believe when it is rational to believe and to confirm when it is rational to confirm.

Reflective withdrawal

Reflective withdrawal is the conscious process of creating a personal *resting place* to obtain openness to information from internal and external sources. The beginning of the reflective episode is an awareness that something does not fit, or does not sit right within

the individual, or a feeling of unfinished business.

The events that trigger reflective withdrawal are unique to every individual and result in discomfort which requires a response not yet available to the conscious intent of the person reflecting. The trigger event evokes an awareness in *the self* that *the self* is not in an adequate position to manage the experience or to perceive it fully. This awareness is the first step in bringing unconscious determinants to a conscious level where they then guide the next stage of the critical reflective learning process, the identification and clarification of the concern.

Reflective withdrawal requires a setting aside of the immediate need for closure in relation to the issue. Openness or receptivity to information from within and/or outside *the self* is necessary.

Learned conversation with *the self*

Critical thinking and reflection involve a learned conversation with *the self*. Within this conversation emotive aspects - feelings, responses, intuition, sensing - are central as the learner or practitioner deliberately breaks with traditional modes of thought to prompt forward leaps in creativity. The learned conversation with *the self* results in emancipatory learning which frees the individual from personal, institutional and environmental forces and prevent him/her from seeing new directions and gaining control of his/her personal life.

The outcome of the learned conversation *with the self* is a change in assumption about oneself and the world, resulting in a corresponding change in behaviour and relationships.

Re-entry

Re-entry is possible at the point where the individual experiences *the self* as changed, having learned, or having come to a satisfactory point of closure in relation to the issue. It is similar to self-insight. The closure is often recognized as not the final answer, but a psychological place where the individual feels comfortable in relation to the issue. Self-insight comes in spurts, is spontaneous, creative and all of a sudden. The individual experiences a subjective sense of rightness, certainty, or adequacy of the solution or

changed perspective.

The changed perspective or resolution is self-affirming in that the individual experiences a surge of positive energy at the time of reentry. As a result the individual is faced with the challenge of relating his or her *changed self* to the past self, to other areas of his or her present life and to future behaviour. A conscious decision may be made to immediately and completely, incorporate the change into behaviour to test the public reaction, or merely to allow it to exist within *the self* without acting overtly on it. Negative reaction from others may force the individual back into *reflective withdrawal*.

(Conscious) Use of all modes of thinking

Text box 7.1. Modes of thinking

T = Total Recall/Reflection

H = Habits (Frame of reference; Bias; Assumptions; Theories used)

I = Inquiry\Critical Inquiry

N = New ideas/creatively/imaginatively/multilogically

K = Knowing how you think/reflect (conscious thinking and reflection)

Critical reflective practice requires being conscious of all thinking modes, and the ability to critically reflect on them when indicated (see text box 7.1. and chapter 5, p.288 for a detailed discussion).

Regulation through choice

Critical reflective practitioners experience themselves as the initiators of their own behaviour, they select desired outcomes and choose how to achieve them. The *action* is self-initiated and grasped as a personal solution. *Regulation through choice* is characterized by flexibility and the absence of external pressure. The behaviour or action is endorsed by the *whole self* and is experienced as *action for which oneself is responsible*.

Supportive culture

A supportive culture for facilitation of critical reflective practice is empowering, caring, challenging, transformative, motivative, visionary, imaginative, proactive, creative and autonomous in nature (see figure 7.6.), thus, energizes regulation through choice.

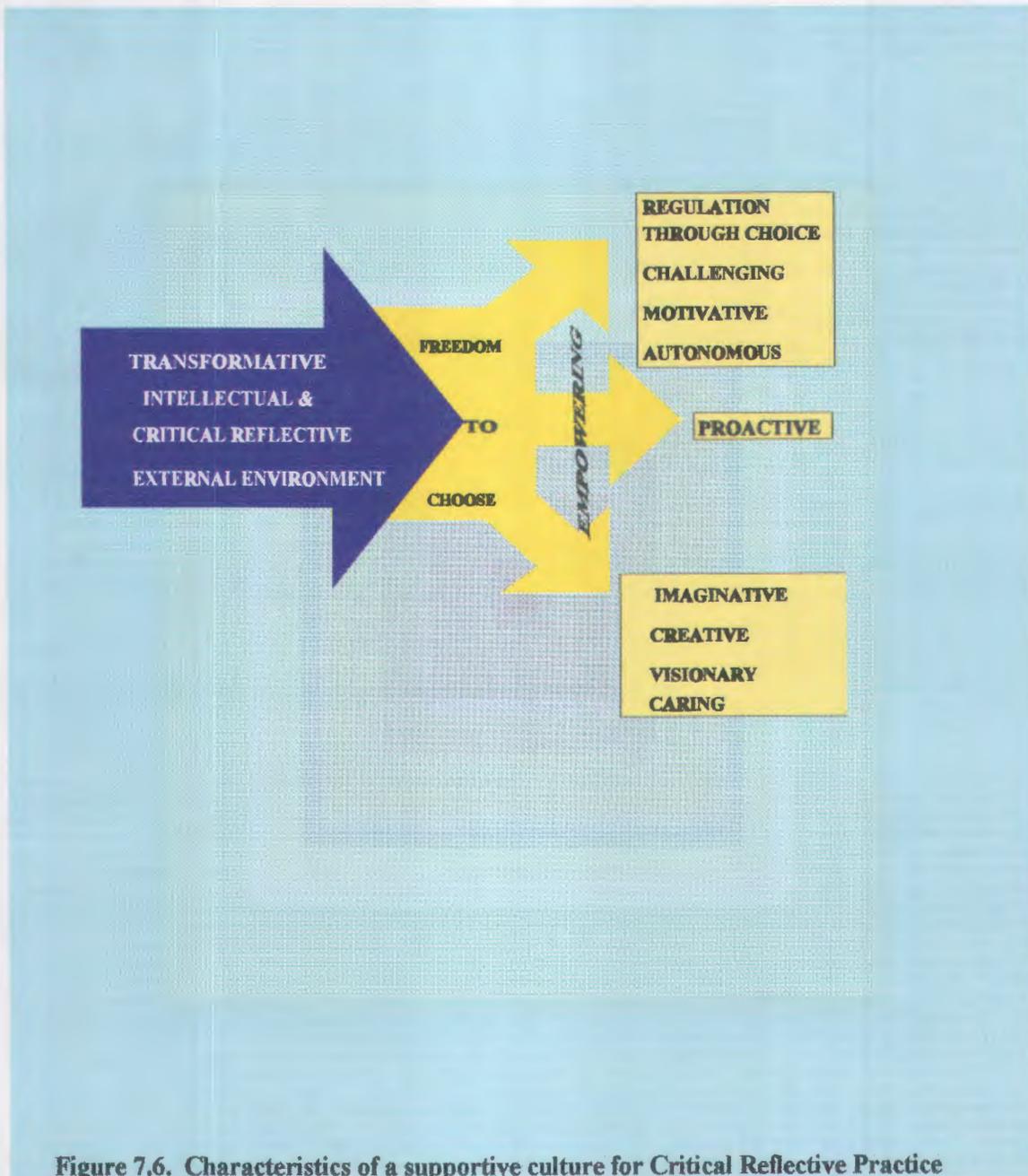


Figure 7.6. Characteristics of a supportive culture for Critical Reflective Practice

7.7.4. Relationship statements

Relationship statements have been developed during construction of the conceptual framework (chapter 5). In chapter 7, however, only selected, relationship statements will be included for the model:

- **Statements for the registered nurse practitioner as *transformative intellectual* (role model/agent of critical reflective practice)**

The registered nurse practitioner as *transformative intellectual*:

- ▶ has the necessary self-knowledge, skill and experience to practice as an independent clinical practitioner, manager of nursing, transformational leader and innovator.
- ▶ role models the behaviour patterns of critical reflective practice, thus empowering developing nurse practitioners and others to become conscious of the need for critical reflective and creative thinking.
- ▶ is supportive of a nurturing external environment which characterizes growth, autonomy and self-actualization.

- **Statements for the educator as *transformative intellectual* (role model/agent of critical reflective practice)**

- ▶ The educator as transformative intellectual sees critical reflection during teaching and learning as a significant step toward developing an antidote for *auto-pilot* functioning and reliance on others, thus:

- strives to develop a positive self-concept in learners, as learners with a positive self-concept are more likely to engage in critical and reflective thinking.
- allows learners to search for ideas, manipulate knowledge and experience, try various approaches and break rules occasionally.

- encourages self-responsibility and self-critique in learners by questioning self-limiting beliefs (habits of mind).
 - encourages reflective withdrawal through the use of guided critical reflective techniques, thus, enabling learners to *reenter* a situation with improved understanding.
 - consciously provides a supportive environment which energizes critical reflective thinking.
- **Statements for the recipient(s) of critical reflective practice**

The recipient as receiver of the activity:

- ▶ develops a critical reflective spirit/attitude with the guidance and support of the transformative intellectual.
 - ▶ continuously clarifies personal behaviour, needs and goals with the transformative intellectual.
 - ▶ participates willingly in meaningful dialogue, critical reflective thinking, creative thought and risk-taking.
 - ▶ learns to value reflective self-criticism, principled thinking, reflective scepticism and regulation through choice.
- **Statements for the context of critical reflective practice**

The context (framework) in which critical reflective practice takes place is a complex of extraneous and internal factors. Thus,

- ▶ critical reflective practice is influenced by each individual's external and internal (subjective) environment. Transformative, critical reflective practice requires conscious recognition of both the external and internal environment.
- ▶ interaction between the external and internal environment is dynamic, dialogical and complex.

- **Statements regarding the energy source (dynamics) for critical reflective practice**

In the model the dynamics (or energy sources) for critical reflective practice are the motivating factors. The transformative intellectual is motivated by the knowledge that he/she can:

- ▶ create vision in learners/practitioners/others.
- ▶ empower others to become *transformative intellectuals*.
- ▶ create meaning through critical thinking and reflective process.

The transformative intellectual's energy source for critical reflective practice lies in:

- ▶ recognition of the importance of intellectual humility, intellectual courage, intellectual empathy, intellectual integrity, intellectual perseverance, faith in reason and an intellectual sense of justice.
- ▶ concern for and emotional involvement in *care* for, growth of, and *empowerment* of others.
- ▶ the ethical norms and values of the nursing profession.
- ▶ recognition of the need for *expert* nursing practice.

- **Statements regarding the protocol (guiding procedure/activity) for critical reflective practice**

The procedure for facilitation of critical reflective practice includes the implementation of specific behaviour (by the transformative intellectual) and supportive, guided critical reflective techniques. The transformative intellectual intentionally creates a context (critical reflective external environment and conscious subjective [internal] environment) constructive for facilitation of critical reflective learning and practice. The behaviour needed includes: self-consciousness/awareness, building trust through communication, developing vision and empowerment. Components crucial for facilitation of a context

enabling critical reflective thinking, learning and practice includes:

- ▶ modeling of the traits of mind characterizing critical reflective thinking.
- ▶ empathic listening by the transformative intellectual, involving listening with the intent to understand the developing nurse practitioner's uniqueness.
- ▶ trust, to share ideas, thoughts and feelings.
- ▶ definite standards for thinking, learning and practising.
- ▶ deliberate support, counteracting the risks of being a critical reflective and creative thinker.
- ▶ intentional use of *deep* learning approaches as the cognitive and affective skills needed to engage in critical reflective process which must be taught, practiced, refined and reinforced.

7.8. Peer review of the model

The model for *facilitation of critical reflective practice* was exposed to peer review.

7.8.1. Introductory remarks for analysis and evaluation of the model

Criteria for analysis and evaluation of the model were constructed from guidelines provided by various authors (adapted from Fawcett, 1984: 39-49; Chinn & Kramer, 1995: 135-137; Maker, 1982: 10-11; Reigeluth, 1983:26) in the field of analysis and evaluation of models. The guiding criteria included:

7.8.1.1. Criteria for Analysis

Analysis, according to Fawcett (1984: 38), deals with an objective breakdown of statements into component elements. This is done to explicitly identify concepts, relationships between concepts, and any relative hierarchy of ideas contained in the conceptual model. The intent of analysis is to clarify statements and to identify their organization. Analysis of elements requires identification of the concepts of the model, and analysis of relationships requires identification of the connections among the concepts. Analysis facilitates:

- ▶ recognition of stated and unstated assumptions,
- ▶ identification of motives, and
- ▶ comprehension of the interrelationships among concepts and statements (propositions) of the model. It further facilitates detection of logical fallacies in the model.

The analysis of organizational principles requires examination of the overall arrangement or structure of the conceptual model, thus permitting a view of its gestalt. Analysis of a conceptual model is accomplished by examining **exactly** what its developer has presented, rather than by making inferences about what might have been meant by any statement. In summary, analysis requires a nonjudgmental, detailed examination of the conceptual model.

7.8.1.2. Criteria for Evaluation

Evaluation, in contrast to analysis, involves judgement about the value and logical structure of the conceptual model. Such judgements are made by determining the extent to which the model satisfies certain external criteria and meets certain standards.

Evaluation of a conceptual model allows the reader to draw judgmental conclusions about its validity. Evaluation of a conceptual model is accomplished by comparing the content of the model to the criteria with a focus on:

- ▶ explication of assumptions,
- ▶ comprehensiveness of concepts and propositions,
- ▶ logical congruence,
- ▶ social consideration,
- ▶ theory-generating capabilities, and
- ▶ contribution to educational/nursing knowledge (Fawcett, 1984: 43).

7.8.2. Questions for analysis and evaluation of the model

Guidelines for analysis and evaluation of the model (adapted from Fawcett, 1984: 39-49; Chinn & Kramer, 1995: 135-137; Maker, 1982: 10-11; Reigeluth, 1983:26) included:

1. Questions regarding the concepts:

- 1.1. *Are the main concepts explicated in the model?*
- 1.2. *How are the main concepts defined and described? Are definitions clear? Congruous? Consistent? Are there sufficient, appropriate explanations? Too many? Not enough? How broad are the concepts in the model? Too broad? Too general?*
- 1.3. *Are the relationships between the main concepts stated? Are the relationships clear? If not, what is needed?*
- 1.4. *Are the related or supporting concepts explicated in this model?*
- 1.5. *How are the related or supporting concepts defined and described? Are definitions clear? Congruous? Consistent? Are explanations sufficient and appropriate? Too many? Not enough?*
- 1.6. *Are the relationships between the related/supporting concepts and the main concepts stated? Are the relationships clear? If not, what is needed?*

2. Questions regarding the examples, diagrams, structure

- 2.1. *Are examples or diagrams helpful? Not helpful? Needed and not presented? Are examples and diagrams meaningful?*
- 2.2. *Are diagrams and examples consistent with their definition?*
- 2.3. *Are compatible and coherent structures suggested for different parts of the model?*
- 2.4. *Can the model be followed? Can an overall structure be diagrammed? Are there any gaps in the flow? Do all concepts fit within the theory? Are there any ambiguities as a result of the sequence of presentation?*
- 2.5. *Does the constructor of the model accomplish what she set out to do?*

3. Questions regarding simplicity of the model

- 3.1. *How many relationships are contained within the model? Are they clear? Congruous? Consistent? Too many? Not enough?*
- 3.2. *How are the relationships organized? Logically? If not, what is needed and not presented?*
- 3.3. *How many concepts are contained in the model? Too many?*
- 3.4. *Are some concepts differentiated into subconcepts and others not?*
- 3.5. *Does the model tend to describe, explain or predict?*
- 3.6. *Does the theory impart understanding? Create meaning? If not, why not?*
- 3.7. *Are the assumptions underlying the model explicit?*

4. Questions regarding generality of the model?

- 4.1. *How specific is the purpose of this model? Does the purpose apply to all or only some practice/educational areas? Is this model specific to nursing/nursing education? If not, who else could use it? Why?*
- 4.2. *Is the purpose justifiably a nursing purpose?*

5. How accessible is this model?

- 5.1. *How specific or general are definitions within the model?*
- 5.2. *Are the empiric indicators of the concepts identifiable in reality? Are they within the realm of nursing/ nursing education?*
- 5.3. *Do the definitions provided for the concepts, adequately reflect their meanings? Is a very narrow definition offered for a broad concept? A broad meaning for a narrow concept?*
- 5.4. *If words are coined, are they defined?*

6. How important is this model?

- 6.1. *Does the model have the potential to influence nursing actions? If so, to what end? Is that end desirable?*
- 6.2. *Does the model have the potential to influence nursing education or education in general? Nursing research or research in general? If so, to what end? Is that end desirable?*
- 6.3. *How specific are the purposes of the model? Do they provide a general framework to action or a means to predict phenomena?*
- 6.4. *Is the model's position about people/learners/developing practitioners and nursing/ education consistent with nursing or educational philosophy or both?*
- 6.5. *Will use/application of this model resolve any important issues in nursing? Will it resolve any problems?*
- 6.6. *Is the model futuristic and forward-looking?*
- 6.7. *Will research based on the model answer important questions?*

7. Questions for general evaluation

- 7.1. *Is the internal structure of the model logically congruent? Does the model reflect more than one contrasting world view?*
- 7.2. *Is the model socially congruent? Does the conceptual model lead to nursing activities*

which meet social expectations, or do the expectations created by the model require societal changes?

- 7.3. *Is the model socially significant? Can the model lead to actions that could make a difference?*
- 7.4. *Is the model socially useful? Is the conceptual model comprehensive enough to provide guidelines for practice, education, administration and research? Does the model generate empirical testable theories?*
- 7.5. *Do other theories yield evidence in support of the model?*
- 7.6. *What is the overall contribution of the conceptual model to nursing/educational knowledge?*

8. Questions regarding the:

8.1. comprehensiveness of the model

- 8.1.1. *Does the model include the total variation that can be accounted for, namely content-, process-, product- and learning-environment modifications?*

8.2. flexibility/adaptability of the model

- 8.2.1. *Can the model be adapted to content areas, administrative structures of the educational institution or practice areas?*
- 8.2.2. *Can the model be combined with other models to provide a comprehensive programme?*
- 8.2.3. *Can the model be adapted to individual differences in learners and practitioners? Does the model provide flexibility in the choice of teaching strategies which can be selected to suit the nature of the content/practice area?*
- 8.2.4. *Can the model be implemented without any additional cost in material and human resources?*
- 8.2.5. *Can the model be implemented without additional training of those implementing it?*

8.3. validity of the model

- 8.3.1. *Was the model developed by using appropriate methods?*
- 8.3.2. *Is the model defensible as a qualitatively different approach to nursing/education?*
- 8.3.3. *Is the model internally valid and structurally sound? How much research has been done to show its effectiveness as an educational approach?*

8.4. historical evolution of the conceptual model?

[Inquirer/model constructor remarks: The model for *facilitation of critical reflective practice* was constructed after thorough conceptual analysis and development (chapter 3); review of different theories/models regarding critical reflective and creative thought processes and review of specific teaching strategies for developing critical reflective ability (chapter 4); and construction of a conceptual framework for critical reflective practice (chapter 5). Chapters 4 & 5 provide clues and explicit descriptions of the inductive and deductive strategies used to transform an implicit private image of *critical reflective practice* and develop it into a formal conceptual model.]

8.4.1. *What is the historical evolution of the conceptual model? Did the model constructor use either or both inductive and deductive reasoning reflecting a certain orientation to research in general and to the development of knowledge in particular?*

8.4.2. *Is the model congruent with the general climate of education and research at the time of its formulation?*

9. Questions based on personal feelings toward the model

9.1. *Does the model correspond with the needs of learners/developing practitioners?*

9.2. *To what extent do the assumptions (explicit and implicit) fit reality?*

9.3. *Does the model correspond with the philosophy of the educational institution, or educational main stream in general?*

9.4. *How do you (the evaluator) feel about this model? Why?*

7.8.3. Feedback by Peers

After critique of the proposed model peers (n=5) indicated that:

- the **main concepts** in the model are clear, consistent, and appropriate to the purpose of the model (n=5).
- the **related/supporting concepts** are clearly defined and explicated in the model, and used in a congruous and consistent manner (n=5).
- the **relationships** between the related/supporting concepts and the main concepts are clearly stated and necessary (n=5).
- the **diagrams** are necessary, helpful, meaningful and consistent with their supporting definitions (n=5).

- compatible and coherent **structures** were suggested for different parts of the model to enable the model to be followed (n=5).
- all **concepts fit within the model** and that there are no ambiguities as a result of the sequence of presentation within the diagram (n=5).
- there are fourteen (14) **relationships contained within the model**, and they are clear, congruous, consistent, necessary and logically organized (n=5).
- the model tends to:
 - ▶ **describe (n=1)**
 - ▶ **describe, explain and predict (n=4)**. As a result the model imparts understanding and creates meaning.
- the **assumptions** of the model are stated explicitly (n=5). Statements provided by peers (n=2) included the following:
 - ▶ **Vallum:** *"I found the assumptions a clear basis for the author's view and they can be referred to as a point of reference - no ambiguity there."*
 - ▶ **van der Westhuizen:** *"The assumptions are stated explicitly, clearly and in a congruent manner."*
- the **purpose of the model** and the model, are not specific to nursing/nursing education only (n=5). Statements provided by peers (n=3) included the following:
 - ▶ **Bezuidenhout:** *"This model has a broad application basis, especially in all the changing facets, structures and service rendering (public and private) departments and institutions as required by the transformative process in the new South Africa."*
 - ▶ **van der Westhuizen:** *"This model is not specific to nursing practice or nursing education only, it is applicable to any profession which requires decisions, judgements and finding solutions in an objective manner."*

- ▶ **Vallun:** *"The critical reflective aspects make it applicable to all spheres of education and health sciences."*

- **the purpose of the model is justifiable** as a purpose within the nursing profession (n=5). Statements provided by peers (n=3) included the following:
 - ▶ **Bezuidenhout:**

" . . . critical reflective practice is much needed in the profession."
 - ▶ **van der Westhuizen:**

"Yes, as nurse practitioners need to clarify their implicit theories in an objective manner and move away from prescribed techniques and conduct."
 - ▶ **Vallun:**

"Yes, as practitioners need to get away from techniques and recipes."

