

**THE NURSING STUDENT'S EXPERIENCES OF PBL AT NORTH WEST
UNIVERSITY**

by

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DECLARATION

I declare that **THE NURSING STUDENT'S EXPERIENCES OF PBL AT NORTH WEST UNIVERSITY** is my own work and that all the sources used or quoted have been indicated and acknowledged by means of complete references and that this work has not been submitted before for any other degree at any other institution.

SIGNATURE

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DATE: 12 February 2009

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ABSTRACT

A qualitative exploratory, descriptive and contextual research design was used to conduct a study. In-depth individual phenomenological interviews with students purposively selected were conducted. Data saturation was reached after interviewing eight students. The following categories emerged: the participants experienced problem-based learning (PBL) as challenging, problematic group collaboration and cohesion, PBL as a good strategy.

The challenges experienced included: unfamiliarity with the strategy, inadequate resources in the library, inaccessible computer laboratories because of limited space and operational hours, time pressures and overload. Clinical learning is not given adequate attention and some professional nurses in the clinical areas are not supportive to the university students as compared to college students. Positive conclusions about PBL include that students need the strategy as it promoted critical thinking, improved communication and presentation skills, helped teamwork and learning from others.

Facilitators and students must be empowered to practise PBL and mentoring.

Key concepts

Students, experiences, problem-based learning, university.

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List of abbreviations

ADC	Academic Development Centre
CBL	Case Based Learning
CCFOs	Critical Cross Field Outcomes
ETQAs	Education and Training Quality Assurors
HBUs	Historically Black Universities
HDI	Historically Disadvantaged Universities
NE's	Nursing Education Institutions
NQF	National Qualification Framework
NWU	North West University
OBE	Outcome Based Learning
OSCE	Objective Structured Clinical Examination
PBL	Problem Based Learning
SANC	South African Nursing Council
SAQA	South African Qualification Authority
SCC	Student Counselling Centre
SPs	Standardised Patients
TELP	Tertiary Education Linkage Project
TJT	Triple Jump Test

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CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Nursing education in South Africa is increasingly under pressure to focus on developing clinicians prepared to work in rapidly changing, multicultural environments influenced by technological advances and fiscal constraints. To meet these challenges, nurse educators are required to redirect their learning and teaching strategies to ones that promote critical thinking in order to develop nurses who are critical, reflective analytical thinkers (South African Nursing Council [SANC] 2001:12; South African Qualifications Authority [SAQA] 2002:6).

In 2002, the Department of Nursing at the North West University (NWU) responded by introducing case-based learning (CBL) for first- and second-year and problem-based learning (PBL) for third- and fourth-year students in an attempt to develop life-long and self-directed learning. Nursing Education requires students to be actively involved in their learning, and as recipients of the curriculum or educational programmes they are in the best position to give constructive feedback on PBL.

1.2 BACKGROUND TO THE STUDY

SAQA (2002:6) and the SANC (2001:12) emphasise a paradigm shift from teacher-centred to learner-centred teaching methodologies that will ensure that students take responsibility for their own learning, and become independent, self-directed and lifelong students.

PBL in professional education has its origins in the medical disciplines in the mid 1960s. Since then this method of learning has spread to schools of health such as nursing, dentistry, pharmacy, and public health, schools of architecture, business and law, and other professional fields (Lowenstein & Bradshaw 2004:84). PBL is especially relevant to professions with applied practice components, and is important for

professionals where skills in independent problem-solving and self-motivation are essential (Barrows 1988:481; Doring, Bramwell-Vial & Bingham 1995:263; Lowenstein & Bradshaw 2004:84).

Billings and Halstead (2005:304) and Conway and Little (2000:11-26) describe PBL as the best learning-teaching strategy for producing critical, reflective and analytical thinkers who are creative problem solvers. Educational changes should be designed to better prepare students to participate fully and productively in today's technologically based workplace. The key skills include critical thinking, problem solving; teamwork; verbal and written work; ability to research, and lifelong learning (Isaacs 2003:12; SANC 2001:6). This emphasises the need for the integrated education of nurses focusing on problem-based learning to promote critical thinking.

Van Schalkwyk (2005:13) critical or cross-field outcomes support the use of PBL. These outcomes form the basis of South African education policy and also “describe the kind of citizen the education and training system should try to produce” (SAQA 2002:8). The outcomes provide a profile of a person (student) equipped to continue with lifelong learning. Such a person communicates effectively; uses creative and critical thinking to solve problems; possesses good self-management skills; works effectively with a team or group for goal achievement; collects, processes and analyses information; takes a global view of world systems; behaves responsibly towards the environment and other people; is tolerant of cultural and other diversity, and is a responsible citizen and entrepreneur (Van Schalkwyk 2005:14).

The North West Province is 60% rural and is characterised