- **the model is accessible** in that:
 - ◆ **definitions** within the model adequately reflect their meaning (n=5);
 - ◆ **empiric indicators** are identifiable in reality (n=3); and
 - ◆ concepts are within the realm of nursing, nursing education and education in general (n=5). Remarks by peers (n=3) included the following:
 - ▶ **Bezuidenhout:** *" . . . definitions and empiric indicators are specific enough to understand the concepts clearly, but general enough to ensure broad application."*
 - ▶ **van der Westhuizen:** *" Definitions and empiric indicators are specific enough to be clear, but, also allows broad application."*

- ▶ **Vallun:** *"Definitions within the model adequately reflect their symbolic meanings and their empiric indicators are identifiable in reality."*
- the model is **important** in that it has the potential to influence nursing actions (n=5). Remarks by peers (n=3) included the following:
 - ▶ **Bezuidenhout:** *"Nursing has been subordinate to the medical profession and needs to acquire its own status, authority and power AND the delivery of nursing care must improve. Both can be achieved through this model."*
 - ▶ **Vallun:** *"The model is important in that the end is desirable. It encourages critical and reflective thinking." Application of the model will solve the problems caused by spoonfeeding. It will encourage analysis by educators, practitioners and learners."*
 - ▶ **van der Westhuizen:** *"The end is desirable . . . to make conscious decisions in health care in a rapid changing environment. The nurse should act as a change agent, be a role model, competent and objective in her daily activities where she can influence colleagues and learners. The model provides a general framework to act and a means to predict phenomena."*

"Application of the model will teach the nurse not to act on impulse, but to act consciously, to think actions through, to be effective and proactive and therefore, improve standards of care."
- the model is **important** in that it is futuristic and forward-looking and can be used as a framework for further research (n=5). Remarks by peers (n=2) included the following:
 - ▶ **Bezuidenhout:** *"The model provides a general framework to act on, and to predict phenomena. It is socially significant in that it leads to actions that could make a difference. It is comprehensive enough to provide guidelines for practice, education, management and research. As a result the model generates empirical, testable theories."*
 - ▶ **Vallun:** *"The model can be used in research – provided that the relational statements are made causal to determine the extent of and predict the influence of guided critical reflection techniques (critical, reflective education) on practice."*

- the model is **socially congruent** in that it leads to activities which meet social expectations (n=5). Remarks provided by peers (n=2) included the following:
 - ▶ **Bezuidenhout:** *"The model leads to activities and changes which meet societal expectations. The expectations created by the model require societal change in the sense of transformed members of society."*
 - ▶ **Vallun:** *"The model is socially significant in that it can definitely make a difference."
"The model is useful in administration . . . to cite: move from authoritarian control - to selfcontrol, to optimal functioning of the self, and of transformative intellectuals who are empowered."*
- the **internal structure** of the model is logically congruent and does not reflect contrasting world views (n=4).
- the model is **supported by other theories** (n=5). The following motivation was provided by a peer (n=1):
 - ▶ **Vallun:** *"The model is supported by other theories, e.g., achievement-motivatie theories."*
- the **overall contribution** of the model to nursing knowledge and educational knowledge was stated by peers (n=3) as follow:
 - ▶ **Bezuidenhout:** *"The model provides an understanding of how transformative intellectuals can be created/developed in order to establish an acceptable critical reflective practice in which people's potential is enhanced through this transformational leader."*
 - ▶ **Vallun:** *"The overall contribution of the model is that it can result in intentional learning, meaningful dialogue and conscious discussion about practice."*
 - ▶ **van der Westhuizen:** *"The overall contribution of the model is that it will enable practitioners and educators to stay focused and be responsible, and will empower people to deal with changes."*

- the model is **comprehensive** in that it includes the total variation to be accounted for, namely content-, process-, product - and learning environment modifications (n=5).
- the model is **flexible and adaptable** :
 - ▶ to content areas and administrative structures of the educational and practice area (n=5).
 - ▶ it can be combined with other models to provide a comprehensive programme (n=4).
 - ▶ it provides flexibility regarding individual differences, teaching strategies and the nature of the content or practice area (n=5).
 - ▶ it can be implemented without additional cost in material and human resources (n=4).
- implementation of the model will require additional training of those who will use it (n=4). Rationales provided by peers (n=2) included the following:
 - ▶ **van der Westhuizen:** *"They will need inservice training to ensure a paradigm shift in their thinking."*
 - ▶ **Bezuidenhout:** *"They will need inservice training to ensure understanding of the need for critical reflective thinking and the available techniques to develop it."*
- the model was **developed using appropriate methods** (n=5) and is defensible as a qualitatively different approach to education (n=4).
- the model seems to be **internally valid** and **structurally sound** (n=4), although it still needs to be tested through research to show its effectiveness (n=3).
- the model constructor used both **inductive** and **deductive reasoning** during the construction of the model (n=5).
- the model is congruent with the **general climate of education and research** at the time of construction (n=5).

- the model corresponds with the **needs of developing practitioners** (n=4).
- the assumptions stated (explicitly and implicitly) by the model constructor are:
 - ▶ **realistic** (n=3)
 - ▶ *"fit reality to a great extent."* (**Bezuidenhout**)
- the model corresponds with the philosophy of the educational mainstream (n=3).

Peers (n=5) voiced the following personal feelings regarding the model:

- ▶ **Bezuidenhout:** *"I am impressed, as the model fills a void and provides for the cultivation of critical reflective practice which is much needed in the nursing profession and the delivery of health care, but also, in education in general."*
- ▶ **Vallun:** *"Positive. It provides a vision of critical reflective practice and is realistic in nature."*
- ▶ **van der Westhuizen:** *"It is a needed model, in that nursing practice requires critical reflective thinking to address patient needs."*
- ▶ **Norval:** *"The model is clear and understandable."*
- ▶ **Kganakga:** *"Positive. It is a much needed model."*

7.9. Conclusive Remarks

Critique of the model by peer reviewers indicated no current need for further revision of the model, although it needs to be validated by research to assess its effectiveness. The following chapter, chapter 8 includes conclusive remarks, guidelines and recommendations.

The model for facilitation of critical reflective practice allows for the activity of reflecting *with* the people with whom the future/developing practitioner enters a caring relationship. It stresses discovery of *meaning* as a mutually enabling process relying on *dialogue* and revelation of *the self* to another. The role of the *transformative intellectual* is to guide future/developing practitioners toward the interpretation of shared meaning and *appropriation*. Appropriation is to actualize the meaning of the experience and to come to identify *with* another person's lived world. In the process the developing practitioner gains a new capacity for knowing him- or herself and discovers a new mode of being.

The inquiry emphasized the fact that the experience of an expert practitioner should not be equated with a period of time. Experience implies a *dialogue* between what is found in practice, and what is expected. Experience is the *transformation* or refinement of preconceived notions or theory. Knowledge of what the various disciplines say is not sufficient in itself. The practitioner must be *empowered* to use personal experience and the experience of others to carefully assess the extent to which each theory helps in understanding the problems of those being cared for. Developing a personal theory about health care is a creative process requiring meta-cognitive flexibility to facilitate the process of reflection, analysis, synthesis, induction, deduction and reproduction. Meta-cognitive flexibility is essential to the critical creation and verification of concepts describing the phenomenon of concern in health care practice.

The inquirer wishes to stress the importance of modeling positive traits of mind and modes of learning. Future/developing practitioners cannot be expected to develop positive modes of thinking unless these traits are modeled in an environment favorable for their development. A *transformative intellectual* leads future/developing practitioners to a point, at which they are intellectually comfortable with dialogical issues and critical, reflective and philosophical discussions. Being a critical reflective and creative practitioner involves a number of personal and professional risks like discovering that one is not the omniscient paragon of clinical virtues that one ought to be, and asking awkward questions about the nature of power and control, and calling

people to account for their ideas and actions.

8.2. Evaluation of the inquiry

The model for facilitation of critical reflective practice was critiqued by peers. Guidelines were provided (chapter 7, p. 415) for its critique. According to the feedback the requirements of semantic clarity, semantic consistency, structural clarity and structural consistency (chapter 7, p. 419) were met. The model (after peer review) thus did not need revision. The inquirer, however, recognize the need to validate and refine the model through further empirical research. The vision being to construct a theory for facilitation of critical reflective practice.

The inquirer considers the study to have contributed in a positive way to the body of nursing knowledge and to education in general since:

- the conceptual exploration phase resulted in the:
 - ▶ clarification of the nature of, and identification of the antecedents and consequences of the main concept and its supporting concepts (3.3.1.3 & 3.3.1.5., p. 68 & 72; 3.3.2.2. & 3.3.2.5., p. 77 & 84.; 3.3.3.2. & 3.3.3.4., p. 86 & 87; 3.3.4.2. & 3.3.4.4., p. 89 & 90; 3.3.5.2. & 3.3.5.4., p. 97 & 99; & 3.4.3, p. 115).
 - ▶ development of *working definitions* for the supporting concepts (3.3.1.4., p. 71; 3.3.2.4., p. 83; 3.3.3.3., p. 87; 3.3.4.3., p. 90 & 3.3.5.3., p. 98).
 - ▶ development of a working definition for the main concept, namely, *critical reflective practice* (3.4.1., p. 112).

- the review of cross-disciplinary literature resulted in the:
 - ▶ description of various strategies which could facilitate critical reflective practice (4.10., p. 185-228 & 4.12., p. 235- 248).
 - ▶ tactical recommendations for facilitation of critical reflective processes in learners or developing practitioners (4.15., p. 258-265).
 - ▶ *working statements* which may be utilized and revised for further research (3.4.2., p. 113 - 114).
 - ▶ assumptions which researchers may utilize and revise in further studies (4.14., p. 253).
 - ▶ construction of a conceptual framework to facilitate critical reflective practice that clarifies: (1) the purpose; (2) the *agents*; (3) the *recipients*; (4) the *context/framework*; (4) the *dynamics*; and (5) the *procedure* for critical reflective practice (chapter 5, p. 268).
- construction of the conceptual framework resulted in the:
 - ▶ development of a model to promote the use of critical reflective practice by the health care profession in general, the nursing profession and the educational mainstream (chapter 7, p. 382 & 383).
 - ▶ construction of the concept *transformative intellectual* (chapter 7, p. 396).
 - ▶ theoretical assumptions which may be utilized, operationalized and tested by future researchers (chapter 7, p. 387).

- the inquirer developed guidelines for the:
 - ▶ application and evaluation of Socratic & LTD. (dialogical) technique, Critical Incident Reporting & Analysis and Critical Reflective Exercises (see Annexure II, p. XXXIX & III, p. XLIII; V, p. L; and VII, p. LIII & IX, p. LVII).
 - ▶ analysis of critical incident reports and completed critical reflective exercises [using codes] (Annexure XVIII, p. CXXI).

- the inquirer made an indepth, cross-disciplinary study of suggested guidelines to critique a theory/model and constructed broader guidelines for such critique than those suggested in current text books (chapter 7, p. 414).

- the inquirer synthesized and critiqued expert opinion on critical thinking, reflection and creative thinking, by using a cross-disciplinary approach characterized by prolonged engagement with the literature. This resulted in a comprehensive report on available literature which may be of use to educators and other researchers (chapter 3, p. 48; chapter 4, p. 118 & Bibliography, p. I).

- the inquirer conducted an empirical inquiry which:
 - ▶ substantiated expert viewpoints that critical reflective strategies/techniques are emotionally demanding and time consuming for all parties involved (table 6.2., p. 348; 6.5.5., p. 358-359; 6.9., p. 380).
 - ▶ confirmed expert viewpoints that critical reflective strategies/techniques could be used to:
 - identify important work or study related elements and stressors or conditions which impair individual or group functioning (Annexure X^{P1} - XVI^{P7},

p. LX - CXIV).

- expose learners'/practitioners' assumptive worlds, theories, feelings, opinions, bias, attitudes and thinking modes (6.8., p. 374).

- ▶ substantiated the inquirer's viewpoint that critical reflective skills need to be taught. The inquirer's reflection on the critical incident reports, completed critical reflective exercises and Socratic & LTD. (dialogical) techniques - employed during the course of the empiric period - confirmed the tendency of participants to function in an egocentric, procedural and *auto-pilot* manner. The data revealed that some participants - in spite of being registered practitioners - still function in a *weak* critical reflective mode (Annexure X^{P1} - XVI^{P7}, p. LX - CXIV).
- ▶ confirmed expert opinion on the need for guidance during critical reflection. Even though the inquirer provided participants with guiding questions to reflect on during the critical incident reporting/analysis and critical reflective exercises, the data revealed that participants still found it difficult to move away from egocentric, biased, emotional and procedural thinking (Annexure X^{P1} - XVI^{P7}, p. LX - CXIV).
- ▶ substantiated the inquirer's viewpoint that Socratic & LTD. (dialogical) technique is a necessity for initiating *conceptual change* and *meaningful knowledge*. Educators should however not attempt to use this method if they themselves lack *openness* to critique and questioning. The application of Socratic & LTD. (dialogical) technique continuously required (inquirer) *self-critique*, exposure of *the self*, and thorough preparation for discussion periods from the facilitator in order to anticipate possible participant questions, reactions, emotions and modes of thinking. The participants themselves, reported similar feelings/experiences (figure 6.2., p. 355).

- ▶ confirmed the naturalistic perspective that it is virtually impossible to devise *a priori*, a non-human instrument with sufficient ability to encompass and adjust to the individual (participant) realities being encountered. During application of the selected critical reflective techniques and exercises, the inquirer had to continuously adapt to individual participant needs, realities and willingness to participate in the inquiry.

8.3. Limitations of the inquiry

Limitations of the inquiry (summative remarks):

- During the application and analysis of the selected critical reflective techniques and exercises, due to time-limitations and practical considerations, the inquirer:
 - ▶ did not include learners registered for the basic degree in nursing. This is seen as a limitation of the inquiry, as, in the inquirer's opinion, guided critical reflective techniques should be introduced at the beginning of a course in whatever discipline. The inquirer thus failed to assess the attitudes and perceptions of basic students toward the selected methods.
 - ▶ did not manage to interview participants after completion of the selected guided reflective techniques. The educational value of the completed exercises was thus not fully utilized.
 - ▶ used a questionnaire to assess participant attitudes toward Socratic & LTD (dialogical) technique and the educator (inquirer). This is seen as a limitation because a questionnaire is not the method of choice in the naturalistic paradigm. It was however, the best possible alternative during a period in which participants were preparing for the final examination of the year concerned with.

8.4. Specific problems experienced by the inquirer

The inquirer:

- kept a reflexive journal to record information about the inquirer's schedule, logistics, insights, reasons for methodological decisions, personal feelings, informal remarks of participants and formal discussion with peers. Keeping the reflexive journal, on a daily basis, was difficult due to the time needed for various academic responsibilities. The reflexive journal did however provide an opportunity for catharsis, for reflection about what was happening and for speculation about growing insights. Keeping the reflexive journal forced the inquirer to take notice of personal emotions, reactions and dissappointments as the inquiry proceeded. The variety of information about *the self*, resulted in personal *interrogation* and periodic resistance to reveal such personal insights to peers. Despite the problems experienced in keeping a reflexive journal, the inquirer admits that it emphasized the need for *conscious* decision making and admission of personal involvement.
- Due to the comprehensiveness of the inquiry, the peer reviewers found it difficult to allocate sufficient time for involvement in and critique of the inquiry. Yet they managed to make the inquirer conscious of personal bias, psychological stress, subjectivity and the possession of implicit information.

8.5. Adequacy of the inquiry

The adequacy of the inquiry, although implicitly addressed in the previous remarks, is extended to include the following criteria:

- Transferability (chapter 1, p. 23). In the study the inquirer provided as complete a data base as humanly possible in order to facilitate transferability judgements by future researchers' who may wish to apply information from this study to other

situations (Annexure: I - IX, p. XXXIV - LVII; XVII & XVIII, p. CXX & CXXI).

- Confirmability (chapter 1, p. 24). The inquirer ensured that the data, interpretations, and outcomes of the inquiry can be traced to their sources (Annexure: X^{P1} - LX^{P7}, p. LX - CXIV). The *raw products* (notes, critical incident reports and completed reflective exercises) were thus made available for inspection and confirmation by outside reviewers.

A hermeneutic, dialectic process applied in the inquiry, limited the opportunity for error to go undetected and unchallenged. The data analysis resulted in several, individual participant case studies, which on completion were made available to participants at various stages during the inquiry and after completion of the thesis. Typed critical incident reports/analysis and critical reflective exercises were verified with individual participants and the necessary emotional support was provided.

8.6. Recommendations

Peer critique of the model confirmed its value for the context of education, health care practice and other caring professions in general. Following are recommendations for practice, research and education:

- The *tacit recommendations* suggested for facilitation of critical reflective and creative thinking should be *consciously* used in formal teaching and practice situation (chapter 4, p. 258-265).
- The techniques and strategies for guided critical reflection (chapter 4, p.185-227) should be introduced as a requirement for basic-, post-basic and post-graduate courses. This could bring students to see the techniques and strategies as a *normal* way of teaching, learning and practicing, and could thus, limit resistance.

- Participation in specific critical reflective exercises should be voluntary, taking individual preferences into account. Unwilling participation in exercises will prevent individuals from reflecting on it in a constructive way. Adult learning from an ethical viewpoint, should be about maintaining the freedom of choice and the dignity of individual learners.
- Before the specific methods are used learners should be fully informed on the meaning and implications of taking part in a critical, reflective or experiential learning exercise before the specific methods are used.
- Modeling positive traits of mind and modes of learning and practicing must be accepted as an integral (indisposable) component of this approach.
- Careful planning of a conducive environment is crucial for critical, reflective and creative thinking. Self-evaluation by the educator and the practitioner is imperative to determine whether they are knowledgeable about, and comfortable with critical reflective techniques and strategies.
- Objectives and criteria for evaluation must be set at higher cognitive levels to encourage *meaningful* learning and the development of critical, reflective and creative skills.
- Research should be done on *how* to evaluate in the practice and educational situation to ensure critical, reflective and creative skill development.
- Due to changes in the "new" South Africa, the nature and character of the context in which to develop critical, reflective and creative thinking must be clarified (determined).

- The various theoretical assumptions and statements which were described during the construction of the model for facilitation of critical reflective practice can be used to formulate hypotheses on which to base further empirical studies.
- The model should be implemented to develop critical reflective practice in various disciplines in order to assess its suitability (its value, meaningfulness, significance). Implementing the model in totality - as is desirable - implies the introduction of a *new* approach to professional education.

The inquirer, being responsible for the instruction and accompaniment of post-basic and post-graduate students at the time of this inquiry, do not advise other researchers to attempt a similar inquiry (of such scope) in addition to complying with normal job requirements. Studies comprising conceptual exploration, model construction and empiric testing demand the full-time concentration and involvement of an inquirer.

8.7. Conclusive remarks

The conceptual exploration, literature review, conceptual framework and model construction, as well as the application of selected critical reflective techniques described by the inquirer fostered renewed interest in the phenomenon of *meaningful* learning. The inquirer, once again, became conscious of the need for a *transformative intellectual* whose aim is to *empower* learners/developing health care practitioners to attain the highest possible level of professional care in regard to its science and its practice. The critical reflective techniques and strategies suggested in this document are compatible with a Problem Based or a Community Based Curriculum.

BIBLIOGRAPHY

Act No.92 of 1996. Choice on Termination of Pregnancy Act, 1996. Cape Town: *Government Gazette*, Republic of South Africa.

African National Congress (ANC). 1994. *The reconstruction and development programme. A policy framework. (RDP)*. Johannesburg: Umanyano Publications.

Alexander, MF. 1993. Promoting analytical and critical thinking in nursing: With a particular emphasis on the post-registration education of qualified nurses and midwives. *AJNS*, Inaugural Issue, August: 30-35.

Allen, P. 1973. Free space. In: Koedt, A, Levine, E & Rapone, E. 1973. *Radical feminism*. New York: Quadrangle/New York Times.

American Nurses' Association. 1976. *Code for nurses with interpretive statements*. Kansas City.

American Philosophical Association. 1990. Critical thinking: A statement of consensus for purpose of educational assessment and instruction. *The Delphi Report*, No. ED 315-423: Research findings and recommendations prepared for the committee on pre-college philosophy. USA: American Philosophical Association.

Apps, JW. 1985. *Improving practice in continuing education: Modern approaches for understanding the field and determining priorities*. San Francisco: Jossey-Bass.

Argyris, C & Schön, D. 1974. *Theory in practice: Increasing professional effectiveness*. Massachusetts: Addison Wesley.

Argyris, C & Schön, D. 1978. *Organisational Learning*. Massachusetts: Addison-Wesley.

Armaline, D & Hoover, RL. 1989. Field experience as a vehicle for transformation: Ideology, education and reflective practice. *Journal of Teacher Education*. March-April: 42-48.

Aronowitz, S & Giroux, H. 1985. *Education under siege*. South Hadley, MA: Bergin & Garvey.

Atkins, S & Murphy, K. 1993. Reflection: A review of the literature. *Journal of Advanced Nursing* Nov.

Bain, K & Travis, P. 1994. *Stimulating active intellects and "covering the material."* Paper presented at the 14th Annual Lilly Conference on College Teaching, Nov. 18-20. Oxford, OH: Miami University.

Bandman, EL & Bandman B. 1995. *Critical thinking in nursing*. Connecticut: Appleton & Lange.

Barell, J. 1995. *Teaching for thoughtfulness. Classroom strategies to enhance intellectual development*. USA: Longman Publishers.

Barnum, BJS. 1994. *Nursing theory. Analysis, application and evaluation*. Philadelphia: Lippincott Company.

III

Bihl-Hulme, J. 1985. Creative thinking in problem-based learning. In: Boud, D & Feletti, G (ed). 1985. *Problem-based learning for the professions*. Sydney: Higher Education Research and Development Society of Australia: 177-183.

Bines, H. 1992. Issues in course design. In: Bines, H & Watson, D (eds.). *Developing professional education*. Buckingham: Society for Research into Higher Education & Open University Press.

Bines, H & Watson, D. 1992. *Developing professional education*. Buckingham: Society for Research into Higher Education & Open University Press.

Black, M. 1962. *Models and metaphors*. Ithaca, NY: Cornell University Press.

Blair, JA. 1985. Some challenges for critical thinking. In: Hoaglund, J (ed). 1985. Conference on critical thinking. *Newport News*. Newport, VA: Newport College.

Bloom, BS. 1974. *Taxonomy of educational objectives. Handbook 1, cognitive domain*. 18th printing. London: Longman.

Boss, L. 1985. Teaching for clinical competence. *Nurse Educator* 10 (4): 8-12.

Botes, AC. 1989. 'n Wetenskapsmodel vir die verpleegkunde. Johannesburg: Randse Afrikaanse Universiteit (*D. Cur -Proefskrif*).

Boud, D & Feletti, G (eds). 1991. *The challenge of problem-based learning*. Kogan Page: London.

Boud, D, Keogh, R & Walker, D. 1985. *Reflection: Turning experience into learning*. New York: Nichols Pub.

Boud, D & Pascoe, J. 1978. What is experiential learning? & Conceptualizing experiential education. In: Boud, D & Pascoe, J (eds). *Experiential learning: Developments in Australian post-secondary education*. Sydney: Australian Consortium on Experiential Education, 1-6: 61-64.

Boud, D & Walker, D. 1991. *Experiencing and learning: Reflection at work*. Geelong: Deakin University Press.

Bowden, J. 1990. Curriculum development for conceptual change learning: A phenomenographic pedagogy. *Occasional Paper* 90.1. Melbourn, Australia: Educational Research and Development Unit, Royal Melbourne Institute of Technology.

Boyd, EM & Fales, AW. 1983. Reflecting learning: Key to learning from experience. *Journal of Humanistic Psychology* 23 (2): 99-117.

Bronowski, J. 1978. *The origins of knowledge and imagination*. New Haven: Yale University Press.

Brookfield, SD. 1987. *Developing critical thinkers*. Milton Keynes: Open University Press.

Brookfield, SD. 1990. Using critical incidents to explore learners' assumptions. In: Mezirow, J. 1990. *Fostering critical reflection in adulthood*. Oxford: Jossey-Bass Publishers.

V

Cascio, RS, Campbell, D, Sandor, MK, Rains, AP & Clark, MC. 1995. Enhancing critical-thinking skills. Faculty-student partnerships in community health nursing. *Nurse Educator* 20 (2): 38-43.

Case, B. 1994. Walking around the elephant: A critical-thinking strategy for decision making. *Journal of Continuing Education in Nursing* 25(3): 101-109.

Case, B. 1995. Critical thinking: Challenging assumptions and imagining alternatives. *Dimensions of Critical Care Nursing* 14 (5): 274-279.

Cervero, R. 1988. *Effective continuing education for professionals*. San Francisco: Jossey Bass.

Chaffe, J. 1991. *Thinking critically*. Boston: Houghton Mifflin Company.

Chally, PS. 1992. Empowerment through teaching. *Journal of Nursing Education* 31 (3): 117-120.

Champagne, AB & Klopfer, LE. 1977. A sixty-year perspective on three issues in science education: I. Whose ideas are dominant? II. Representation of women. III. Reflective thinking and problem solving. *Science Education* 61: 431-452.

Champion, R. 1992. The philosophy of an honours degree programme in nursing and midwifery. In: Bines, H & Watson, D (eds). 1992. *Developing professional education*. Buckingham: Society for Research into Higher Education & Open University Press.

Charlton, G. 1992. *Leadership. The human race*. Pretoria: Juta & Co. Ltd.

Chi, MTH, Glaser, R & Rees, E. 1982. Expertise in problem solving. In: Sternberg, R (ed). *Advances in the psychology of human intelligence* 1: 7-75. Hillsdale, NJ: Erlbaum.

Chi, MTH & Koeske, RD. 1983. Network representation of a child's dinosaur knowledge. *Developmental Psychology* 19: 29-39.

Chinn, C & Brewer, WF. 1993. The role of anomalous data in knowledge acquisition: A theoretical framework and implications for science teaching. *Review of Educational Research* 63 (1): 1-49.

Chinn, PL. 1986. *Nursing research methodology: Issues and implementation*. Rockville, Md: Aspen.

Chinn, PL. 1989. Nursing patterns of knowing and feminist thought. *Nursing & Health Care* 10: 71-75.

Chinn, PL & Kramer, MK. 1995. *Theory and nursing. A systematic approach*. St. Louis: Mosby Company.

Chipman, SF, Segal, JW & Glaser, R. (eds). 1985. *Thinking and learning skills: Current research and open questions*. Hillsdale, NJ: Erlbaum.

Chubinski, S. 1996. Creative critical-thinking strategies. *Nurse educator* 21(6): 23-27.

Cinelli, B, Bechtel, LJ, Rose-Colley, M & Nye, R. 1995. Critical thinking skills in health education. *Journal of Health Education* 26(2): 119-120.

VII

- D'Angelo, E. 1971. *The teaching of critical thinking*. Amsterdam: Bruner, BR.
- Darley, W. 1961. The professions and professional people. *Nursing Forum* 1, Winter: 83-84.
- Dart, BC & Clarke, JA. 1991. Helping learners become better learners: A case study in teacher education. *Higher education* 22 (3): 317-335.
- Davis, GA. 1992. *Creativity is forever*. Dubuque, IA: Kendall/Hunt.
- deBono, E. 1974. *Teaching Thinking*. London: Temple Smith.
- deBono, E. 1985. *deBono's thinking course*. New York: Facts on File Publications.
- Deci, EL & Ryan, RM. 1987. The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology* 53 (6): 1024-1037.
- Degazon, CE & Lunney, M. 1995. Clinical journal: A tool to foster critical thinking for advanced levels of competence. *Clinical Nurse Specialist* 9 (5): 270-274.
- Denzin, NK & Lincoln, YS (eds). 1994. *Handbook of qualitative research*. London: Sage.
- Demetrulias, DM. 1993. Thinking about statistics. In: Clarke, JH & Biddle, AW. 1993. *Teaching critical thinking. Reports across the curriculum*. Englewood Cliffs, NJ: Prentice-Hall, 168-183.
- Deshler, D. 1985. Moral faith and cognitive development: Aspects of critical awareness on the part of professors of adult education. *Paper presented* Nov. 5. Milwaukee: Commission of Professors of Adult Education Conference.
- De Vaney, KV. 1990. In: Paul, RW. 1990. *Critical thinking : What every person needs to survive in a rapidly changing world*. California: Sonoma State University.
- Dewey, J. 1896. The reflex are concept in psychology. *Psychological Review* 3: 357-370.
- Dewey, J. 1933. *How we think*. Regnery: Chicago.
- Dickoff, J, James, P & Wiedenbach, E. 1968. Theory in a practice discipline. Part 1. Practice oriented research. *Nursing research* 17 (5): 415-435.
- diSessa, AA. 1982. Unlearning Aristotelian physics: A study pf knowledge-based learning. *Cognitive Science* 6: 37-75.
- Dittman, J. 1976. Individual autonomy: The magnificent obsession. *Educational Leadership* 33 (6): 463-467.
- Drake, J. 1976. *Teaching critical thinking*. Danville, Ill: Interstate Publishers.
- Drake, JM. 1993. Verandering in 'n verpleegdiens. *M Cur Verhandeling*. Johannesburg: Randse Afrikaanse Universiteit.

IX

- Farah, BD. 1995-96. Information literacy: Retooling evaluation skills in the electronic information environment. *Journal of Educational technology Systems* 24 (2): 127-133.
- Fawcett, J. 1984. *Analysis and evaluation of conceptual models of nursing*. Philadelphia: Davis Company.
- Field, PA & Morse, JM. 1985. *Nursing research. The application of qualitative approaches*. London: Chapman & Hall.
- Fielding, NG & Fielding, JL. 1986. *Linking data*. London: Sage.
- Firestone, WA. 1993. Alternative arguments for generalizing from data as applied to qualitative research. *Educational Researcher* 22 (4): 16-23.
- Fitzgerald, M. 1989. Lecturer-practitioner: Action researcher. *MA Thesis*. University of Whales School of Nursing.
- Fitzgerald, M. 1994. Theories of reflection for learning. In: Palmer, AM, Burns, S & Bulman, C. 1994. *Reflective practice in nursing. The growth of the professional practitioner*. London: Blackwell Scientific Publications.
- Flinders, DJ. 1992. In search of ethical guidance: Constructing a basis for dialogue. *Qualitative Studies in Education* 5 (20): 101-116.
- Ford, JS & Profetto-McGrath, J. 1994. A model for critical thinking within the context of curriculum as praxis. *Nursing Education* 33 (8): 344.
- Fox, G. 1989. *Collins Cobuild essential English dictionary*. London: Collins.
- Frankl, VE. 1963. *Man's search for meaning*. New York, NY: Washington Square Press.
- Freire, P. 1972. *Pedagogy of the oppressed*. Harmondsworth: Penguin Books.
- Frensch, P & Cross, D. 1992. An interpersonal epistemological curriculum model for nurse education. *Journal of Advanced Nursing* 17: 83-89.
- Fulwiler, T (ed.) 1987. *The journal book*. Portsmouth: Boynton/Cook.
- Gambrill, E. 1990. *Critical thinking in clinical practice*. San Francisco: Jossey-Bass.
- Garfinkel, E. 1967. *Studies in ethnomethodology*. Englewood Cliffs, N.J: Prentice-Hall.
- Garratt, S. 1992. Reflective practice as a learning strategy. In: Gray, G & Pratt, R (eds). 1992. *Issues in Australian Nursing* 3. Melbourne: Churchill Livingstone. p. 213-228.
- Garrison, DR. 1991. Critical thinking and adult education: A conceptual model for developing critical thinking in adult learners. *International Journal of Lifelong Education* 1 (4): 287-303.
- Gavier, T. 1985. Critical thinking in the armchair, the classroom and the lab. Unpublished paper quoted by: Blair, JA : Some challenges for critical thinking. *Newport News* 1985: 70. Newport, VA: Christopher Newport College Press.

XI

- Gray, G & Pratt, R (eds). 1992. *Issues in Australian Nursing 3*. Melbourne: Churchill Livingstone.
- Gray, G & Pratt, R. 1994. *Towards a discipline of nursing*. Melbourne: Churchill Livingstone.
- Gray, J & Forsstrom, S. 1994. Generating theory from practice: The reflective technique. In: Gray, G & Pratt, R. 1994. *Towards a discipline of nursing*. Melbourne: Churchill Livingstone.
- Greene, M. 1973. *Teachers as strangers*. Belmont, CA: Wadsworth.
- Greeno, JG. 1978. Natures of problem-solving abilities. In: Estes, WK (ed). 1978. *Handbook of learning and cognitive processes*. Vol. 5. Hillsdale, NJ: Erlbaum.
- Griffin, AP. 1983. A philosophical analysis of caring in nursing. *Journal of Advanced Nursing* 8: 289-95.
- Griffin, C. 1992. Absorbing experiential learning. In: Mulligan, J & Griffin, C. *Empowerment through experiential learning*. London: Kogan Page. 31-49.
- Grundy, S. 1989. *Curriculum: Product or praxis*. Philadelphia: Falmer Press.
- Guba, EG (ed). 1990. *The paradigm dialog*. London: Sage.
- Guba, EG & Lincoln, YS. 1981. *Effective evaluation*. San Francisco: Jossey Bass.
- Guba, EG & Lincoln, YS. 1989. *Fourth generation evaluation*. London: Sage.
- Guba, EG & Lincoln, YS. 1994. Competing paradigms in qualitative research. In: Denzin, NK & Lincoln, YS (eds). 1994. *Handbook of qualitative research*. London: Sage.
- Gunden, E & Crissman, S. 1992. Leadership skills for empowerment. *Nursing Administration Quarterly* 16 (3): 6-10.
- Habermas, J. 1972. *Knowledge and human interests*. London: Heineman.
- Habermas, J. 1974. On social identity. *Telos* 19: 91-103.
- Habermas, J. 1976. *Legitimation crisis*. London: Heinemann.
- Habermas, J. 1977. *Knowledge and human interests*. Boston: Beacon Press.
- Habermas, J. 1979. *Communication and the evolution of society*. Boston: Beacon Press.
- Habermas, J. 1984. The theory of communicative action. Vol. I: *Reason and rationalization of society*. Boston: Beacon Press.
- Hage, J. 1972. *Techniques and problems of theory construction in sociology*. London: Wiley & Sons.

XIII

- Hedin, B. 1989. Expert clinical teaching. In: *Curriculum revolution: Reconceptualizing nursing education*. New York: National League for Nursing. p 82.
- Heidegger, M. 1962. *Being and time*. Oxford: Blackwell.
- Heiss, J. 1981. *The social psychology of interaction*. Englewood Cliffs, NJ: Prentice-Hall.
- Heller, A. 1984. *Everyday life*. London: Routledge & Kegan Paul.
- Hempel, CG. 1952. *Fundamentals of concept formation in empirical science*. Chicago: University of Chicago Press.
- Henry, J. 1992. Creative capability and experiential learning. In: Mulligan, J & Griffin, C. 1992. *Empowerment through experiential learning*. London: Kogan Page. Chapter 19: 187-196.
- Heron, J. 1992. The politics of facilitation: Balancing facilitator authority and learner autonomy. In: Mulligan, J & Griffin, C. 1992. *Empowerment through experiential learning*. London: Kogan Page. 31-49.
- Hester, E. 1994. The effective thinking skills model. In: Heck, JP. 1994. *Teaching for thinking. A program for school improvement through teaching critical thinking across the curriculum*. Durham, North Carolina: Academic Press.
- Higgs, P. 1993. Standards in education. *South African Journal of Higher Education* 7 (1): 85-88.
- Hogston, R. 1993. From competent novice to competent expert: A discussion of competence in the light of the post registration and practice project (PREPP). *Nurse Education Today* 13 (3): 167-171.
- Holden, R. 1991(a). Responsibility and autonomous nursing practice. *Journal of Advanced Nursing* 16 (4): 398-403.
- Holden, R. 1991 (b). In defence of Cartesian dualism and the hermeneutic horizon. *Journal of Advanced Nursing* 16 (11): 1375-1381.
- Holly, M. 1987. *Keeping a personal-professional journal*. Geelong: Deakin University Press.
- Holmberg, C. 1982. Using visual paradigms in classroom teaching. *Unpublished Report*. Minnesota: State Universities of Minnesota.
- Holm, D & Stephenson, S. 1994. Reflection - a student's perspective. In: Palmer, AM, Burns, S & Bulman, C (eds). 1994. *Reflective practice in nursing. The growth of the professional practitioner*. London: Blackwell Scientific Publications.
- Hopson, B & Adams, J. 1977. *Transition: Understanding and managing personal change*. Montclair, NJ: Allenhald & Osmund.
- Horowitz, MJ. 1978. *Image formation and cognition*. New York: Appleton-Century-Crofts.
- House, ER. 1990. An ethics of qualitative studies. In: Guba, EG (ed.). 1990. *The paradigm dialog*. London: Sage. 158-164.

- Kagan, C, Evans, J & Kay, B. 1986. *A manual of interpersonal skills for nurses*. London: Harper & Row.
- Kaplan, A. 1964. *The conduct of inquiry : Methodology for behavioral sciences*. New York: Chandler.
- Kataoka-Yahiro, M & Saylor, C. 1994. A critical thinking model for nursing judgement. *Journal of Nursing Education* 33 (8): 351-356.
- Katona, G. 1940. *Organizing and memorizing: Studies in the psychology of learning and teaching*. New York: Hafner.
- Kay, MW (ed). 1976. *Webster's collegiate thesaurus*. Massachusetts: Merriam Company.
- Kay, MW (ed). 1981. *Webster dictionary*. Massachusetts: Merriam Company.
- Keck, JF. 1986. Terminology of theory development. In: Mariner, A (ed). 1986. *Nursing theorists and their work*. St. Louis: Mosby. 15-23.
- Keith, J. 1988. Participant observation. In: Schare, K, Campbell, R, Meredith, W & Rowlings, S (eds). 1988. *Methodological issues in aging research*. New York: Springer. 211-230.
- Kemmis, S. 1985. Action research and the politics of reflection. In: Boud, D, Keogh, R & Walker, D (eds.). *Reflection: turning experience into learning*. London: Kogan Page.
- Kennedy, M. 1979. Generalizing from single case studies. *Evaluation Quarterly* 3: 661-678.
- Kerlinger, FN. 1986. *Foundations of behavioural research*. New York: Holt, Rinhart & Winston.
- Kesler, AR. 1977. Pitfalls to avoid in interviewing outpatients. *Nursing* 7: 70.
- Kestabaum, V. 1982. *The humanity of the ill: Phenomenological perspectives*. Knoxville: University of Tennessee Press.
- Khumalo, E. 1994. Angels without mercy. Special report. *PACE* December/January, 49-52.
- Kim, HS. 1983. *The nature of theoretical thinking in nursing*. Norwalk, Conn: Appleton-Century-Crofts.
- King, IM. 1971. Towards a theory for nursing: General concepts of human behavior. In: George, JB. 1990. *Nursing theories: The base for professional nursing practice*. Englewood Cliffs, New Jersey: Prentice-Hall International.
- King, IM. 1988. Concepts: Essential elements of theories. *Nursing Science Quarterly* 1: 22-25.
- King, PM, Kitchener, KS & Wood, PK. 1985. The development of intellect and character: A longitudinal-sequential study of intellectual and moral development in young adults. *Moral Education Forum* 10 (1): 1-13.
- Kirby, PC & Teddlie, PC. 1989. Development of the reflective teaching instrument. *Journal of Research and Development in Education* 22 (4): 45-51.

XVII

- Langer, GM & Colton, AB. 1994. Reflective decision making. The cornerstone of school reform. *Journal of Staff Development* 15 (1): 2-7.
- Larkin, JH, McDermott, J, Simon, DP & Simon, HA. 1980. Models of competence in solving physics problems. *Cognitive Science* 4: 317-345.
- Laudan, L. 1977. *Progress and its problems*. Berkeley: University of California Press.
- Lauder, W. 1994. Beyond reflection: Practical wisdom and the practical syllogism. *Nurse Education Today* 14 (2): 91-98.
- Lawler, J. 1991. *Behind the screens nursing comology, the problem of the body*. Melbourne: Churchill Livingstone.
- Lawson, A & Renner, J. 1975. Piagetian theory and biology teaching. *The American Biology Teacher* 37 (6): 336-343.
- Lazzara, PJ. 1985. Foundations for a method for knowledge analysis. *Doctoral Dissertation*, Tennessee: Department of Psychology, University of Tennessee.
- Le Compte, MD & Goetz, JP. 1982. Problems of reliability and validity in ethnographic research. *Review of Educational Research* 52 (1): 31-60.
- Le Compte, MD, Millroy, W & Preissle, J (eds). 1992. *The handbook of qualitative research in education*. New York: Academic Press.
- Leininger, MM. 1985. Ethnography and ethnonursing: Models and modes of qualitative data analysis. In: Leininger, MM (ed). 1985. *Qualitative research methods in nursing*. New York: Grune & Stratton. 211-230.
- Leininger, MM. 1993. In: Talbot, LA. 1995. *Principles and practice of nursing research*. London: Mosby.
- Lesgold, AM, Feltovich, PJ, Glaser, R & Wang, Y. 1981. *The acquisition of perceptual diagnostic skill in radiology*. (Tech. Rep. PDS-1). Pittsburgh, PA: Learning Research and Development Center, University of Pittsburgh.
- Levin, SL. 1989. *Promoting adult growth in schools*. Boston, MA: Allyn and Bacon.
- Levinson, DJ. 1978. *The seasons of a man's life*. New York: Knophf.
- Lincoln, YS. 1981. Strategies for insuring the dependability (reliability) of naturalistic studies. *Paper presented at the joint annual meeting of the Evaluation Network and the Evaluation Research Society*, Austin Texas.
- Lincoln, YS & Guba, EG. 1984. *Naturalistic inquiry*. London: Sage.
- Lincoln, YS & Guba, EG. 1985. *Naturalistic inquiry*. London: Sage.
- Lindegger, GC. 1982. *The contemporary crisis of values*. London: Maskew Miller Longman.

XIX

- Marsick, VJ. 1990. In: Mezirow, J (ed.). 1990. *Fostering critical reflection in adulthood*. Oxford: Jossey-Bass Publishers.
- Maslow, AH. 1968. *Toward a psychology of being*. New York: Van Nostrand.
- Matthews, CA & Gaul, AL. 1979. Nursing diagnosis from the perspective of concept attainment and critical thinking. *Advances in Nursing Science* 2 (11): 17-26.
- Maxson, J & Hair, B. 1990. *Managing diversity: A key to building a quality work force*. Research and Development Series No. 271. Ohio State University: Columbus.
- Maxwell, JA. 1992. Understanding and validity in qualitative research. *Harvard Educational Review* 62 (3): 279-300.
- Mayeroff, M. 1971. *On caring*. New York: Harper & Row.
- McCombs, BL & Marzano, RJ. 1990. Putting the self in self-regulated learning: The self as agent in integrating will and skill. *Educational Psychologist* 25: 51-69.
- McCombs, BL. 1991. Metacognition and motivation for higher level thinking. *Paper presented at the annual meeting of the American Educational Research Association, Chicago*.
- McCormick, EJ & Ilgen, D. 1995. *Industrial and organizational psychology*. London: Routledge.
- McDonald, FJ. 1964. The influence of learning theories on education (1900-1950). In: Hildegard, ER (ed). 1964. *Theories of learning and instruction: The sixty-third yearbook of the National Society for the Study of education*. Pt. 1: 1-26. Chicago: National Society for the Study of Education.
- McFague, S. 1975. *Speaking in parables*. Philadelphia: Fortress Press.
- McKeachie, WJ (ed). 1980. *Learning, cognition and college teaching*. New Directions for Teaching and Learning, No.2. San Francisco: Jossey-Bass.
- McKeon, R. 1974. *Introduction to Aristotle*. London: Random House.
- McKinnon, JW & Renner, JW. 1971. Are colleges concerned with intellectual development? *American Journal of Physics* 39: 1051-1052.
- McPeck, JE. 1981. *Critical thinking and education*. New York: St. Martin's Press.
- Meisel, A & Roth, LH. 1981. What we do and do not know about informed consent. *Journal of the American Medical Association* 246, November: 2473-7.
- Melia, K. 1987. *Learning and working - The occupational socialisation of nurses*. London: Tavistock.
- Merriam, SB. 1988. *Case study research in education. A qualitative approach*. London: Jossey-Bass Publishers.

XXI

- Ncayiyana, DJ (ed). 1994. Nurses - abdicating their professionalism? *Epidemiological Comments* 21 (6): 120.
- Nelson, J. 1982. Authenticity: Fabric of ethical nursing practice. *Topics in Clinical Nursing* 4 (1): 1-6.
- Newell, A. 1980. One final word. In: Tuma, DT & Reif, F (eds). 1980. *Problem solving and education: Issues in teaching and research*. Hillsdale, NJ: Erlbaum. 175-179.
- Newell, A & Simon, HA. 1972. *Human problem solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Newell, R. 1992. Anxiety, accuracy, reflection: The limits of professional development. *Journal of Advanced Nursing* 17: 1326-33.
- Newell, R. 1994. Reflection: art, science or pseudo-science. *Nurse Education Today* 14 (2): 79-81.
- Nickerson, RS. 1987. Why teach thinking. In: Baron, JB & Sternberg, RJ (eds). 1987. *Teaching thinking skills*. Freeman: New York.
- Nightingale, P, TeWiata, I, Toohey, S, Hughes, C, Ryan, G & Magin, D. 1995. A resource for improving the practice of assessment in Higher Education. *Innovations in Education and Training International* 32 (4): 344-355.
- Noblit, GW & Hare, RD. 1988. *Meta-ethnography: Synthesizing qualitative studies*. London: Sage.
- Noddings, N. 1984. *Caring*. California: University of California Press.
- Norman, D. 1980. What goes on in the mind of the learner. In: McKeachie, WJ (ed). 1980. *Learning, cognition and college teaching*. New Directions for Teaching and Learning, No.2. San Francisco: Jossey-Bass.
- Norman, DA, Gentner, DR & Stevens, AL. 1976. Comments on learning schemata and memory representation. In: Klahr, D (ed). 1976. *Cognition and instruction*. Hillsdale NJ: Erlbaum.
- Norris, CM. 1982. *Concept clarification in nursing*. Rockville, Md: Aspen.
- Norris, SP. 1990. Thinking about critical thinking: Philosophers can't go it alone. In: McPeck, JE. 1990. *Teaching critical thinking*. London: Routledge. 67-74.
- Norris, SP & Ennis, RH. 1989. *Evaluating critical thinking*. California: Midwest Publications Critical Thinking Press.
- Novak, JM. 1992. *Advancing invitational thinking*. California: Caddo Gap Press.
- Nuy, HJP. 1991. Interactions of study orientation and learners' appreciation of structure in their educational environment. *Higher Education* 22 (3): 267-274.
- Nyiri, JC. 1988. Tradition and practical knowledge. In: Nyiri, JC & Smith, B. (eds) 1988. *Practical Knowledge*. London: Croom Helm.

XXIII

- Paul, RW & Heaslip, P. 1995. Critical thinking and intuitive nursing practice. *Journal of Advanced Nursing* 22(1): 40-47.
- Paulsen, WJ & du Plessis, AJ. 1996. 'n Ontleding van kritiese denke vanuit opvoedkundige perspektief. *Tydskrif vir Geesteswetenskappe* 36 (1): 49-60.
- Pearson, A. 1992. Knowing nursing: Emerging paradigms in nursing. In: Robinson, K & Vaughan, B (eds). 1992. *Knowledge for nursing practice*. London: John Wiley.
- Peck, JE. 1990. *Teaching critical thinking. Dialogue and dialectic*. London: Routledge.
- Perkins, DN. 1985. Postprimary education has little impact on informal reasoning. *Journal of Educational Psychology* 77 (5): 69-73.
- Perkins, DN. 1986. On creativity and thinking skills: A conversation with David Perkins. *Educational Leadership* 43 (8): 12-18.
- Perry, WG. 1970. *Forms of intellectual and ethical development in the college years: A scheme*. New York: Holt, Rinehart & Winston.
- Perry, WG. 1981. Growth in the making of meaning. In: Chickering, AW (ed). 1981. *The modern American college*. San Francisco: Jossey-Bass.
- Pesut, D. 1985. Toward a new definition of creativity. *Nurse Educator* 10 (1): 5.
- Peters, J. 1990. The Action-Reason-Thematic Technique: Spying on the self. In: Mezirow, J. 1990. *Fostering critical reflection in adulthood*. Oxford: Jossey-Bass Publishers.
- Peters, RS. 1972. On teaching to be critical. In: Dearden, FR, Hirst, DH & Peters, RS (eds). 1972. *Education and the development of reason*. London: Routledge & Kegan Paul. 209-229.
- Pitman, MA & Maxwell, JA. 1992. Qualitative approaches to evaluation: Models and methods. In: LeCompte, MD, Millroy, WL & Preissle, J (eds). 1992. *The handbook of qualitative research in education*. New York: Academic Press. 729-770.
- Poggenpoel, M. 1989. Psychiatric nursing conceptual model. Johannesburg: Randse Afrikaanse Universiteit (*Research report*).
- Poggenpoel, M & Muller, M. 1996. Challenges facing the South African Nursing Profession. *Nursing News* October: 8-11.
- Polanyi, M. 1962. *Personal knowledge: Towards a post-critical philosophy*. Chicago: University of Chicago Press.
- Polanyi, M. 1967. *The tacit dimension*. New York: Doubleday.
- Pollard, E (ed). 1988. *The Oxford English dictionary*. Oxford: Oxford University Press.
- Pollard, E (ed). 1994. *The Oxford paperback dictionary*. Oxford: Oxford University Press.

- Revans, RW. 1980. *Action learning*. London: Blond & Briggs.
- Revans, RW. 1982. *The origin and growth of action learning*. England: Chartwell-Bratt.
- Rew, L & Barrow, EM. 1987. Intuition: A neglected hallmark of nursing knowledge. *Advances in Nursing Science* 10 (1): 49-62.
- Reynolds, PD. 1971. *A primer in theory construction*. New York: Bobbs-Merrill.
- Richert, AE. 1990. Teaching teachers to reflect: A consideration of programme structure. *Journal of Curriculum Studies* 22 (6): 509-527.
- Ricoeur, P. 1976. *Interpretation theory: Discourse and the surplus of meaning*. Texas: Texas Christian University Press.
- Riegel, KF. 1983. What adults, what politics? In: Advisory Council for Adult and Continuing Education. 1983. *Political education for adults*. London: Advisory Council for Adult & Continuing Education.
- Roach, MS. 1984. *Caring, the human mode of being, implications for nursing*. Toronto, Ontario: University of Toronto.
- Robbins, SP. 1993. *Organizational behavior. Concepts, controversies, and applications*. Englewood Cliffs, NJ: Prentice-Hall.
- Robinson, K & Vaughan, B. 1992. *Knowledge for nursing practice*. London: Butterworth Heinemann.
- Rodgers, BL & Knafl, KA. 1993. *Concept development in nursing. Foundations, techniques, and applications*. London: WB Saunders.
- Rogers, CR. 1961. *On becoming a person*. Boston: Houghton Mifflin.
- Rogers, C. 1983. *Freedom to learn for the eighties*. Ohio: Merrill.
- Rogoff, B & Lave, J (eds). 1984. *Everyday cognition: Its development in social context*. Cambridge, Mass: Harvard University Press.
- Ross, EW & Hannay, LM. 1986. Towards a critical theory of reflective inquiry. *Journal of Teacher Education*, 37 (4): 9-15.
- Rossouw, GJ & Lamprecht, JC. 1995. A comprehensive approach to the development of thinking skills. *Koers* 60 (4): 521-539.
- Rubano, G & Anderson, PM. 1993. Metaphorical portraits of literary characters. In: Clarke, JH. & Biddle, AW. 1993. *Teaching critical thinking. Reports across the curriculum*. Englewood Cliffs, NJ.: Prentice-Hall, 146- 155.
- Rubenstein, MF. 1975. *Patterns of problem solving*. Englewood Cliffs, NJ.: Prentice-Hall.

XXVII

- Schön, DA. 1987. *Educating the reflective practitioner*. San Francisco: Jossey-Bass.
- Schön, DA. 1991. *The reflective practitioner*. 2nd. ed. London: Temple Smith.
- Schrag, F. 1988. *Thinking in school and society*. New York: Routledge.
- Schrök, RA. 1990. Conscience and courage - a critical examination of professional conduct. *Nurse Education Today* 10 (1): 3-9.
- Schwartz-Barcott, D & Kim, HS. 1993. An expansion and elaboration of the Hybrid Model of concept development. In: Rodgers, BL & Knafl, KA. 1993. *Concept development in nursing. Foundations, techniques, and applications*. London: WB. Saunders.
- Schwiebert, JE. 1996. The topic/form grid. Diverse forms of writing to enrich thinking. *College Teaching* 44 (1): 8-12.
- Scribner, S. 1984. Studying working intelligence. In: Rogoff, B & Lave, J (eds). *Everyday cognition: its development in social context*. Cambridge: Harvard University Press.
- Scriven, M. 1976. *Reasoning*. New York: McGraw-Hill.
- Scriven, M. 1985. Critical for survival. *National Forum* Winter: 9-12.
- Seligman, M. 1990. *Learned optimism*. New York: Knopf.
- Shaughnessy, C. 1994. Critical thinking. Letter to the editor. *Journal of Continuing Evaluation in Nursing* 25: 100.
- Sheppard, C & Gilbert, J. 1991. Course design, teaching method and student epistemology. *Higher Education* 22 (3): 229-249.
- Shor, I. 1987. *Critical teaching and everyday life*. Chicago: University of Chicago Press.
- Sieber, JE. 1992. *Planning ethically responsible research: A guide for students and internal review boards*. (Applied Social Research Methods Series, Vol. 31). London: Sage.
- Siegel, H. 1980. Critical thinking as an educational ideal. *The Educational Forum* Nov.: 7-23.
- Siegel, H. 1985. Educating reason: critical thinking, informal logic and the philosophy of education, Part two. Philosophical questions underlying education for critical thinking. *Informal Logic* 7 (2 & 3): 69-81.
- Siegel, H. 1988. *Educating reason. Rationality, critical thinking and education*. New York: Routledge.
- Siegel, H. 1990. McPeck, informal logic, and the nature of critical thinking. In: McPeck, JE. 1990. *Teaching critical thinking*. London: Routledge. 75-85.
- Siegler, RS & Klahr, D. 1982. When do children learn? The relationship between existing knowledge and the acquisition of new knowledge. In: Glaser, R (ed). *Advances in instructional psychology* 2: 121-211. Hillsdale, NJ: Erlbaum.

XXIX

- Stake, RE. 1994. Case studies. In: Denzin, NK & Lincoln, YS (eds). 1994. *Handbook of qualitative research*. London: Sage Publications. Chapter 14.
- Steers, RM & Porter, LW. 1983. *Motivation and work behavior*. New York: McGraw-Hill.
- Steinaker, NW & Bell, MR. 1979. *The experiential taxonomy. A new approach to teaching and learning*. New York: Academic Press.
- Sternberg, RJ. 1981. Intelligence and nonintelligence. *Journal of Educational Psychology* 73: 1-16.
- Sternberg, RJ. 1986. Critical thinking: its nature, measurement, and improvement. *ERIC Document* Reproduction Service No. ED 272882. Cambridge.
- Sternberg, RJ. 1988. A three-facet model of creativity. In: Sternberg, RJ [ed.]. 1988. *The nature of creativity: contemporary psychological perspectives*. Cambridge: Cambridge University. 125-147.
- Sternberg, RJ. 1990. *Wisdom: Its nature, origins, and development*. New York: Praeger.
- Steyn, GM. 1993. Reflektiewe praktyk: 'n Nuwe paradigma vir onderwysbestuur. *Progressio* 15(2): 118-128.
- Steyn, PJN. 1991. *Instructional objectives for effective teaching and management*. Isando, Johannesburg: Lexicon.
- Stice, J (ed). 1987. Developing critical thinking and problem-solving abilities. *New Directions for Teaching and Learning* 30. San Francisco: Jossey-Bass.
- Street, A. 1991. *From image to action - reflection in nursing practice*. Geelong: Deakin University.
- Street, A. 1992. *Inside nursing: A critical ethnography of clinical nursing practice*. Sunny: Cornhill.
- Stuart, GW & Sundeen, SJ. 1991. *Principles and practice of psychiatric nursing*. St. Louis: Mosby Company.
- Stockhausen, L. 1994. The clinical learning spiral: A model to develop reflective practitioners. *Nurse Education Today* 14 (5): 363-371.
- Sundeen, SJ, Stuart, GW, Rankin, EAD & Cohen, SA. 1994. *Nursing-client interaction. Implementing the nursing process*. London: Mosby.
- Swanson, KM. 1991. Empirical development of a middle range theory of caring. *Nursing Research* 3: 161-166.
- Swartz, R & Perkins, D. 1989. *Teaching thinking - Issues and approaches*. Pacific Grove, CA: Midwest Pub.
- Styles, MM. 1982. *On nursing: Toward a new endowment*. St. Louis, MO: Mosby.

United Kingdom Central Council for Nursing, Midwifery and Health Visiting. 1990. *The report of the post-registration education and practice project*. London: UKCC.

Usher, R. 1985. Beyond the anecdotal: Adult learning and the use of experience. *Studies in the Education of Adults* 17 (1): 59-74.

Usher, R. 1988. The practical and the critical study of adult education. In: Zukas, M (ed). 1988. *Papers from the transatlantic dialogue*. Papers from the combined meeting of the Standing Conference on University Teaching and Research in the Education of Adults, Adult Education Research Conference, and Canadian Association for the study of Adult Education, University of Leeds, July 11-13. England: School of Continuing Education, University of Leeds.

Van Hooft, S. 1990. Moral education for nursing decisions. *Journal of Advanced Nursing* 15 (2): 210-215.

Van Huyssteen, MC. 1981. 'n Evaluering van die opleiding van verpleegkundiges vir basiese registrasie in die RSA. Pretoria: SAVV (*Monografie: D Cur. - proefskrif*).

Van Maanen, M. 1977. Linking ways of knowing with ways of being practical. *Curriculum Inquiry* 6: 205-228.

Vaughan, B. 1990. Knowing that and knowing how: the role of the lecturer practitioner. In: Kershaw, B & Salvage, J (eds). 1990. *Models of nursing 2*. London: Scutari Press.

Vaughan, B & Fitzgerald, M. 1992. Caring for the acutely ill. In: Vaughan, B & Robinson, K (eds). 1992. *Knowledge in nursing practice*. Oxford: Butterworth Heinemann.

Vaughan, B & Robinson, K (eds). 1992. *Knowledge for nursing practice*. Oxford: Butterworth Heinemann.

Viljoen, CM. 1989. Pedagogiese perspektiewe op bio-etiese wêreldvraagstukke in die lig van 'n Christelike opvoedingsbeskouing. *Opvoedkundige studies, Die Unie*, 108-111.

Von Oesh, RA. 1983. *A whack on the side of the head: How can you become more creative*. New York: Warner Books.

Voss, JF, Greene, TR, Post, TA & Penner, BC. 1985. Problem solving skill in the social sciences. In: Bower, G (ed). 1985. *The psychology of learning and motivation: Advances in research theory*. New York: Academic Press.

Walker, LO & Avant, KC. 1988. *Strategies for theory construction in nursing*. Norwalk, CT.: Appleton & Lange.

Walker, LO & Avant, KC. 1995. 3rd ed. *Strategies for theory construction in nursing*. Norwalk, CT: Appleton & Lange.

Watson, G & Glasser, EM. 1989. *Critical thinking appraisal*. Orlando: Harcourt, Brace, Jovanovich.

Watson, J. 1988. *Nursing: The philosophy and science of caring*. Boston: Little Brown.

XXXIII

- Wolf, ZR. 1986. The caring concept and nurse identified behaviors. *Topics in Clinical Nursing* 2: 84-93.
- Woolfolk, AE. 1990. *Educational psychology*. 4th edition. Englewood Cliffs, NY: Prentice-Hall.
- Wright, SG. 1990. *Building and using a model of nursing*. London: Edward Arnold.
- Yin, RK. 1993. *Applications of the case study research*. London: Sage.
- Young, RE (ed). 1980. Fostering critical thinking. *New Directions for Teaching and Learning*, 3. San Francisco: Jossey Bass.
- Zeichner, KM. 1982. Reflective teaching and field-based experience in teacher education. *Interchange* 12 (4): 1-22.
- Zeichner, KM. 1983. Alternate paradigms in teacher education. *Journal of Teacher Education* 334 (3): 3-8.
- Zeichner, KM & Liston, DP. 1987. Teaching student teachers to reflect. *Harvard Educational Review* 57 (10): 23-48.

QUESTIONNAIRE FOR FEEDBACK ON SOCRATIC & LTD. (DIALOGICAL) DISCUSSION

Instructions to participants:

1. Read the questions carefully
2. Critically reflect on the NUED 301 discussion periods
3. Answer the following questions or respond to the statements as frankly as possible by making an X in the applicable block.
4. Provide a short rationale/motivation if indicated.
5. Please feel free to comment on anything you wish to add under *general comments*.
4. Thank you for your participation in Socratic and LTD (dialogical) discussion periods this year.

QUESTIONS/STATEMENTS REGARDING SOCRATIC & LTD (DIALOGICAL) TECHNIQUES & FACILITATION OF TECHNIQUES BY EDUCATOR

--	--

1-2

1. Have you previously participated in Socratic/LTD (dialogical) study and learning methods?

Yes	1
No	2

3

2. The educator explained the Socratic & LTD (dialogical) technique at the beginning of the academic year?

Yes	1
No	2

4

3. The educator explained what would be expected from every student during the discussion/questioning periods?

Yes	1
No	2

5

4. Looking back, *I personally feel . . .* about the Socratic & LTD (dialogical) techniques used.

Positive	1
Negative	2
Uncertain/Mixed feelings	3

6

Rationale/motivation for feelings indicated:

5. Will you recommend Socratic & LTD (dialogical) method to other learners?

Yes	1
No	2
Uncertain/Mixed feelings	3

7

Rationale/motivation for answer:

6. Will you use Socratic & LTD (dialogical) techniques to teach others?

Yes	1
No	2
Uncertain/Mixed feelings	3

8

Rationale/motivation for answer:

7. Looking back, list what (the incident/situation/ requirement) you perceived or experienced as MOST difficult during Socratic & LTD (dialogical) discussion:

8. The educator CONTINUOUSLY

	Yes	No	
<i>considered alternative opinions/beliefs/assumptions sympathetically?</i>	1	2	9
<i>challenged students to think critically?</i>	1	2	10
<i>motivated learners to reflect on previous learning?</i>	1	2	11
<i>challenged students to engage in reflective self-criticism?</i>	1	2	12
<i>accepted criticism/challenge from students positively?</i>	1	2	13
<i>motivated students to recognize trigger experiences?</i>	1	2	14
<i>motivated students to use trigger experiences as a starting point for critical reflection and learning?</i>	1	2	15
<i>modeled critical, reflective thinking?</i>	1	2	16
<i>motivated students to recall circumstances during which a belief was formed?</i>	Yes 1	No 2	17
<i>expected students to inspect the possible implications of a specific view-point/belief/assumption/theory?</i>	1	2	18
<i>expected students to paraphrase opposing points of view?</i>	1	2	19

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<i>proped students' thinking on a variety of issues?</i>	1	2	20
<i>expected students to study the meaning of difficult concepts in depth?</i>	1	2	21
<i>expected students to stay focused during discussion?</i>	1	2	22
<i>expected students to reflect on those subjects relevant to the issue/topic under discussion?</i>	1	2	23

9. **Did the educator manage to make you conscious of the need for critical, reflective thinking and learning?**

Yes	1
No	2

24

Motivation/rationale for answer:

10. **General remarks**

REQUIREMENTS (GUIDELINES) FOR PARTICIPATION IN SOCRATIC & LTD. (DIALOGICAL) DISCUSSION DURING NUED 301

1. Socratic discussion/questioning and LTD. (dialogical) discussion periods, will require more work and effort than the typical lecture classes from every participant. The methods will not allow participants to remain passive while learning. It requires active involvement in the acquisition of and development of knowledge. The dialogical process involved moves away from memorization and regurgitation of ready-made facts. Dialogical discussion will require a high level of analytical and reflective thinking and opportunity to critically evaluate your own and peers thinking, and interpersonal abilities. While participants are studying and mastering the subject content, they will also be mastering critical reflective skills and thinking.
2. The techniques to be used will depend on the use of **democratic dynamics**. Also, democratic principles should not be confused with laissez-fair mode in which anything is acceptable. If didactic material must be mastered, there must be some rules and method of proceeding.
3. During discussion participants must promote equality in communication, each student's freedom to participate is subject to the group's allotment of time and task achievement only.
4. Effective dialogical discussion and learning on every participant's primary commitment to learn.
5. The following are the minimum requirements/ criteria participants' must meet. Group members must:
 - attend regularly.
 - ▶ come prepared to discuss the course material for the specific day (only possible if every individual studies the material indicated for a specific session beforehand). Students must read the material at least once to get a general idea, approach the material as if conducting a silent group meeting, and prepare contributions at each step. An outline for preparation is provided in the following text box.
 - perceive every group discussion as a cooperative and not a competitive learning experience.
 - see to it that the material for the specific day is adequately and efficiently covered.
 - participate in evaluation of the dialogical process, group process and individual contributions.

- see to it that everyone participates and interacts in the dialogical discussions. Discussion sessions in which only a few members participate, are obviously not dialogical.
- listen actively. In any learning situation, some learners understand and some do not. In Socratic & LTD. (dialogical) discussion periods those who do not understand must communicate it and those who do understand must help such individuals to gain understanding. During interaction, even those who do understand, are learning. As the saying goes:

"you never really learn a subject until you try to teach it." After clarifying an elusive component to a fellow student, you will usually find it usually easier to explain that component in a test or an exam.

- see to it that dialogical sessions and the task of learning are enjoyable. A friendly, accepting climate although important in any learning situation, is especially so in Socratic & LTD. discussions which require participants to reveal their ignorance and confront their fellow students.
- recognize that an effective group accepts the fact that procedural problems will occur from time to time. Therefore it is necessary to evaluate progress from time to time as needed. The goal of the evaluation is not to hurt the feelings of others, but to give **constructive** feedback - whether negative or positive. Evaluation allows individuals to:
 - ▶ express that they are being helped, encouraged, supported, understood, inhibited, frightened, or intimidated by others.
 - ▶ discover how they are perceived and evaluated by others as "helping" or "hindering" their peers. Evaluation enhances group membership by creating and suggesting solutions to individual and interpersonal problems occurring in groups.

Text box

Outline for preparation:

Step 1: Definition of terms and concepts. List all the words of which you are unsure. Look them up and write down their meaning.

Step 2: State the author's message. Write down your version of what you think the author's message is.

Step 3: Identify the major themes and subtopics of the article or material.

Step 4: Discuss major themes and subtopics. Write a brief statement of the subject matter of each subtopic. Formulate a question that would ask for each.

Step 5: Integrate material with previous learning and knowledge. Write down the usefulness the material has for understanding other concepts or subjects. Indicate what other ideas the material substantiates, contradicts, or expands.

Step 6: Apply the material to your own life or work situations - past, present, or future - or what implications the material has for your own intellectual interests.

Step 7: Evaluate the author's presentation. Write down your reactions to and evaluation of the material.

- when studying difficult material, check the meaning of words or concepts in different dictionaries. Even participants who think they know the concept. The act of defining concepts comprises learning. Participants who are actively reading and questioning complex concepts are usually members of a group in which a sense of unity and higher learning remains primary.
 - recognize that although personal reactions are important, the author's message is just as important. It is therefore, necessary to obtain a grasp of the overall meaning of the assigned reading before voicing personal feelings. Verbal expression of the author's general statement enables students to zero in on the topic under discussion. Participants may never discover what the author has to say if they immediately begin to express their personal opinions.
 - counteract the possibility of fragmented learning, by allocating time for a conscious effort to relate current learning to previous learning and discussions. The purpose of application is to take arguments of one author and compare them to refute or support of expert point of view or experience of another.
 - recognize that knowledge needs to be cumulative and integrated. Knowledge is most valuable when it has personal value or significance. *Self-application* encourage participants to make the discussion personal and rewarding.
 - accept responsibility for *gatekeeping and expediting* by attempting to spread participation.
 - accept responsibility for *timekeeping*. If dialogical discussion periods are to adhere to its time budget, everyone must watch the clock!
6. Nonfunctional roles should be identified and limited. Participants may experience both overt and covert resistance to the dialogical process. The following types of behaviour may emerge and cause difficulties:
- ▶ *Silence* by some participants. An important tenet of Socratic & LTD. discussions are that everyone should participate. Although it is not mandatory for each person to verbalize ideas at every meeting, a person must both listen and verbally participate to be considered a true group member. It is important for participants to work together to determine the reason behind a member's silence and to explore ways in which silent persons can become productive.
 - *Overparticipation* (domination, repetition, wandering, storytelling) by some participants. Participants must help overparticipative members to use their knowledge in such a way that it is productive and helpful to the group.
 - ▶ *Minority opinion (the lone dissenter)*. An obstinate participant expressing a minority voice may seem like a problem if the person is forceful, stubborn, or adamant. But this can become an asset rather than a problem if some members of the group help others to appreciate the voice of dissent and treat it with respect.

7. Remember, the following are things all of us do some of the time and some of us do all of the time, and we should all try to do less of the time:

- When we **compare** ourselves to others, we tend not to listen.
- When we try to **second-guess** what others are saying, we tend not to listen.
- When we **rehearse**, we tend not to listen.
- ▶ When we **judge** others negatively, we tend not to listen.
- ▶ When we **give advice**, we tend not to listen.
- ▶ When we **placate** (be nice, never get involved, always agree), we tend not to listen.

8. Dialogical discussion carries a strong element of personal risk: to sense the feelings of others deeply, to understand the meaning of their experiences for themselves, to see the world as they see it - you risk being changed yourself. It is threatening to give up, even momentarily, what you believe and to start thinking in someone else's terms. It takes a great deal of inner security and courage to be able to risk understanding each other.

9. The Socratic & LTD discussion groups will be more productive if participants share and adapt the roles stated in the following text box:

Text box

Roles to be shared:

- ▶ **Encourager** (praise, agree, accept other ideas)
- ▶ **Harmonizer** (mediator)
- ▶ **Compromizer** (meet others halfway, yield status, admit mistakes)
- ▶ **Expediter** (facilitate participation of others)
- ▶ **Observer** (observe group process and provide feedback when needed)
- ▶ **Follower** (actively accept group decisions)
- ▶ **Evaluator** (actively participate in evaluating individual and group input)
- ▶ **Resourcer** (share knowledge, resources, relevant experiences)

**SUGGESTED CRITERIA TO BE USED DURING CONTINUOUS EVALUATION SESSIONS
(SOCRATIC & LTD [DIALOGICAL] DISCUSSION)**

Criteria that should be considered include the following:

- *How well did the group cover the topic?*
- *Did the author's or lecturer's key points make sense?*
- *What areas of agreement did the group reach?*
- *Were differences resolved?*
- *Was every student heard and understood?*
- *Were there questions which needed further clarification?*
- *What areas of disagreement were there that could, or could not be answered?*
- *Who contributed most to the discussion?*
- *If someone did not contribute, why not?*
- *Who and what was constructive?*
- *Who and what inhibited the discussion?*
- *Did every group member come prepared? If not, why not?*
- *Did the dialogical discussions and questioning result in:*
 - ▶ *self-awareness?*
 - ▶ *values clarification?*
 - ▶ *values inquiry?*
 - ▶ *knowledge of habitual thinking/bias?*
 - ▶ *knowledge of peers' feelings, opinions, assumptions or values?*
- *Did the educator:*
 - ▶ *consider alternate opinions/beliefs/assumptions sympathetically?*
 - ▶ *challenge students to think critically?*
 - ▶ *motivate students to reflect on or recall previous learning?*
 - ▶ *challenge students to engage in reflective self-criticism?*
 - ▶ *accept criticism or challenge from students positively?*
 - ▶ *clarify personal beliefs, opinion or values?*
 - ▶ *model critical, reflective thinking?*
 - ▶ *used humor during discussion and lecture periods?*
 - ▶ *come prepared to group discussion periods?*
 - ▶ *prepare the module or topic thoroughly?*
 - ▶ *provide students with the necessary reading material or refer them to the sources needed?*
 - ▶ *expose students to different authors'/experts' viewpoints?*
 - ▶ *inhibit the discussion in any way? In what way?*

Annexure IV: Act No. 92 of 1996: Choice on Termination of Pregnancy Act, 1996



REPUBLIC OF SOUTH AFRICA

GOVERNMENT GAZETTE

STAATSKOERANT

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KAAPSTAD, 22 NOVEMBER 1996

PRESIDENT'S OFFICE

No. 1891. 22 November 1996

It is hereby notified that the President has assented to the following Act which is hereby published for general information:—

No. 92 of 1996: Choice on Termination of Pregnancy Act, 1996.

KANTOOR VAN DIE PRESIDENT

No. 1891. 22 November 1996

Hierby word bekend gemaak dat die President sy goedkeuring geheg het aan die onderstaande Wet wat hierby ter algemene inligting gepubliseer word:—

No. 92 van 1996: Wet op Keuse oor die Beëindiging van Swangerskap, 1996.

ACT

To determine the circumstances in which and conditions under which the pregnancy of a woman may be terminated; and to provide for matters connected therewith.

*(Afrikaans text signed by the President.)
(Assented to 12 November 1996.)*

PREAMBLE

Recognising the values of human dignity, the achievement of equality, security of the person, non-racialism and non-sexism, and the advancement of human rights and freedoms which underlie a democratic South Africa;

Recognising that the Constitution protects the right of persons to make decisions concerning reproduction and to security in and control over their bodies;

Recognising that both women and men have the right to be informed of and to have access to safe, effective, affordable and acceptable methods of fertility regulation of their choice, and that women have the right of access to appropriate health care services to ensure safe pregnancy and childbirth;

Recognising that the decision to have children is fundamental to women's physical, psychological and social health and that universal access to reproductive health care services includes family planning and contraception, termination of pregnancy, as well as sexuality education and counselling programmes and services;

Recognising that the State has the responsibility to provide reproductive health to all, and also to provide safe conditions under which the right of choice can be exercised without fear or harm;

Believing that termination of pregnancy is not a form of contraception or population control;

This Act therefore repeals the restrictive and inaccessible provisions of the Abortion and Sterilization Act, 1975 (Act No. 2 of 1975), and promotes reproductive rights and extends freedom of choice by affording every woman the right to choose whether to have an early, safe and legal termination of pregnancy according to her individual beliefs.

BE IT ENACTED by the Parliament of the Republic of South Africa, as follows:—

Definitions

1. In this Act, unless the context otherwise indicates—

- (i) "Director-General" means the Director-General of Health; (iii) 5
- (ii) "gestation period" means the period of pregnancy of a woman calculated from the first day of the menstrual period which in relation to the pregnancy is the last; (iv)
- (iii) "incest" means sexual intercourse between two persons who are related to each other in a degree which precludes a lawful marriage between them; (ii) 10

WET

Om die omstandighede en voorwaardes te bepaal waarin of waarop die swangerskap van 'n vrou beëindig kan word; en om vir bykomstige aangeleenthede voorsiening te maak.

*(Afrikaanse teks deur die President geteken.)
(Goedgekeur op 12 November 1996.)*

AANHÊF

In erkentlikheid aan die waardes van menswaardigheid, die bereiking van gelykheid, sekuriteit van die persoon, nie-rassisme en nie-seksisme, en die bevordering van mensegter en -vryhede wat 'n demokratiese Suid-Afrika ten grondslag lê;

In erkentlikheid daaraan dat die Grondwet die reg van persone om besluite rakende reproduksie en sekuriteit in en beheer oor hul liggame te neem, beskerm;

In erkentlikheid daaraan dat beide vroue en mans die reg het om ingelig te word oor en om toegang te hê tot veilige, effektiewe, bekostigbare en aanvaarbare metodes van vrugbaarheidsregulering van hul keuse, en dat vroue die reg het op toegang tot behoorlike gesondheidsorgdienste om veilige swangerskap en kindergeboorte te verseker;

In erkentlikheid daaraan dat die besluit om kinders te hê fundamenteel is aan vroue se fisiese, sielkundige en sosiale gesondheid en dat universele toegang tot reproduktiewe gesondheidsorgdienste, gesinsbeplanning en geboortebeporing, beëindiging van swangerskap asook seksuele opvoeding en voorligtingsprogramme en dienste insluit;

In erkentlikheid daaraan dat die Staat die verantwoordelikheid het om reproduktiewe gesondheid aan almal te voorsien, en ook om veilige omstandighede te skep waaronder die reg van keuse sonder vrees of benadeling uitgeoefen kan word;

In geloof dat beëindiging van swangerskap nie 'n tipe voorbehoeding of bevolkingsbeheer is nie;

Herroep hierdie Wet derhalwe die beperkende en ontoeganklike bepalings van die Wet op Vrugafdrywing en Sterilisasie, 1975 (Wet No. 2 van 1975), en bevorder reproduktiewe regte en verbreed vryheid van keuse deur aan elke vrou die reg te verleen om te kies om 'n vroeë, veilige en wettige beëindiging van swangerskap ooreenkomstig haar individuele oortuigings te verkry.

DAAR WORD BEPAAL deur die Parlement van die Republiek van Suid-Afrika, soos volg:—

Woordomskrywing

1. In hierdie Wet, tensy uit die samhang anders blyk, beteken—

- 5 (i) "beëindiging van 'n swangerskap" die skeiding en uitdrywing, deur geneskundige of chirurgiese metodes, van die inhoud van die uterus van 'n swanger vrou; (x)
- (ii) "bloedskande" seksuele gemeenskap tussen twee persone wat aan mekaar verwant is in 'n graad wat hulle belet om wettig met mekaar te trou; (iii)
- 10 (iii) "Direkteur-generaal" die Direkteur-generaal van Gesondheid; (i)

- (iv) "medical practitioner" means a person registered as such under the Medical, Dental and Supplementary Health Service Professions Act, 1974 (Act No. 56 of 1974); (v)
- (v) "Minister" means the Minister of Health; (viii)
- (vi) "minor" means any female person under the age of 18 years; (vii) 5
- (vii) "prescribe" means prescribe by regulation under section 9; (x)
- (viii) "rape" also includes statutory rape as referred to in sections 14 and 15 of the Sexual Offences Act, 1957 (Act No. 23 of 1957); (ix)
- (ix) "registered midwife" means a person registered as such under the Nursing Act, 1978 (Act No. 50 of 1978); (vi) 10
- (x) "termination of a pregnancy" means the separation and expulsion, by medical or surgical means, of the contents of the uterus of a pregnant woman; (i)
- (xi) "woman" means any female person of any age. (xi)

Circumstances in which and conditions under which pregnancy may be terminated

- 2. (1) A pregnancy may be terminated— 15
 - (a) upon request of a woman during the first 12 weeks of the gestation period of her pregnancy;
 - (b) from the 13th up to and including the 20th week of the gestation period if a medical practitioner, after consultation with the pregnant woman, is of the opinion that— 20
 - (i) the continued pregnancy would pose a risk of injury to the woman's physical or mental health; or
 - (ii) there exists a substantial risk that the fetus would suffer from a severe physical or mental abnormality; or
 - (iii) the pregnancy resulted from rape or incest; or 25
 - (iv) the continued pregnancy would significantly affect the social or economic circumstances of the woman; or
 - (c) after the 20th week of the gestation period if a medical practitioner, after consultation with another medical practitioner or a registered midwife, is of the opinion that the continued pregnancy— 30
 - (i) would endanger the woman's life;
 - (ii) would result in a severe malformation of the fetus; or
 - (iii) would pose a risk of injury to the fetus.
- (2) The termination of a pregnancy may only be carried out by a medical practitioner, except for a pregnancy referred to in subsection (1)(a), which may also be carried out by a registered midwife who has completed the prescribed training course. 35

Place where surgical termination of pregnancy may take place

- 3. (1) The surgical termination of a pregnancy may take place only at a facility designated by the Minister by notice in the *Gazette* for that purpose under subsection (2).
- (2) The Minister may designate any facility for the purpose contemplated in subsection (1), subject to such conditions and requirements as he or she may consider necessary or expedient for achieving the objects of this Act. 40
- (3) The Minister may withdraw any designation under this section after giving 14 days' prior notice of such withdrawal in the *Gazette*.

Counselling 45

- 4. The State shall promote the provision of non-mandatory and non-directive counselling, before and after the termination of a pregnancy.

Consent

- 5. (1) Subject to the provisions of subsections (4) and (5), the termination of a pregnancy may only take place with the informed consent of the pregnant woman. 50
- (2) Notwithstanding any other law or the common law, but subject to the provisions of subsections (4) and (5), no consent other than that of the pregnant woman shall be required for the termination of a pregnancy.

WET OP KEUSE OOR DIE BEËINDIGING VAN SWANGERSKAP, 1996

Wet No. 92, 1996

- (iv) "draagtyd" die tydperk van swangerskap van 'n vrou bereken vanaf die eerste dag van die menstruele periode wat met betrekking tot die swangerskap die laaste is; (ii)
- 5 (v) "geneesheer" iemand wat as sodanig kragtens die Wet op Geneeskiere, Tandartse en Aanvullende Gesondheidsdiensberoeps, 1974 (Wet No. 56 van 1974), geregistreer is; (iv)
- (vi) "geregistreerde vroedvrou" iemand wat as sodanig kragtens die Wet op Verpleging, 1978 (Wet No. 50 van 1978), geregistreer is; (ix)
- (vii) "minderjarige" 'n vroulike persoon onder die ouderdom van 18 jaar; (vi)
- 10 (viii) "Minister" die Minister van Gesondheid; (v)
- (ix) "verkragting" ook statutêre verkragting in artikels 14 en 15 van die Wet op Seksuele Misdrywe, 1957 (Wet No. 23 van 1957), bedoel; (viii)
- (x) "voorskryf" by regulasie kragtens artikel 9 voorskryf; (vii)
- (xi) "vrou" 'n vroulike persoon van enige ouderdom. (xi)

15 Omstandighede waarin en voorwaardes waarop swangerskap beëindig kan word

2. (1) 'n Swangerskap kan beëindig word—

- (a) op versoek van 'n vrou gedurende die eerste 12 weke van die draagtyd van haar swangerskap;
- 20 (b) vanaf die 13de tot en met die 20ste week van die draagtyd indien 'n geneesheer, na oorleg met die swanger vrou, van oordeel is dat—
- (i) die voortgesette swangerskap 'n gevaar van benadeling vir die vrou se liggaamlike of geestesgesondheid sal inhou; of
- (ii) daar 'n wesenlike gevaar bestaan dat die fetus aan 'n erge liggaamlike of geestes-abnormaliteit sal ly; of
- 25 (iii) die swangerskap voortgevoel het uit verkragting of bloedskanie; of
- (iv) die voortgesette swangerskap die sosiale of ekonomiese omstandighede van die vrou aansienlik sal benadeel; of
- (c) na die 20ste week van die draagtyd indien 'n geneesheer, na oorleg met 'n ander geneesheer of geregistreerde vroedvrou, van oordeel is dat die voortgesette swangerskap—
- 30 (i) die lewe van die vrou in gevaar sal stel;
- (ii) 'n erge misvorming van die fetus sal veroorsaak; of
- (iii) 'n gevaar van benadeling vir die fetus sal inhou.

(2) Die beëindiging van 'n swangerskap kan slegs deur 'n geneesheer uitgevoer word, behalwe 'n swangerskap in subartikel (1)(a) bedoel, wat ook deur 'n geregistreerde vroedvrou wat die voorgeskrewe opleidingskursus voltooi het, uitgevoer kan word.

Plek waar chirurgiese beëindiging van swangerskap kan plaasvind

3. (1) Die chirurgiese beëindiging van 'n swangerskap kan slegs by 'n fasiliteit plaasvind wat deur die Minister by kennisgewing in die *Staatskoerant* vir daardie doel kragtens subartikel (2) aangewys is.

(2) Die Minister kan 'n fasiliteit vir die doeleindes in subartikel (1) beoog, aanwys, behoudens die voorwaardes en vereistes wat hy of sy noodsaaklik of dienstig ag ten einde die oogmerke van hierdie Wet te verwesenlik.

45 (3) Die Minister kan enige aanwysing kragtens hierdie artikel terugtrek nadat 14 dae vooraf kennis van sodanige terugtrekking in die *Staatskoerant* gegee is.

Voorligting

4. Die Staat moet die voorsiening van nie-verpligte en nie-voorskriftelike voorligting bevorder, voor en na die beëindiging van 'n swangerskap.

50 Toestemming

5. (1) Behoudens die bepalings van subartikels (4) en (5), vind die beëindiging van 'n swangerskap slegs plaas met die oorwoë toestemming van die swanger vrou.

(2) Ondanks enige ander wet of die gemene reg, maar behoudens die bepalings van subartikels (4) en (5), is geen toestemming behalwe dié van die swanger vrou nodig vir die beëindiging van 'n swangerskap nie.

(3) In the case of a pregnant minor, a medical practitioner or a registered midwife, as the case may be, shall advise such minor to consult with her parents, guardian, family members or friends before the pregnancy is terminated: Provided that the termination of the pregnancy shall not be denied because such minor chooses not to consult them.

(4) Subject to the provisions of subsection (5), in the case where a woman is— 5

(a) severely mentally disabled to such an extent that she is completely incapable of understanding and appreciating the nature or consequences of a termination of her pregnancy; or

(b) in a state of continuous unconsciousness and there is no reasonable prospect that she will regain consciousness in time to request and to consent to the 10 termination of her pregnancy in terms of section 2.

her pregnancy may be terminated during the first 12 weeks of the gestation period, or from the 13th up to and including the 20th week of the gestation period on the grounds set out in section 2(1)(b)—

(i) upon the request of and with the consent of her natural guardian, spouse or 15 legal guardian, as the case may be; or

(ii) if such persons cannot be found, upon the request and with the consent of her *curator personae*:

Provided that such pregnancy may not be terminated unless two medical practitioners or a medical practitioner and a registered midwife who has completed 20 the prescribed training course consent thereto.

(5) Where two medical practitioners or a medical practitioner and a registered midwife who has completed the prescribed training course, are of the opinion that—

(a) during the period up to and including the 20th week of the gestation period of 25 a pregnant woman referred to in subsection (4)(a) or (b)—

(i) the continued pregnancy would pose a risk of injury to the woman's physical or mental health; or

(ii) there exists a substantial risk that the fetus would suffer from a severe physical or mental abnormality; or

(b) after the 20th week of the gestation period of a pregnant woman referred to in 30 subsection (4)(a) or (b), the continued pregnancy—

(i) would endanger the woman's life;

(ii) would result in a severe malformation of the fetus; or

(iii) would pose a risk of injury to the fetus,

they may consent to the termination of the pregnancy of such woman after 35 consulting her natural guardian, spouse, legal guardian or *curator personae*, as the case may be: Provided that the termination of the pregnancy shall not be denied if the natural guardian, spouse, legal guardian or *curator personae*, as the case may be, refuses to consent thereto.

Information concerning termination of pregnancy 40

6. A woman who in terms of section 2(1) requests a termination of pregnancy from a medical practitioner or a registered midwife, as the case may be, shall be informed of her rights under this Act by the person concerned.

Notification and keeping of records

7. (1) Any medical practitioner, or a registered midwife who has completed the 45 prescribed training course, who terminates a pregnancy in terms of section 2(1)(a) or (b), shall record the prescribed information in the prescribed manner and give notice thereof to the person referred to in subsection (2).

(2) The person in charge of a facility referred to in section 3 or a person designated for 50 such purpose, shall be notified as prescribed of every termination of a pregnancy carried out in that facility.

(3) The person in charge of a facility referred to in section 3, shall, within one month of the termination of a pregnancy at such facility, collate the prescribed information and forward it by registered post confidentially to the Director-General: Provided that the 55 name and address of a woman who has requested or obtained a termination of pregnancy, shall not be included in the prescribed information.

(3) In die geval van 'n swanger minderjarige moet 'n geneesheer of 'n geregistreerde vroedvrou, na gelang van die geval, sodanige minderjarige adviseer om haar ouers, voog, familieledede of vriende te raadpleeg alvorens die swangerskap beëindig word. Met dien verstande dat die beëindiging van die swangerskap nie geweier mag word omdat

5 die minderjarige verkies om hulle nie te raadpleeg nie.

(4) Behoudens die bepalinge van subartikel (5), in die geval waar 'n vrou—

(a) in so 'n mate ernstig geestesonbevoeg is dat sy geheel en al onbevoeg is om die aard of gevolge van 'n beëindiging van haar swangerskap te begryp; of

(b) in 'n staat van voortdurende bewusteloosheid is en daar geen redelike vooruitsig is dat sy betyds haar bewussyn sal herwin om die beëindiging van haar swangerskap ingevolge artikel 2 te versoek en toestemming daartoe te verleen nie,

kan haar swangerskap gedurende die eerste 12 weke van die draagtyd, of vanaf die 13de tot en met die 20ste week van die draagtyd, beëindig word op die gronde soos uiteengesit in artikel 2(1)(b)—

15

(i) op die versoek van en met die toestemming van haar natuurlike voog, gade of wettige voog, na gelang van die geval; of

(ii) indien sodanige persone nie gevind kan word nie, op die versoek en met die toestemming van haar *curator personae*;

20

Met dien verstande dat sodanige swangerskap nie beëindig sal word nie tensy twee geneesheer of 'n geneesheer en 'n geregistreerde vroedvrou wat die voorgeskrewe opleidingskursus voltooi het, daartoe toegestem het.

(5) Waar twee geneesheer of 'n geneesheer en 'n geregistreerde vroedvrou wat die voorgeskrewe opleidingskursus voltooi het, van mening is dat—

25

(a) gedurende die tydperk tot en met die 20ste week van die draagtyd van 'n swanger vrou in subartikel (4)(a) of (b) bedoel—

(i) die voortdurende swangerskap 'n gevaar van benadeling vir die vrou se fisiese of geestesgesondheid sal inhou; of

30

(ii) daar 'n wesenlike gevaar bestaan dat die fetus aan 'n erge liggaamlike of geestes-abnormaliteit sal ly; of

(b) na die 20ste week van die draagtyd van 'n swanger vrou in subartikel (4)(a) of (b) bedoel die voortgesette swangerskap—

(i) die lewe van die vrou in gevaar sal stel;

35

(ii) 'n erge misvorming van die fetus sal veroorsaak; of

(iii) 'n gevaar van benadeling vir die fetus sal inhou,

kan hulle toestem tot die beëindiging van die swangerskap van sodanige vrou na oorlegpleging met haar natuurlike voog, gade, wettige voog of *curator personae*, na gelang van die geval. Met dien verstande dat die beëindiging van die swangerskap nie geweier sal word nie indien die natuurlike voog, gade, wettige voog of *curator personae*, na gelang van die geval, toestemming daartoe weier.

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Inligting rakende beëindiging van swangerskap

6. 'n Vrou wat 'n beëindiging van swangerskap van 'n geneesheer of 'n geregistreerde vroedvrou, na gelang van die geval, ingevolge artikel 2(1) versoek, moet oor haar regte kragtens hierdie Wet deur die betrokke persoon ingelig word.

45 Kennisgewing en hou van aantekeninge

7. (1) 'n Geneesheer, of 'n geregistreerde vroedvrou wat die voorgeskrewe opleidingskursus voltooi het, wat 'n swangerskap ingevolge artikel 2(1)(a) of (b) beëindig, moet die voorgeskrewe inligting op die voorgeskrewe wyse aanteken en kennis daarvan gee aan die persoon in subartikel (2) bedoel.

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(2) Die persoon wat in beheer is van 'n fasiliteit bedoel in artikel 3 of 'n persoon wat vir daardie doel aangewys is, moet meegedeel word, soos voorgeskryf, van elke beëindiging van 'n swangerskap wat in daardie fasiliteit uitgevoer word.

(3) Die persoon in beheer van 'n fasiliteit in artikel 3 bedoel, moet binne een maand vanaf die beëindiging van 'n swangerskap by so 'n fasiliteit, die voorgeskrewe inligting kollasioneer en dit vertroulik per geregistreerde pos aan die Direkteur-generaal yersend. Met dien verstande dat die naam en adres van 'n vrou wat 'n beëindiging van swangerskap versoek of verkry het, nie in die voorgeskrewe inligting ingesluit word nie.

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Act No. 92, 1996

CHOICE ON TERMINATION OF PREGNANCY ACT, 1996

(4) The Director-General shall keep record of the prescribed information which he or she receives in terms of subsection (3).

(5) The identity of a woman who has requested or obtained a termination of pregnancy shall remain confidential at all times unless she herself chooses to disclose that information.

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Delegation

8. (1) The Minister may, on such conditions as he or she may determine, in writing delegate to the Director-General or any other officer in the service of the State, any power conferred upon the Minister by or under this Act, except the power referred to in section 9.

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(2) The Director-General may, on such conditions as he or she may determine, in writing delegate to an officer in the service of the State, any power conferred upon the Director-General by or under this Act or delegated to him or her under subsection (1).

(3) The Minister or Director-General shall not be divested of any power delegated by him or her, and may amend or set aside any decision taken by a person in the exercise of any such power delegated to him or her.

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Regulations

9. The Minister may make regulations relating to any matter which he or she may consider necessary or expedient to prescribe for achieving the objects of this Act.

Offences and penalties

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10. (1) Any person who—

(a) is not a medical practitioner or a registered midwife who has completed the prescribed training course and who performs the termination of a pregnancy referred to in section 2(1)(a);

(b) is not a medical practitioner and who performs the termination of a pregnancy referred to in section 2(1)(b) or (c); or

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(c) prevents the lawful termination of a pregnancy or obstructs access to a facility for the termination of a pregnancy,

shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding 10 years.

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(2) Any person who contravenes or fails to comply with any provision of section 7 shall be guilty of an offence and liable on conviction to a fine or to imprisonment for a period not exceeding six months.

Application of Act

11. (1) This Act shall apply to the whole of the national territory of the Republic.

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(2) This Act shall repeal—

(a) the Act mentioned in columns one and two of the Schedule to the extent set out in the third column of the Schedule; and

(b) any law relating to the termination of pregnancy which applied in the territory of any entity which prior to the commencement of the Constitution of the Republic of South Africa, 1993 (Act No. 200 of 1993), possessed legislative authority with regard to the termination of a pregnancy.

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Short title and commencement

12. This Act shall be called the Choice on Termination of Pregnancy Act, 1996, and shall come into operation on a date fixed by the President by proclamation in the *Gazette*.

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WET OP KEUSE OOR DIE BEËINDIGING VAN SWANGERSKAP, 1996 Wet No. 92, 1996

(4) Die Direkteur-generaal moet aantekeninge hou van die voorgeskrewe inligting wat hy of sy ingevolge subartikel (3) ontvang.

(5) Die identiteit van 'n vrou wat 'n beëindiging van swangerskap versoek of verkry het, bly vertroulik te alle tye, tensy sy self verkies om daardie inligting openbaar te maak.

Delegering

8. (1) Die Minister kan, op die voorwaardes wat hy of sy bepaal, enige bevoegdheid by of kragtens hierdie Wet aan hom of haar verleen, behalwe die bevoegdheid in artikel 9 bedoel, skriftelik aan die Direkteur-generaal of 'n ander beampte in diens van die Staat deleger.

(2) Die Direkteur-generaal kan, op die voorwaardes wat hy of sy bepaal, enige bevoegdheid by of kragtens hierdie Wet aan hom of haar verleen of kragtens subartikel (1) aan hom of haar gedeleger, skriftelik aan 'n beampte in diens van die Staat deleger.

(3) Die Minister of Direkteur-generaal is nie ontdeen van enige bevoegdheid wat hy of sy gedeleger het nie, en kan enige beslissing van 'n persoon wat geneem word in die uitoefening van enige sodanige bevoegdheid aan hom of haar gedeleger, wysig of herroep.

Regulasies

9. Die Minister kan regulasies maak betreffende enige aangeleentheid wat hy of sy nodig of dienstig ag ten einde die oogmerke van hierdie Wet te bereik.

Misdrywe en strawwe

10. (1) 'n Persoon wat—

(a) nie 'n geneesheer of 'n geregistreerde vroedvrou is wat die voorgeskrewe opleidingskursus voltooi het nie en wat die beëindiging van 'n swangerskap in artikel 2(1)(a) bedoel, uitvoer;

(b) nie 'n geneesheer is nie en wat die beëindiging van 'n swangerskap in artikel 2(1)(b) of (c) bedoel, uitvoer; of

(c) die regmatige beëindiging van 'n swangerskap verhoed of toegang tot 'n fasiliteit vir die regmatige beëindiging van 'n swangerskap verhinder, is aan 'n misdryf skuldig en by skuldigbevinding strafbaar met 'n boete of met gevangenisstraf vir 'n tydperk van van hoogstens 10 jaar.

(2) 'n Persoon wat versuim om enige bepaling van artikel 7 na te kom of dit oortree, is aan 'n misdryf skuldig en by skuldigbevinding strafbaar met 'n boete of met gevangenisstraf vir 'n tydperk van hoogstens ses maande.

Toepassing van Wet

11. (1) Hierdie Wet is op die hele nasionale grondgebied van die Republiek van toepassing.

(2) Hierdie Wet herroep—

(a) die Wet in kolomme een en twee van die Bylae vermeld in die mate in die derde kolom van die Bylae uiteengesit; en

(b) enige wet met betrekking tot die beëindiging van swangerskap wat van toepassing was op die grondgebied van 'n entiteit wat voor die inwerkingtreding van die Grondwet van die Republiek van Suid-Afrika, 1993 (Wet No. 200 van 1993), wetgewende bevoegdheid gehad het met betrekking tot die beëindiging van 'n swangerskap.

Kort titel en inwerkingtreding

12. Hierdie Wet heet Wet op Keuse oor die Beëindiging van Swangerskap, 1996, en tree in werking op 'n datum wat die President by proklamasie in die *Staatskoerant* bepaal.

Act No. 92, 1996

CHOICE OF TERMINATION OF PREGNANCY ACT, 1996

SCHEDULE

No. and year of law	Short title	Extent of repeal
Act No. 2 of 1975	Abortion and Sterilization Act, 1975	In so far as it relates to abortion

BYLAE

No. en jaar van wet	Kort titel	Omvang van herroeping
Wet No. 2 van 1975	Wet op Vrugaafwyng en Sterilisasie, 1975	In soverre dit betrekking het op vrugaafwyng

Guidelines for critical reflection on Act No. 92 of 1996 (Choice on Termination of Pregnancy Act, 1996).

1. Read the Act provided **carefully**.
2. Reflect on the Act. That is think about what you have read.
3. **Write** down your **immediate** reactions (thoughts, feelings).
4. Read the Act a **second time**.
5. **Summarize** the **most** important implications of the Act.
6. **Critically reflect** on the Act for a **third time** and answer the following questions:
 - 6.1. *What essential factors (in your opinion) contributed to the South African government's decision to draw up the Act?*
 - 6.2. *Who will be affected by the Act (e.g., which individuals/groups)?*
 - 6.3. *What broader issues may arise from the Act (e.g., ethical/professional/political/social)?*
7. **Critically reflect** on the Act for a **fourth time**:
 - 7.1. **Imagine** that you are a **registered midwife** (or you may already be a registered midwife).
 - 7.2. **Critically reflect** on what your role will be in implementing the Act. What is the **implications** of the Act for a registered midwife?
 - 7.3. **Write** your thoughts regarding 7.2. down.
 - 7.4. **Critically reflect** on what you have written. How do you feel about it?
 - 7.5. **Write** your feelings down.
8. **Critically reflect** on what you have **read, written** and thought about:
 - 8.1. *What sources of knowledge will you need to make a decision on whether or not to terminate a pregnancy (e.g., on knowledge of ethical principles; patient opinion/history; theoretical knowledge; specific skills; and other sources)?*
 - 8.2. **Write** the needed sources of knowledge down and **motivate** your answer. *Why do you need it?*
9. **Critically reflect** on the exercise and **answer** the following questions frankly:
 - 9.1. *What are your feelings about the exercise? Why?*
 - 9.2. *What was positive (good) and what was negative (bad) about the exercise?*

9.3. *Did you learn anything new about*

9.3.1. *yourself? What?*

9.3.2. *the issue/topic? What?*

10. After completion of the exercise, hand it in for the inquirer's review.

THANK YOU FOR PARTICIPATING IN THIS EXERCISE!

Annexure VI: Babies from a plastic womb: the end of childbirth as we know it?

Babies from a plastic womb: the end of childbirth as we know it?

According to *Reuter* a Japanese scientist, Professor Yoshinori Kuwabara of Juntendo University, Japan, recently developed an artificial 'womb'. According to Professor Kuwabara his research team has successfully incubated goat foetuses for up to three weeks in a plastic 'womb' until the end of their incubation period.

Can a plastic tank replace the female womb?

The plastic 'womb' consists of a rectangular clear plastic box filled with amniotic fluid at body temperature. The whole apparatus is connected to vital function devices. The foetus lies submerged in amniotic fluid inside the 'womb'. The 'womb' replaces the vital oxygen of the foetus and also cleans the foetus' blood via a dialysis machine which is linked to the umbilical cord of the foetus.

Never before has anyone been successful in sustaining life outside the female womb

Other researchers have managed to keep foetuses alive outside the womb for a few days only. Prof Kuwabara's research team is the first with a success rate of sustaining life in an artificial 'womb' for several weeks - until the end of their incubation period.

Replacement of the human womb possible within 10 years

According to Professor Kuwabara successful incubation of human babies should be possible within a decade.

Another ethical dilemma

Nursing News recently reported on "who owns the sperm of a dead man". Yet another ethical dilemma now confronts medical science with the development of the plastic 'womb'. Medical ethicists and others are extremely concerned over these developments.

Those in favour of this type of developments tell us that genetic defects will be easier to diagnose. There will be no need for an amniocentesis with all its associated risks to both mother and unborn child - a specimen of amniotic fluid can easily be taken from the tank. But what will happen when a foetus is found to be suffering from a genetic defect or if the foetus is of the wrong gender? There will be no need to perform an abortion - one will merely remove the foetus from the tank and destroy it! No one even needs to know about it.

Could this hail the end of miscarriages. Can premature births now be prevented? Will this be a major step towards ending perinatal

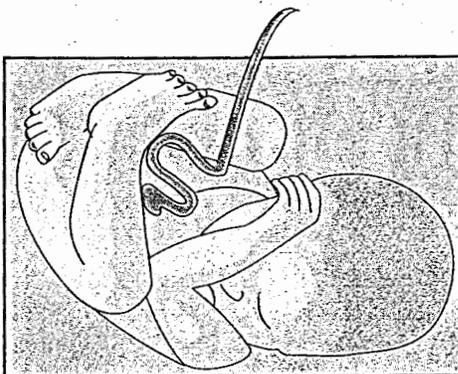
fatalities? Yes, it could be so, but what are the ethical implications? Should research like this be allowed to continue?

Several questions need to be answered

Could this be the start of a market for human embryos? By implication anyone can now acquire a plastic 'womb' together with a fertilised embryo and watch the embryo grow and develop in the plastic tank until it is ready to be removed from the tank and become a living baby!

Women can now have their embryos fertilised in a laboratory and have them incubated in an artificial womb. Gone are the days of morning sickness. No more discomfort or medical problems related to pregnancy. The 'mother' can now keep on working. No need even for the mother to take maternity leave. It could contribute to productivity as 'mothers' can continue to work while their babies are growing in plastic tanks at home! Multiple pregnancies can be safely handled without fear of miscarriage. Parents can come home at night and watch their baby/babies grow!

But who will regulate this process? Is current legislation sufficient to deal with this



issue? Should the judiciary be in control of this. Should it be in the hands of medical practitioners.

Will any childless individual now be in a position to 'buy' the baby of their choice?

Should the development of a plastic 'womb' for humans be allowed to continue further? Is humanity ready to take this advanced step in controlling procreation? Where will it all end? Will midwives now also be required to become technicians responsible for maintaining and controlling artificial 'wombs'?

Serious debate and urgent answers required

The time has come for medical scientists to sit down together with ethicists and other interested groups to seriously debate this issue. Answers must be found before this type of experimentation is allowed to continue. Without this, total chaos could erupt and a situation develop which eventually cannot be controlled.

Guidelines for critical reflection on media reports/journal articles

1. Read the media report/article carefully.
2. Reflect critically on what you have read.
3. *Write down* your immediate reactions (thoughts and feelings about what you have read).
4. Read the report/article a second time.
5. *Summarize* the most important implications of the report/article.
6. Critically reflect on the article for a second time, and *answer* the following questions:
 - 6.1. What factors (your opinion) contributed to the issue/problem discussed in the report/article?
 - 6.2. Who will be affected by this issue/problem? Why will these people be affected?
 - 6.3. What broader issues (e.g., ethical, professional, political, social) may arise from this issue/problem?
7. Read the report/article a third time:
 - 7.1. Think about what you have read and written.
 - 7.2. What sources of knowledge will you (as registered nurse) need to deal with the issue/problem?
 - 7.3. Write the sources of knowledge down and explain why you will need it.
8. Critically reflect on what you have read and written. *What are your feelings about the exercise? Why? What was positive and what was negative? Did you learn anything new about yourself, the issue/problem? What?*

Submit the exercise on completion. Thank you for participating.

Guidelines for participation in Critical Incident Technique
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1. Participants will be involved in what is called **Guided, Critical Reflective Exercises** through Critical Incident recording and analyzes.
2. *What is guided critical reflection?*

It is a combination of techniques/exercises intended to stimulate critical and reflective thinking on your professional, personal and study/learning experiences. Guided critical reflective technique enables the participant to learn from experiences/incidents/problems in a structured and supported way. It provides a *mirror* to help you view an incident/experience/problem in a more objective manner.

3. *What is a critical incident?*

Critical incidents are brief descriptions of significant events, issues or situations experienced. It is a *written* description of the particular event, issue or situation. The critical incident that you may wish or choose to recall, record and share, may be a *positive* or *negative* one.

The critical incident report requires *details* of:

- ▶ time and place,
- ▶ actors (people) involved in the incident, and
- ▶ reasons why the event was so significant.

Use of *actual dialogue* (if possible) are required. **Do not try to be creative.** The incident report should be a **true account of what had happened.**

4. *Other requirements*

To report and analyze your chosen incident effectively, you will need to:

- ▶ **stand back** from the incident. That is **withdraw** from the situation and the actors involved.
- ▶ remember that the report is more than a recording of what has happened. It is an objectification of your **inner search**, an anchor from which you will make further explorations.

- ▶ **find a quiet place** which will enable you to **distance yourself** from colleagues, peers, clients and family. The critical incident report is an **introspective tool** that needs your **full attention**.

After each incident recorded, you will need to critically reflect on, and analyze it.

Guidelines *on how* the incident should be analyzed will be provided. The incidents you choose to share with the inquirer, will be **determined by yourself**.

5. ***What will the inquirer do with the knowledge, feedback and incident reports gained from participants?***

5.1. The inquirer will use it to:

- ▶ assess participants' attitudes and feelings toward Critical Incident Technique as a critical, reflective exercise;
- ▶ assess *what* changes are needed for effective use of Critical Incident Technique as a learning technique;
- ▶ **complete a doctoral thesis;**
- ▶ develop guidelines for other educators on how critical, reflective thinking could be facilitated for future nurse practitioners; and
- ▶ **develop an educational model for facilitation of critical, reflective and creative thinking.**

5.2. Who other than the inquirer will have access to the incident reports and feedback ?

People who will have access include:

- ▶ Two (2) senior professors who will critique, and provide accompaniment for this inquiry;
- ▶ Two (2) senior peer reviewers (professors) who will critique the inquiry, tools, data analysis. This is necessary to ensure that the inquirer stays objective in her interpretation of the study findings.
- ▶ At least two (2) external examiners, not known to the inquirer, will have access to the incident reports and questionnaires if required.

5.3. What about confidentiality?

Your identity, and the identity of other *actors* involved will be protected by the inquirer, in that:

- ▶ your handwritten reports will be typed by the inquirer. The typed reports will not reveal your personal identity or those of other actors or places. The typed reports, will only reflect a protective code.
- ▶ your real identity will only be known to the inquirer and yourself.
- ▶ data summarized in the thesis, will not indicate/show your personal identity.
- ▶ no other person will have access to your real identity (except with your written permission).

6. *Will you personally benefit from participation in Critical Incident Technique and the inquiry?*

- **No financial reward will be given.**
- You may benefit, through personal insight, professional growth, self-knowledge and growth in empathy for others (that is growth in your personal, critical and reflective ability).
- An additional benefit may be the support and listening ear of the inquirer.
- Hopefully, participation in the inquiry will result in you (as nurse practitioner/educator) using similar techniques in the accompaniment or guidance of others.

6. Personal details regarding the inquirer and other supervisors

6.1. Inquirer: EJ van Aswegen (Senior lecturer, Medunsa)

Office: SHS 343

Tel. No.: 5214664 (012)

Fax: 5214481 (012)

Post Box: 142, Medunsa 0204.

6.2. Name of Peer Reviewers:

- at Medunsa: Prof. C Kganakga

SHS 341

Tel. No. 5214477 (012)

- Prof. CF. van Niekerk (Previous Head: Nursing Science Department, Medunsa)

6.3. Name of study supervisors: Prof. HIL Brink (Head: Nursing Science Department, UNISA).

Prof. PJN. Steyn (Head: Distance Education Department, UNISA).

Guidelines for recording and analyses of Critical Incidents by participants
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I. Instructions to participants:

1. Use the workbook provided.
2. Split each page in two sections.
3. Write up the incident (experience) on the left-hand side:
 - Write the incident/experience on the same day it happened if possible.
 - Use *actual dialogue* wherever possible to capture the situation.
 - Balance problematic incidents/experiences with satisfying incidents/experiences (if possible).
 - Always endeavour to be open and honest with yourself - find the *authentic you* to do the writing.
4. After you have written the experience/incident down, ask yourself the following core questions:
 - **What information do I need in order to learn through this incident/experience?**
 - Write your answer on the right-hand side of the workbook (next to the incident/experience that you have written down).
 - Attempt to answer the following key questions (if applicable to the incident/experience):
 - 1.0. *Description of the experience/incident (What happened?)*
 - .1. *Causal* - What essential factors contributed to this experience?
 - .2. *Context* - Where did the experience/incident take place?
 - Who were involved in this experience/incident? Who were the "actors"?
 - 2.0. *Reflect (consciously and critically think about the experience/incident: What were you thinking and feeling?)*
 - .1. *What were you trying to achieve?*
 - .2. *Why did you react as you did?; Why did you intervene as you did?; Why were you involved? What was your role in the situation?*

LVIII

.3. *What were the consequence of your actions for:*

- *Yourself?*
- *The people you work with?*
- *Your peers?*
- *Your friends?*
- *Your family?*
- *The patient ? The patients family/friends?*

.4. *How did you feel about this experience when it was happening?*

.5. *How did the other people involved ("actors") feel about it?*

3.0. *Influencing factors (What influenced the situation?)*

.1. *What internal factors (within the situation/immediate environment) influenced the situation? Your actions? Your decision making?*

.2. *What external factors influenced the situation? Your actions? Your decision making?*

.3. *What sources of knowledge influenced your actions/decisions?*

- *Personal experience? (Previous experience with a similar situation?)*
- *Instinct? (Nothing specific; " You just acted")*
- *Emotive reaction?*
- *Theoretical knowledge?*
- *Policy? (Rules & Regulations; Procedures)*
- *Ethical principles?*
- *Patient (opinion; attitude; history)*
- *Other sources (such as?)*

.4. *What sources of knowledge should have influenced your actions/decisions?*

4.0. *Could you have dealt better with the situation?; OR Do you feel positive about the situation? (Analysis)*

.1. *Why?*

.2. *What other choices/options did you have? What can you change in future?*

.3. *What would be the consequences of these choices?*

5.0. *Learning [Evaluation] (What did you learn from the situation/experience/issue?)*

.1. *How do you feel about the experience? Did you feel comfortable or uncomfortable? Why?*

.2. *What was good (positive) and what was bad about the experience?*

- .3. *Did you learn anything from this experience/situation/issue that might influence future actions/decisions? What?*
 - .4. *Do you feel as if you have learned anything new about:*
 - yourself?
 - the other "actors" (who?; what?)
 - the situation/issue?
 - .5. *Has the experience changed your thinking in any way?*
 - .6. *Did you expect anything different to happen? What and why?*
 - .7. *What broader issues, for example ethical, professional, political or social may arise from this situation/experience/issue?*
- 6.0. *Action plan (Evaluation: What knowledge do you need to handle similar situations in future?)*
- .1. *Theory & Research: What knowledge from theory and research can apply to this situation? Could have been used in the situation?*
 - .2. *Broader knowledge: Ethical knowledge/guidelines? Political knowledge? Cultural knowledge?*
 - .3. *Self-knowledge?*
- 5. After writing down the incident/experience and analysing it, reflect on the exercise and answer the following questions:**
- 5.1. *Reflecting on the exercise (incident reporting and analysis) - How do you feel about the exercise?*
 - 5.2. *What was positive and what was negative about the exercise?*

PLEASE SUBMIT THE CRITICAL REPORT AND ANALYSES IF YOU WISH TO SHARE IT WITH THE INQUIRER! IF NOT: Write the answers to Question 5.1. & 5.2. on a piece of paper and hand it in.

((Participant recorded and analyzed eight (8) critical incidents, however, due to the personal nature of six of the incidents are not included in this Annexure))

Participant: P1

Date: 15/7/97

Critical Incident Report: 1

Description of the incident:

- 1 *I was arrogently shouted at, demoralized, dehumanized, criticized very rudely =*
- 2 *= and stopped from continuing while giving a lecture at GJK.*
- 3 *The stage FFJ learners were attentive and cooperative until the lecturer MKT =*
- 4 *= started criticizing me in front of them.*
- 5 *They then started being arrogant until one of the learners asked their "ma'am" =*
- 6 *= to step me down so that she can lecture them.*
- 7 *I maintained my professionalism though it wasn't easy.*
- 8 *I felt discouraged to continue with the profession it has got a lot of stumbling blocks within it =*
- 9 *= and actually in the end it does not pay.*

Analysis of the incident by the participant

What were the contributing factors?

- 10 *I don't know but could diagnose some inferiority complex.*

Who were the actors involved?

- 11 *Lecturer MKT*
- 12 *Stage FFJ Diploma students*

What was I thinking and feeling?

- 13 *I felt insulted, demoralized before the students terribly undermined by the woman.*

Participant: P1

Date: 17/7/97

Critical Incident Report: 2

Description of the incident:

- 1 *I was demonstrating a procedure to the B Cur J group, tried my best.*
- 2 *Did the procedure together with the lecture beforehand till such time that the lecturer =*
- 3 *= had to score my skills.*
- 4 *I was terribly criticized as if I do not know anything or I didn't take efforts.*
- 5 *I felt cheated and wrongfully evaluated.*
- 6 *I was very angry but contained all of it.*
- 7 *The fact that I know I have done all I can to be the best lecturer.*
- 8 *I was given 60% which I know I do not deserve.*
- 9 *I just took it for the sake of finishing the report.*

Analysis of the incident by the participant

Why was I involved in the situation?

- 10 *It's a requirement for my course.*

Where did the incident occur?

- 11 *In the lecturer's office.*

Who were the actors involved?

- 12 *Myself*
- 13 *Ms. EN*

What was I thinking and feeling?

- 14 *I felt that Nursing with all its products is a Nightmare.*
- 15 *No matter how hard one tries, she meets resistance and stumbling blocks from superiors.*
- 16 *For a person to be satisfied or happy in Nursing is when you fight, and you know =*
- 17 *= you cannot afford to be fighting for the rest of your life.*
- 18 *Somewhere one has to rest and be yourself.*
- 19 *And fighting is strenuous.*

Participant: P1

Date: 28/7/97

**Critical reflective exercise: Choice on Termination of Pregnancy Act,
Act No. 92 of 1996.**

Participant feedback on exercise

1. Immediate feelings:

- 1 *I feel that the government is giving a lot of freedom on many things. =*
- 2 *= some of which will be detrimental to the lives of some individuals. =*
- 3 *= eg. toxicity that will end up in many who underwent TOP from Thromboplastins.*

2. Most important implications of the act:

- 4 *Women should be given the right of choice regards whether or not to have children.*
- 5 *To terminate pregnancy if it poses danger to the mother and fetus, or some =*
- 6 *= emotional stress to both mother and baby, or has economical implications =*
- 7 *= to the mother and the baby.*
- 8 *This can be done during the first 12 weeks of gestation or up to 20 weeks =*
- 9 *= depending on the medical practitioner's discretion.*

3. Essential factors that contributed to the government decision to draw up this act:

- 10 *Many births resulting from rape and/or incest.*
- 11 *Many unwanted pregnancies resulting from sexual harassment and/or =*
- 12 *= wife abuse/battering by their husband.*
- 13 *The oppression of women for a long time.*

4. Those affected by the act:

- 14 *All females*
- 15 *Most professionals*
- 16 *Christians*
- 17 *Teenagers*
- 18 *Illegitimate kids*
- 19 *Health service providers*
- 20 *Promiscuous people*
- 21 *Unborn children*

5. Broader issues arising from the act:

5.1. Ethical:

9. How do I feel about this exercise? Why?

- 54 *Just fine, but a little tensed, because I sleep very late everyday.*
 55 *I do not have enough time to rest for a single day in my life.*

10. What was good (positive) and what was bad (negative) about the exercise (experience)?**10.1. Positive:**

- 56 *The good thing is that the exercise outlines all important aspects =*
 57 *= pertaining to the Act 92 of 1996.*

10.2. Negative:

- 58 *The exercise was done in the middle of the year when many learners =*
 59 *= are in the middle of the workload.*
 60 *So even if it is done, it is not done as perfect =*
 61 *= as it would have been if it were issued early in the year.*

11. Did you learn anything new about:**11.1. Yourself? (What?)**

- 62 *Yes.*
 63 *That till this for I don't enjoy reading acts they are written with small letter =*
 64 *= too clustered and a lot of references and sometimes talk very difficult language.*

11.2. The issue? (What?)

65. *Yes.*
 66. *I've learnt that it is possible for people to given the latitude to kill =*
 67 *= innocent babies and actually encouraged to =*
 68 *= sleep arround and not use contraceptives because they know that the final =*
 69 *= and destructive method is available for them.*
 70 *I've also learnt that democracy is nonsense many times because it allows nonsense =*
 71 *= because it's human rights."*

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- 36 = and I am using public transport.
37 I tried to explain my problem of transport, but she could not listen.
38 I left the hospital not knowing where to go, or what to do.
39 All I did was to make a short prayer, asking God to be with me =
40 = and told myself that if ever the night super was treating me like that because =
41 = I was the only black among Whites, God should forgive her =
42 = or if ever that was the punishment that I was deserving that night, =
43 = for what ever I have done or I have not done, well I also accepted it.
44 All in all, at the end i thanked God because I manage to arrive safely =
45 = in the residence.

Analysis of the incident by the participant

What was the factors that contributed to this incident?

- 46 My skin colour.
47 I was the only person working in that ward.

Who were the actors involved?

- 48 Myself.
49 Patients.
50 Sister in nearby ward.
51 Relations of the patient.
52 Night-super.
53 The patient who cried of pain and required immediate attention.

What were the consequences of my actions?

- 54 My actions nearly led me in big trouble.

What were the consequences for the others involved?

- 55 All others were less concerned about me.
56 They were very happy with the final decision made.

Did I benefit from this exercise?/How do I feel about the exercise?

- 57 The exercise enabled me to look at the incident once again, =
58 = and to recognize that I still feel dissapointed about how the incident were treated.
59 I also, think that I could have acted in a more assertive manner.

Inquirer remarks:

((The participant works over weekends, on a part-time basis, for a nursing agency.))

- 36 = between epileptic fit and convulsion caused by other things.
- 37 I felt so bad and I appeared very stupid.
- 38 The detailed history was taken from the relatives, =
- 39 = and it was found that the patient took a poisonous substance, =
- 40 = trying to commit suicide.
- 41 He had been having repeated attacks since ingestion of the substance.
- 42 Fortunately they had brought the container of what the patient has taken.
- 43 I was also fortunate, because after post-mortem the results was that =
- 44 = he died from poison.
- 45 To some extent, I was some-how relieved, but not completely.
- 46 I learned a lot from this incident, because it was only after the incident that I =
- 47 = could realize that there is a difference between an epileptic fit and convulsions, =
- 48 = and that it is important to know the cause before you treat.
- 49 As from that time till now I have never given a convulsing patient Valium.
- 50 I think I will never forget that incident.

Analysis of the incident by the participant

What were the consequences of my actions?

- 51 I am still having guilty feelings.
- 52 I have contributed to the death of a patient.
- 53 I am not sure how the incident influenced the people I worked with (my peers).
- 54 To the patient it is worse, because he is dead.
- 55 To the family, they did not blame anybody.
- 56 Everybody felt so bad and we were very sorry for the guy (patient).

What influenced the situation?

- 57 ?My action could have influenced the situation.
- 58 I think my experience, knowledge and the policy influenced the situation.

Could I have dealt better with the situation?

- 59 I think that I need to know more about drugs and their actions.
- 60 I also need to know more about the condition and to understand the =
- 61 = meaning of the standing orders.
- 62 If the internal policy/ standing order is vague I need more clarification.

What was the causal/contributing factors?

- 63 Standing orders.
- 64 My rank (I was a professional nurse).
- 65 The nature of the department (casualty).

Participant: P2

Date: 12/7/97

**Critical reflective exercise: Choice on Termination of Pregnancy Act,
Act No. 92 of 1996.**

Participant feedback on exercise

1. Immediate feelings:

- 1 *I believe the act is to a certain extent overlooking the fact =*
- 2 *= that life begins immediately after conception =*
- 3 *= and everybody has the right to live.*
- 4 *By termination of pregnancy it actually means "killing" or terminating the life of =*
- 5 *= the "morula" which will sooner or later be called a fetus then the unborn baby.*
- 6 *When taking into consideration the religious point of view, this is totally wrong =*
- 7 *= and in my opinion I really differ with the Act.*

2. Most important implications of the act:

- 8 *Many women may use this as another method of family planning.*
- 9 *Teenagers may feel free to practice unsafe sex, knowing that they are allowed to =*
- 10 *= terminate pregnancy.*
- 11 *This may lead to increased sexually transmitted diseases, including AIDS.*
- 12 *On the other side there might be positive implications, =*
- 13 *= eg., decreased incidences of septic abortions, decreased maternal deaths =*
- 14 *= because the procedure will be performed by experienced persons.*
- 15 *To a certain extent the economic status of a country will be boosted =*
- 16 *= because of decreased number of unwanted children =*
- 17 *= which is leading to the street-kids.*
- 18 *The dignity and the status of women will be protected.*

**3. Essential factors that contributed to the government
decision to draw up this Act:**

- 19 *The fact that women have the right of access to appropriate health care services =*
- 20 *= to ensure safe pregnancy and childbirth.*
- 21 *The physical, psychological and social health of a woman.*
- 22 *There were many deaths arising because of women trying to terminate pregnancy =*
- 23 *= under unhygienic conditions.*
- 24 *Many children were abandoned because of the social and the economic status =*
- 25 *= of the women and these become a burden to the state.*
- 26 *To maintain the dignity of women.*

- 52 *I need to know why has the patient decided to take such a drastic step.*
- 53 *Her social, economical, family and fertility history.*
- 54 *How many children she is having, are they all alive, how many still-births did she had, =*
- 55 *= what is the cause.*
- 56 *Are her children normal or not.*
- 57 *Is she married or not.*
- 58 *All these might be contributing to the woman's opinion and where possible=*
- 59 *= counselling may make the woman to change her decision.*
- 60 *It is important to know all these because the woman might not be =*
- 61 *= aware that her fertility rate might be too low, that her chances of =*
- 62 *= conceiving again are very slim.*
- 63 *Theoretical knowledge: =*
- 64 *= I think it is necessary to know a little about Genetics.*
- 65 *Experience: =*
- 66 *= The midwife may also make the decision basing her facts on =*
- 67 *= experience, eg., the complications which may arise because of this, =*
- 68 *= the side-effects of the treatment used to induce pregnancy.*
- 69 *Ethical principles: =*
- 70 *= Know the standards and the principles to guide and conduct =*
- 71 *= decision making in the protection of human rights.*
- 72 *As the members of the profession we must know the importance of =*
- 73 *= ethical principles for professional practice.*

9. How do I feel about this exercise? Why?

- 74 *It was a form of brainstorming.*
- 75 *Firstly, it made me to read the Act of which I don't think I =*
- 76 *= could have done that on my own.*
- 77 *It actually again made or forced me to internalize the Act =*
- 78 *= and try to find out both the positive and the negative implications of the Act.*

10. What was good (positive) and what was bad (negative) about the exercise (experience)?

10.1. Positive:

- 79 *The positive part of this is that it is for the first-time for me =*
- 80 *= going through this Act so thoroughly ever since it has been passed =*
- 81 *= and I have gained insight concerning this Act.*
- 82 *I have also realized the need to read more=*
- 83 *= about additional knowledge concerning the Act before I make any decision.*

10.2. Negative:

- 84 *((Nothing indicated))*

11. Did you learn anything new about :

11.1. Yourself? (What?)

Participant: P2

Date: 22/11/97

Critical reflective exercise: Journal Article

Articles: "Babies from a plastic womb: the end of childbirth as we know it."

Journal: Nursing News, October 1997, 21(10), 53.

Immediate thoughts and feelings after reading the article once

1 *Confusion.*

2 *I am having so many questions to ask about the issue, for example:*

3 - *Religious point of view:*

4 *God created man in his image, will a baby from a plastic womb still be in the image of God?*

5 *God has assigned pregnancy to a woman and He said a woman will suffer labour-pains =*

6 *= during delivery, if in the long run a man develops a plastic womb, what will be the impact =*

7 *= of this in God's eyes? Does it show that the man is against God or what?*

8 *It has been said in the article that it will be easy to "stop" or "discontinue" the life of =*

9 *= a grossly deformed foetus, from this, is life still valued or respected?*

10 - *Psychological point of view:*

11 *From different literature it has been said that bonding between mother and child starts =*

12 *= while the baby is still in utero, from this my question is, in the case of plastic womb baby, =*

13 *= when is the bonding going to start between the two?*

14 *Psychologists claim that the foetus is able to hear voices while still in uterus, in so much that it =*

15 *= can even identify the father's voice from other voices, so, what I will like to know is =*

16 *= whether this will still be the same in the case of a plastic-womb baby, what will the foetus perceive =*

17 *= the "machine-operator" to be because to me the person who is operating the machine =*

18 *= will be the one who is closer to the baby more than anybody else.*

19 *Further bonding is established immediately after birth of the baby, by allowing the baby to =*

20 *= suck from the mother, how will this need be satisfied to ensure bonding.*

21 *At times it does happen that the pregnant woman do report that she is no longer feeling =*

22 *= foetal movements, which in most cases is the sign of intra-uterine death, should it happen that =*

23 *= the plastic womb foetus dies while its mother is not around, how will she feel when she is being =*

24 *= told that her foetus has passed away?*

25 *Who is to be blamed? Is the machine operator to be blamed who possibly will be the nurse?*

26 - *Economical point of view:*

27 *How much is it going to cost the Government to buy these plastic wombs, their maintenance =*

28 *= and to employ the people who are going to monitor them?*

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Who will be the actors involved in the situation?

- 64 *The medical officer, eg., the doctor who is performing the procedure.*
65 *The mother and father of the unborn foetus.*
66 *The laboratory technician – he will be responsible for all the investigations.*
67 *The regulator of the machine – responsible to monitor the life of the foetus.*
68 *The team which is going to take part in "delivering the baby," thus taking the baby out of the =*
69 *= plastic womb when it is ready to be removed.*
70 *The foetus – plays the most important role as it is the main object of focus.*

What possible ethical issues may arise?

- 71 *The ethical dilemma will rise incase where life of the foetus is supposed to be terminated or =*
72 *= where the individual is supposed to buy the plastic-womb baby.*
73 *The other ethical dilemma will be in cases where the woman may after some time, =*
74 *= feel that she is no longer interested in that baby and demand that the life of the baby be terminated.*

What is my feelings about the incident (article)?

- 75 *My feelings about the exercise is that there is a lot of advancement as far as technology is concerned =*
76 *= because after the implementation of this procedure it will be the same like developing a factory =*
77 *= which is manufacturing babies.*
78 *It is difficult to say what is positive and what is negative about the exercise because the procedure is =*
79 *= not yet clear.*

29 *Daily in health care practices.*

What do I think and feel when such incidences occur?

30 *Emotionally uncomfortable!*

31 *Guilty!*

32 *Depressed!*

33 *Helpless!*

Can I deal better with such incidents?

34 *Yes.*

How?

35 *By being first able to verbalize my own fears regarding Ca.*

36 *To talk it through with a sympathetic ear!*

37 *By receiving more training in counselling skills.*

38 *By using instruments (such as this report) as a way of catharsis.*

39 *By becoming more assertive as this will enable me to confront colleagues/medical staff =*

40 *= who shy away from their responsibilities towards Ca. patients.*

41 *By accepting the fact that Ca. is a fact of life.*

How do I feel about this exercise?

42 *I have mixed feelings.*

43 *The exercise made me conscious of my vulnerability as a human being, =*

44 *= and my lack of experience in patient counselling.*

45 *It made me conscious of the fact that I need to distance myself from =*

46 *= previous, negative experiences with death in my own family.*

What were the consequences of my feelings towards Cancer?

47 *It complicates my relationship with Ca. patients!*

48 *In that I find it difficult to work with them in an objective manner.*

What are the consequences for my relationship with colleagues (nursing and medical)?

49 *Anger towards medical staff for not being frank with Ca. patients.*

50 *Anger in that it put me and other junior staff in a vulnerable position.*

Inquirer remarks:

((Participant works on a part-time basis for a Nursing Agency to earn money for studies. The part-time work includes spending time in a general (medical and surgical) ward and emergency department. During an informal conversation with the participant she said that Incident 1 was written after night shift. The trigger experience which motivated recording the above incident was exposure with an elderly patient who complained that the medical practitioner is always in a hurry and answers his questions in a superficial manner.))

27 Exhausted

What was the longterm effect of the incident?

- 28 *I felt a loss of idealism towards my profession- Do we really make a difference?*
- 29 *Disturbed sleep - I was working all day in my dreams.*
- 30 *Tension headache.*
- 31 *Loss of energy.*

Could I have dealt better with the situation?

- 32 *No!*
- 33 *I do not think so.*

How do I feel about this exercise?

- 34 *Positive!*
- 35 *In that it enabled me to look more objective at the incident and myself, =*
- 36 *= and distance myself (emotionally) from it.*

Inquirer remarks:

((After handing in this report, the participant verbalised that this is her final report that she would be handing in, as her time is currently limited being a full-time student and part-time worker over weekends.))

- 28 = *it may happen that incompetent, careless people provide the procedure!*
 29 *Therefore, it may be necessary to compare the advantages and disadvantages of such a procedure.*

5.2. Professional:

- 30 *Even more complicated as abortion on demand is not really congruent =*
 31 *= with the nursing and medical professions ethical principles.*
 32 *It is a major problem.*
 33 *I think that if abortions on demand must be done, then it should be done by experienced, =*
 35 *= older health care personnel.*
 36 *Emotionally young practitioners and midwives will not be able to cope with it!*
 37 *Their will also be a need for a counselling service for personnel involved in such practices."*

5.3. Religious:

- 38 *Very serious implications which can result in feelings of guilt and depression in the women =*
 39 *= who underwent the abortion and the health care personnel involved.*

5.4. Social:

- 40 *Social promiscuity, as sexual relationships now do not need to end up =*
 41 *= with an unwanted child or marriage.*
 42 *I think they may also be an increase in sexually related diseases as people do not need =*
 43 *= to practice safe sex any longer!*
 44 *Divorce may also increase if the partners disagree regarding the abortion.*
 45 *Murder, that is legal murder may now be possible if the gender of the unborn child is unacceptable.*

6. Implications of the Act for the registered midwife (myself):

- 46 *Serious implications.*
 47 *Although I am currently not yet involved in abortion on request, it stress me to =*
 48 *= know that I will not always be studying, and at some time will have to get involved/make =*
 49 *= a decision.*
 50 *I also know that I do not have enough experience in counselling, and am certain that =*
 51 *= many midwives and medical practitioners also lack it.*
 52 *Thus, will the counselling that we are supposed to provide be of any benefit ?*
 53 *Also if the abortion clinic is very busy their will not be much time for proper counselling.*
 54 *Personnel is already stressed with time and overworked.*
 55 *Before going back to the practice situation, I will need to sit down and seriously think =*
 56 *= about the implications of this act.*
 57 *Although I know that we are allowed to refuse participation, I also know that management =*
 58 *= will frown on those of us refusing!"*

7. How do I feel about this?

- 59 *Uncertain.*
 60 *I have mixed feelings.*

8. What sources of knowledge will I need to make a decision on whether or not to terminate a pregnancy?

was "interesting and necessary, but time-consuming."))

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- 20 = really afford to play God?
21 Medical ethicists – they will need to become the consciousness of medical science.
22 Nurse practitioners – will they be responsible for maintaining and controlling =
23 = artificial wombs?
24 Value clarification by nurses will be necessary.
25 Legislators – they will need to debate this issue carefully before drawing up the =
26 = necessary legislation.

Broader issues that may arise from this issue

- 27 Increase in abortion based on gender.
28 Potential inability of the mother to bond with a plastic womb baby.
29 Misuse of the plastic womb by individuals who would otherwise not become parents.
30 The possibility that more and more babies would grow up as asocial individuals or autistic human beings.
31 Society may become characterized by lack of normal pregnancies, as more and more
32 = women may demand it; or more and more employers may refuse maternity leave =
33 = as an alternative is available.

Personal feelings about the exercise

- 34 Positive, as it forced me to read the article more carefully.
35 Following the guidelines provided for the exercise I was forced not to form an =
36 opinion based on superficial reading – which I tend to

What was positive/negative about the exercise?

- **positive?**

- 37 Deep reading.
38 I read an article that I otherwise would not read, thus I became conscious of =
39 = changes in medical science that needs ethical debate.
40 The exercise forced me to think about potential implications!

- **negative?**

- 41 The exercise is time consuming as you really have to think about the article.

Did I learn anything new

- **about myself?**

- 42 Yes, that I feel uncomfortable with medical discoveries such as a plastic womb.
43 The exercise made me conscious of the need for nurses and other groups in =
44 = society to question medical scientists, and to take notice of what they are =
45 = doing before it is too late!

Participant: P4
Date: 14/10/97
Critical Incident Report 1

<i>Description of the incident by the participant</i>

- 1 It was the 14 th October '97 when I reported on duty as a night super in charge of the hospital. =
 2 = when I got a report from one male colleague about two male nurses who are threatening to =
 3 = kill each other with knives and guns in the male psychotic ward.
 4 The matter was brought to me to analyse and solve if possible.
 5 I then called the two officers and their immediate supervisor to hear out the whole incident.
- 6 Myself: "What brought about the swearing at each other?"
 7 1st Nurse: "Mr. M did not want me to give him orders of continuing with toilet training of=
 8 = the incontinent patients in the ward."
 9 Myself: "Continue Mr. Z."
 10 1st Nurse: "He then claimed that I have been after him since I commenced our night duty shift =
 11 = and he'll solve me by silencing with a gun that he posses.
 12 Myself: "Can I hear your side of the story Mr. M."
 13 Mr. M: "Yes, madam, I did end up threatening Mr. Z, because he did not want to solve my =
 14 = problem of coming to work late, due to personal problems at home as well as drunkenness =
 15 = on duty."
 16 Myself: "Do you really come to work drunk Mr. M.?"
 17 Mr. M: "No madam it is because I have been accused by my wife's lawyer of not maintaining =
 18 my child properly and I am having problems with money and I cannot make it to pay my debts.
 19 (Mr M. was literally crying now.)
 20 Myself: "Mr. M does it really solve your problem to be drunk on duty and threaten your =
 21 = senior with a gun when he is delegating?"
 22 Mr. M: "No madam the problem is Mr. Z did not want to listen to me to hear my side of the story."
 23 (Suddenly I saw something shining appearing in the inside pocket of Mr M's jacket.)
 24 Myself: "Mr M, what is that inside your jacket's pocket?"
 25 Mr M: "It is nothing madam!"
 26 My other college: "Yes that is the weapon he threatened Mr. Z with. Mr. M does not have =
 27 = manners he needs to be disciplined."
 28 Mr. M (referring to my male colleague): "You sir, you side with Mr. Z, and you'll also pay for =
 29 = your actions."
 30 Myself: "Hold it Mr. M and you to my college. Do not make this problem worse. =
 31 = as it is too late and patients needs us in our different departments.
 32 = Mr. M, would you kindly give me the shining object in your pocket, so that I =
 33 = can keep it for you."
 34 Mr. M: "Here it is madam, it is my knife that I was going to use to protect myself =
 35 ="

72 *I felt that we supervisors, we are not safe during the night if security lacks =*
73 *= and nurses can bring weapons along to work.*

What were the consequences of the incident for the other actors involved?

74 *The other people, i.e., my other colleague and Mr. Z were furious =*
75 *= because they told me that before they referred Mr. M to me, =*
76 *= he was really aggressive and promising to end both of their lives,*
77 *= so they were really feeling bad about the incident.*

Which factors contributed to the incident?

78 *Drunkenness by Mr. M as well as his failure to carry out the assigned job.*
79 *My actions were influenced by the fact that I once worked with Mr. M =*
80 *= and understand that he usually abuses alcohol when he is stressed up =*
81 *= and also becomes verbally aggressive if his problem is not attended to.*
82 *Lack of serenity at our institution as well as shortage of personnel in =*
83 *= carrying out the job.*
84 *Nurses during the night are allocated to approximately 50:1 with patients =*
85 *= who need close supervision as well as toilet training.*

Did I learn anything from the incident?

86 *I have learnt to listen to both parties side of story and then intervene =*
87 *= after analysing both statements.*
88 *Other people can be dangerous if taken for granted and that could =*
89 *= result in a disaster!*
90 *The situation was tense as my other colleague was taking sides and =*
91 *= that could have resulted to an assault of both him and Mr. Z.*
92 *Yes, sometimes one has got to be sympathetic to other officers' problems =*
93 *and practice democracy as far as problem solving is concerned.*
94 *One has got to forget the old thought of saying junior nurses, are always =*
95 *= guilty when problems like these crops up, without consulting the =*
96 *= situation accordingly and finding out exactly where the problem lies.*

Broader implications arising from the incident?

97 *Ethically, Mr. M did not behave according to the ethical code of nurses.*
98 *Socially, the issue affected the friendship that existed between Mr. M & Z, =*
99 *= as Mr. Z stated that he would not trust Mr. m again.*

What sources of knowledge are needed to cope with such problems?

100 *Guidelines regarding disciplinary as well as handling misconduct =*
101 *= in the nursing situation, particularly on night duty.*

Participant: P4

Date: 7/12/97

**Critical reflective exercise: Choice on Termination of Pregnancy Act,
Act No. 92 of 1996.**

Participant feedback on the exercise

1. Immediate feelings:

- 1 *It is a good attempt to try and empower the women of S.A. with freedom of choice, =*
- 2 *= but it does have disadvantages to the future of the women who choose to follow it, =*
- 3 *= who ultimately won't bare children.*

2. Most important implications of the Act:

- 4 *As it is stipulated in subsection 2 (1) (b) (i) that after the medical practitioner's consultation =*
- 5 *= with the woman, is of the opinion that the pregnancy would pose a risk to the physical or =*
- 6 *= mental health of the woman, this implies that it is not acceptable as woman will gamble =*
- 7 *= with becoming pregnant, knowing that their physical and mental health are taken to =*
- 8 *= consideration, but the health of unborn children is not considered.*

- 9 *Under the same subsection 2 (1) (b) (iv) if woman had the knowledge and are living under =*
- 10 *= such circumstances of poverty, why do they attempt to become pregnant?*
- 11 *Womens liberation ignores the fact that the unborn fetuses has got the right to life also.*

- 13 *Implications from subsection (3) where it stipulates that if the parents, guardians or family =*
- 14 *= and friends deny to give consent, a pregnancy termination won't be denied the minor =*
- 15 *= as she does have the right to choose without consulting them.*
- 16 *To me this is utterly wrong and unfair, for the parents to be depleted their right and responsibility.*
- 17 *The government should device some means of dealing with this matter at least to find a state =*
- 18 *lawyer to represent the parents and the involved minor.*

3. Essential factors that contributed to the government decision to draw up the Act:

- 19 *Value of human dignity and advancement to equality as well as security of the persons involved.*
- 20 *Non-racialism and non-sexism.*
- 21 *Advancement in human rights and freedom which underline the democratic S.A.*
- 22 *Right of person to make decisions concerning reproduction and for security in and =*
- 23 *= control over their bodies.*
- 24 *State having the responsibility for providing reproductive health for all.*

8. What sources of knowledge will I need to make a decision on whether or not to terminate a pregnancy?

- 51 *Ethical principles will need to be considered unless circumstances do not give ethical facts =*
 52 *= for e.g., a chance of malformed features.*
 53 *Theoretical knowledge from the client about the possibility of not having any more =*
 54 *= pregnancies after termination.*
 55 *Patients opinion and history will need to be considered as that is where a lot of information =*
 56 *= will be obtained as to whether the client is playing tricks or she is really in trouble.*
 57 *Situation analysis of the clients home environment, if present, to assess the conditions of living.*
 58 *Only registered midwives who have obtained an advanced course in midwifery and counseling =*
 59 *= skills and psychology should be allowed to perform the procedure.*
 60 *Knowledge that incest or rape took place and there is a reason beyond any doubt that the =*
 61 *= pregnancy occurred unlawfully.*
 62 *Knowledge of over-population (over-crowding) in families due to illiteracy and poverty where =*
 63 *= children are presenting with malnutrition and infantile epidemics.*
- 64 *I will not terminate a pregnancy if :*
 65 *It is due to a client who is trying to enjoy the issuing of the Act, for e.g. delinquent adolescence =*
 66 *= who are sexual workers not even registered.*
 67 *Purposeful planned pregnancy the suddenly feels she has some social reasons that impedes her =*
 68 *= from proceeding the pregnancy.*
 69 *Health responsible women who can care for the unborn foetus without problems and who are =*
 70 *= having a history of infertility in their families.*

9. How do you feel about this exercise? Why?

- 71 *I feel good as it gave me an opportunity to read the good and bad subsections that can be =*
 72 *= analysed within the Act.*

10. What was good (positive) and what was bad (negative) about the exercise (experience)?

10.1. Positive:

- 73 *It gave me a chance to express my feelings as far as the Act is concerned.*

10.2. Negative:

- 74 *It gave me the impression that somewhere up in the highest government positions, people at =*
 75 *= grass root level were not considered for their right to autonomy.*
 76 *This mad me to feel bad about this exercise .*

((participant misunderstood question))

11. Did I learn anything new about

11.1. myself? (what?)

Participant: P4

Date: 13/12/97

Critical reflective exercise: Journal Article

Articles: "Babies from a plastic womb: the end of childbirth as we know it."

Journal: Nursing News, October 1997, 21(10), 53.

Immediate thoughts and feelings after reading the article once

- 1 Confused.
- 2 I react strongly to the fact that plastic wombs cannot replace or substitute human uteruses =
- 3 = as they do not have a link as far as bonding between two human beings is concerned.

Summary of the most important implications after reading the article twice

- 4 It has come to my knowledge that scientists have invented a plastic womb to replace the human uterus =
- 5 = to prove a point that an unborn child can live outside the human body =
- 6 = and be substituted by a plastic tank..
- 7 Plastic womb uteruses are not safe as they can be exposed to too much light which =
- 8 = can damage their eye sight at a later stage.
- 9 Insecurity due to placement in the laboratory where a disaster can occur like an explosion where all =
- 10 = the foetuses put in those tanks could die.
- 11 The implications are that the plastic wombs are now going to be used as incubators of =
- 12 = human embryos until the incubation period is over.
- 13 The plastic womb implies that human embryos are not delicate enough like before, as according to =
- 14 = the author when there's a genetic defect within the unborn foetus, it can easily be destroyed in the tank.
- 15 It implies that every person can have an access in monitoring the development of embryos =
- 16 = in the tanks, i.e. no more privacy and this is an ethical dilemma, where even young immature =
- 17 = females and males can own these tanks if they are able to afford them.

Factors that contributed to the issue discussed in the article

- 18 No need to perform amniocentesis with its associated risks to mother and the unborn child.
- 19 Genetic defects will be easier to diagnose.
- 20 No need to perform an abortion as the foetus if it is malformed can be easily destroyed =
- 21 = without inflicting pain on the mother.
- 22 There could be an end to miscarriages.

Who will be affected by this problem/issue?

- 23 Health professionals - they will have to change or devise other means of educating the whole public =
- 24 = about how to care, use and monitor the tanks.
- 25 Society - anybody will feel like having a right to own a plastic womb irrespective of his/her maturity =
- 26 = which robs the society of its ethical beliefs.
- 27 Population explosion is foreseen, as control of these tanks will need an intensive research.
- 28 Children, they won't experience the love that a normal newborn child from a human uterus experience =
- 29 = e.g. bonding and warmth as a result those children from those tanks would become antisocial.

- **positive**

- 60 *Decrease in genetic defects, which is not a sure case though.*
- 61 *Decrease in morning sickness which accompanies normal pregnancy.*
- 62 *Easy obtainment of amniotic fluid for investigation.*

- **negative**

- 63 *Plastic wombs do not have privacy as child grows.*
- 64 *Expected date of delivery won't come as a surprise to couples as they'll be aware of the foetus growth =*
- 65 *= and shall remove it from the tank when they feel like it.*
- 66 *Taking the responsibility from midwives in controlling child growth and delivery.*

CII

23 *I learned that I should not react emotionally before seeing the pros and cons of the situation.*

24 *I have learned that I am very emotional.*

25 *I have learned that my supervisor also does not shoulder her responsibilities =*

26 *= she only allocate people who are willing to work instead also finding out=*

27 *= why others are not willing to work.*

How do I feel about what happened?

28 *I am very comfortable about the experience.*

29 *In the future I am going to try to think first and react later.*

30 *I need more self-knowledge to deal with the situation.*

How do I feel about the exercise (incident report and analysis)?

31 *I feel positive, in that the exercise reminded me of my tendency to =*

32 *= react in a very emotional manner when I feel that I am being exploited.*

33 *By reporting and analysing the incident I looked at it in a more objective manner.*

34 *This enabled me to do self-examination!*

CIV

25 = it is like disposed their beliefs they have to provide abortion on demand.

5.2. Professional:

26 The values of the professional have to adapt to those of the society, =

27 = so that he/she can cope with clients who has had an abortion =

28 = so professionals have to reassess their values so that they do not conflict with her work.

5.3. Political:

29 It may be expensive for hospital.

30 The public who are pro-life may influence people to turn against those politicians =

31 = who are for abortion.

5.4. Social:

32 They may be conflict between family members and partners as one can get an abortion =

33 = without consulting either and a child in a South culture is not an individual being =

34 = but family property.

6. Implications of the act for the registered midwife (myself)?

35 I have not a single problem in implementing this act, because I believe that if a person =

36 = is sure she does not want a child it is her right to terminate it.

37 But for a minor before age 13 will have a problem, as I am not sure of her Decision Making ability.

38 I will need support of parent to terminate that pregnancy.

7. How do you feel about this?

39 I think this government did well to pass this act as we face heart breaking situations of =

40 = maternal morbidity and mortality.

8. What sources of knowledge will I need to make a decision on whether or not to terminate a pregnancy?

41 I will need to know what the belief of the client are on TOP, will she be able to face =

42 = the decision afterwards, or is she having outside pressure to terminate her pregnancy =

43 = and not be able to face her fundamental cultural and religious beliefs.

44 I will refer the client to a psychologist for that.

43 I personally do not believe in termination of pregnancy after 12 weeks so it would be =

44 = a problem to participate in a termination after 12 weeks, as the fetus at that stage =

45 = needs decapitation which looks more like murder so it is ethically a problem to me.

46 I would have to go for training to acquire the skills necessary for TOP.

47 I do not think skills I have now would equip me for the act.

48 I would like to know how many times this person has undergone an abortion.

49 Abortion is not a contraceptive and having more than one to me is criminal =

50 = as one can make a mistake ones and then be prepared to see it never occur again.

Participant: ^{P6}

Date: 17/9/97

Critical Incident Report I

Description of the incident

- 1 It was during student accompaniment on the 17th September 1997, when on reaching the =
- 2 = female medical surgical ward, I found an assistant nurse with a receiver in which there =
- 3 = was a vial of Pethidinge 100mg.
- 4 On enquiring as to what was happening and where she was headed with this medicine.
- 5 She replied that she was sent to administer it to a patient, a certain Mrs S who had =
- 6 = carcinoma of the cervix.
- 7 I then asked her to wait for me and I went to the sister in charge of the ward at the time.
- 8 I found her in the duty room seated reading a book.
- 9 I then greeted her and enquired about the scheduled medicine which I found with the =
- 10 = nurse assistant.
- 11 She then admitted to having given the nurse this drug.
- 12 I then politely reminded her about the professional obligation for administering a =
- 13 = scheduled drug; and that two nurses were required to perform this act after checking =
- 14 = on the drug in the drug cupboard for control of these drugs to prevent substance abuse =
- 15 = and to protect the patient from harm through faulty administration by a nurse.
- 16 I also reminded her about the negligence on her part presently.
- 17 What would happen if the nurse assistant had not given the patient the drug and used it =
- 18 = for some other purpose?
- 19 What would happen if the nurse assistant had injected the patient on the wrong site =
- 20 = striking the static nerve on the patient?!
- 21 I then asked her to administer the drug with the nurse correctly fulfilling all that is =
- 22 = expected of her and she did.
- 23 I also made it clear to her that I would not hesitate to report her to her authorities and =
- 24 = even to the SA Interim Nursing Counsel for such conduct.
- 25 I asked her to write a statement about this because I did not want her to repeat this fault again.

Analysis of the incident by the participant

Causal factors?

- 26 Negligence on the part of the professional.
- 27 Laziness as well, as she was not busy but was reading.

CVIII

69 = analyze the incident in detail.

70 I think one first have to get used to the idea of recording incidents and looking at them =

71 = more carefully.

What were my feelings about the incident?

- 71 *I felt angry.*
- 72 *Responsibility for maintaining and control of class equilibrium, pacify the bewildered student.*
- 73 *Duty to pacify and maintain equilibrium.*
- 74 *Professional obligation.*

What were the feelings of the other actors involved?

- 75 *Felt at first happy when they illtreated the other student thereafter ashamed of their behavior.*

What were the consequences of my actions?

- ***for the actors involved?***

- 76 *Positive, there was peace and classroom equilibrium.*
- 77 *Change behavior of not only learners but other professionals.*
- 78 *Better conditions of living – happier, peaceful.*

- ***for myself?***

- 79 *Learned to be assertive, peacemaker, leadership abilities, and maintain control.*
- 80 *Yes immensely, has taught me to be a critical thinker and a reflective reasoner.*

What is my feelings about this exercise?

- 81 *Positive.*
- 82 *Broader knowledge as well as cultural knowledge and management of groups in society – =*
- 83 *= these groups of students.*
- 84 *Allows me to grow.*

- 27 *Trained midwives.*
- 28 *Health personnel.*
- 29 *Society.*

5. Broader issues arising from this act:

5.1. Ethical:

- 30 *Difficulty in the definition of life and its preservation.*
- 31 *Religious beliefs pertaining to life and its preservation.*
- 32 *Cultural beliefs.*
- 33 *Personal consciousness regards participation in this.*

5.2. Professional:

- 34 *Competency when trained.*
- 35 *Confidentiality and advocacy for the client and patient.*
- 36 *Responsibility to patient care pre and post termination.*
- 37 *Counselling and contraception measures in sex practising individuals.*

5.3. Political:

- 38 *Democracy respect for human dignity and rights to all.*
- 39 *Respect of women's choice over what happens to their bodies.*
- 40 *Responsibility for health for all citizens.*

5.4. Social:

- 41 *Improved social status and economical as well.*
- 42 *Improved health for all SA.*
- 43 *Resources to be used for the development of the young.*

6. Implications of this act for the registered midwife (myself):

- 44 *Depending on personal, religious and cultural values, I will not =*
- 45 *= subject myself for the training in order to practice the act literally; =*
- 46 *= but I respect the rights of others and also midwives who will participate in this procedure. =*
- 47 *= I am prepared to help clients to have sufficient information and if need be refer =*
- 48 *= to correct services, and will endeavour to help post care if any problems.*

7. How do you feel about this?

- 49 *I feel it is a good act, it uplifts the right methods of contraception.*
- 50 *But abused women should really be free to use this all the most.*

8. What sources of knowledge will I need to make a decision on whether or not to terminate a pregnancy?

- 51 *Patient's opinion to be respected as has rights as an individual to choices.*
- 52 *Ethical principles respect for human dignity and so the maintenance*
- 53 *= of confidentiality at all times pre and post termination of abortion.*

Participant: ^{P7}

Date: 5/5/97

Critical Incident Report: 1

Description of the incident:

- 1 On the 5th of May 1997 I was working at MHS in a maternity section.
- 2 I admitted Mrs. DM aged 30, grav. 2 para 1, with lower abdominal pains.
- 3 On examination she was 33 weeks' pregnant.
- 4 BP was 90/60. Temperature 37.4.
- 5 The cervix was 4cm dilated and well effaced at 9h00.
- 6 Fetal heart was good ranges between 140 - 160 beats per minute and regular.
- 7 Urine testing was done and patient found to be having trace of protein, =
- 8 = sugar level was 6.1. Hb: 11.1=
- 9 = and the patient contractions were moderate ranges between 20-50 seconds and =
- 10 = observations were taken on hourly basis and were normal at 13h50.
- 11 The cervix was 9cm dilated at 14h15.
- 12 When she was fully dilated, the membrane was still intact.
- 13 Membranes ruptured artificially and an episiotomy was performed to aid during delivery.
- 14 An infant male with Apgar score of 2/5 to 5/5 was born at 14h25.

- 15 Before cutting of the umbilical cord the infant was shown to the mother =
- 16 = for touching to promote bonding, but for my surprise the mother was very sad and depressed.
- 17 The infant weight was 75g.
- 18 The incubator was well prepared.
- 19 Child injected with Konaktion 0.5mg and =
- 20 = the eyes were applied with chloromycetin and the infant was kept dried =
- 21 = and put into the incubator and an Ambulance was called to transfer the patient =
- 22 = to the G Hospital.
- 23 By then the doctor was not available still in his one of his surgery but the matron =
- 24 = was notified about everything and the ambulance arrived at 15h00 same day and =
- 25 = the child were rapped with a thick cotton wool and =
- 26 = together with the mother they were transferred to the hospital W25.
- 27 The GR Hospital nurses in W24 were notified regarding premature on the way to their units, =
- 28 = condition of the infant, medication given.

- 29 At 15h15 after 15 minutes the mother and infant were transferred to GR Hospital.
- 30 Doctor in charge of maternity who was also the owner of the whole service arrived.
- 31 The service comprised of curative as well as maternity section =
- 32 = with six (6) professional nurses -that is there were two (2) part time and one (1)matron.
- 33 Plus two nursing assistance.
- 34 The doctor was notified about the patient who was transferred to GR Hospital.

77 *Lastly, all the professional nurses working for them after discovery of the whole thing=*
 78 *= two (2) permanent staff resigned and the other two (2) remaining their salary =*
 79 *= was drastically increased because two professional nurses that is myself =*
 80 *= and the other sister we were part time employees and our service was also =*
 81 *= terminated as we were told that they will call us when work is available.*

82 *I kept all my documents with me as that doctor promise to contact his lawyer =*
 83 *= which he never does.*

What were the consequences of my actions?

84 *I lost my part time job.*
 85 *Two (2) of the permanent staff resigned when they become conscious of the=*
 86 *= illegal abortions being done.*
 87 *The premature infant is living.*

What influenced the situation?

88 *The pregnant women being in labor.*
 89 *The fact that the infant only weight 750g.*
 90 *MHS lacked facilities for premature infants.*
 91 *The doctor who reacted with anger.*
 92 *The matron who supported her husband (the doctor)*
 93 *The fact that an illegal abortion was planned, not a living infant.*
 94 *The mother admitting that she requested an abortion.*

Could I have dealt better with the situation?

95 *No, I acted ethically correct.*
 96 *My actions resulted in the registered nurses becoming conscious of the=*
 97 *= illegal abortions being done.*
 98 *I acted professionally correct, in that the infant received the care that he needed.*
 99 *I acted correct in that I prevented an illegal abortion.*

How do I feel about this exercise?

100 *Positive.*
 101 *It provided an opportunity to share a difficult and potentially threatening experience.*
 102 *It enabled me to reflect on the situation, and to look at it in a more objective manner.*
 103 *It enabled me to evaluate my decisions taken and my actions.*

Who were the actors involved?

104 *Myself*
 105 *The Matron*
 106 *The Doctor*
 107 *The newly born infant*
 108 *The patient (mother)*

5.2. Professional:

- 20 *As nurses the society were having confidence that our duty is to cure =*
 21 *= but not to kill therefore the image of nurses may be doomed.*

5.3. Political:

- 22 *Males in future may have negative attitude towards hospitals =*
 23 *= as well as nurses.*
 24 *Other churches for example Roman Catholic they are against termination =*
 25 *= and other members they are not willing to be treated were TOP is carried out=*
 26 *= for any illness.*

5.4. Social:

- 27 *Males may have negative attitude with all women undergoing TOP.*

6. Implications of the act for the registered midwife (myself):

- 28 *Positive attitude towards woman.*
 29 *Informing them of their rights.*
 30 *Informing them of TOP procedure.*
 31 *Confidentiality of TOP clients.*
 32 *Non judgemental attitudes towards clients.*

7. How do you feel about this?

- 33 *Truely speaking the idea of TOP act will safe the life of many women =*
 34 *= as now is a legal procedure but they must be told about family planning =*
 35 *= to be more safe.*

8. What sources of knowledge will I need to make a decision on whether or not to terminate a pregnancy?

- 36 *Ethical principles a good knowledge of choice on TOP act should be known =*
 37 *= and understood.*
 38 *Patient opinion the history of the women which include any illness =*
 39 *= medication she is on and duration of pregnancy in order the procedure to be safe.*

9. How do I feel about this exercise? Why?

- 40 *The exercise was nice because it really needs your inner feelings =*
 41 *= especially if you put yourself to the patient.*

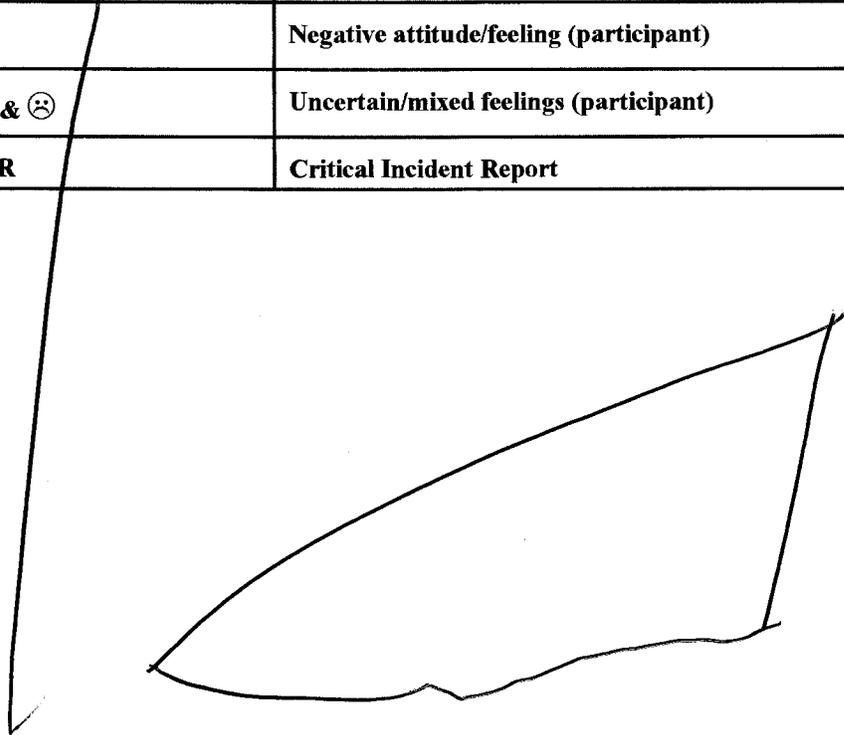
10. What was good (positive) and what was bad about the exercise (experience)?

10.1. Positive:

- 42 *The woman will be safe as the act provide safe legal termination of pregnancy.*

Guidelines: Transcription symbols used by the inquirer

SYMBOL	MEANING
• =	Equal signs, one at the end of a line and one at the beginning, indicates no gap between the two lines (one sentence).
• (())	Double parentheses contain inquirer's descriptions/ remarks rather than transcriptions.
• M	Motivation/Rationale
• P	Participant
• R	General remarks
• ☺	Positive attitude/feeling (participant)
• ☹	Negative attitude/feeling (participant)
• ☺ & ☹	Uncertain/mixed feelings (participant)
• CIR	Critical Incident Report



Guidelines for analysis of critical incident reports and completed critical reflective exercises, using codes.

((Please note that examples of indications of all these codes are not included in chapter 6, but all codes developed by the inquirer are included in this Annexure for further use by other inquirers))

CODE	MEANING
• AT	Adverse Thinking (emphasis on logical support rather than mutual exploration)
• ASSUMP	Assumption
• APT	Auto-pilot thinking or conduct
• BIAS/PJ	Biased thinking/Prejudice
• CIR	Critical Incident
• CP	Clarify Perception
• CREA	Creative Thinking
• CT	Critical Thinking
• DT	Detached Thinking
• ET	Egocentric Thinking
• Ext-T	Extreme Thinking (thinking in terms of absolute concepts/theories)
• F-IV	Find Intervening Variable
• F-UP	Follow up/Clarify
• GT	Generative Thinking (bringing about/solving problems)
• G & S -TD	Gain & Sustain Theoretical Distance
HE	Habit of Expectation

CXXII

• Inf - F	Influencing Factor
• Inf - T	Influencing Theory/Implicit Theory
• Int - J	Initial Judgement (use logical power to back up initial judgement)
• Inq	Inquirer
• Inq - R	Inquirer Remark
• MOT	Motivation
• P	Participant
• PART	Partialism (partial thinking/pure error of perception)
• P - PUZ	Participant Puzzlement
• RIA	Reflection-in-action
• Rintp	Reflective Interpretation
• ROA	Reflection-on-action/Ex post facto reflection
• RL	Reflective Learning
• RP	Reflective Practice
• RW	Reflective Withdrawal

CXXIII

<ul style="list-style-type: none"> • RJ-S1 • RJ-S2 • RJ-S3 • RJ-S4 • RJ-S5 • RJ-S6 • RJ-S7 	<p>Reflective Judgement Stage 1 (concrete knowing/single-category belief system/absolute thinking)</p> <p>Reflective Judgement Stage 2 (knowing more complex; knowledge not immediately known ; dualism; all problems solvable)</p> <p>Reflective Judgement Stage 3 (truth in some are seen as temporarily inaccessible; beliefs justified on basis of momentual feelings of rightness)</p> <p>Reflective Judgement Stage 4 (knowledge cannot be validated externally; idiosyncratic; scepticism; distinguish between well- and ill-structured problems)</p> <p>Reflective Judgement Stage 5 (believe knowledge must be placed within context; understand role of interpretation in what a person perceives; cannot compare and evaluate merits of alternative interpretations of same issue)</p> <p>Reflective Judgement Stage 6 (knowing uncertain; knowledge in relation to context derived from; compare evidence/perspectives across contexts - basis for forming judgements on ill-structured problems)</p> <p>Reflective Judgement Stage 7 (believe epistemologically justifiable claims can be made about the better solution to the problem under consideration; knowledge can be constructed via critical inquiry into claims that can be evaluated as having greater <i>truth value</i>)</p>
<ul style="list-style-type: none"> • S-AW • Self-d I 	<p>Self-awareness</p> <p>Self-directed Inquiry</p>
<ul style="list-style-type: none"> • THEO • Tranf-L • TV 	<p>Theory</p> <p>Transformative Learning</p> <p>Tunnel Vision (narrow band thinking)</p>
<ul style="list-style-type: none"> • VIEW 	<p>Viewpoint</p>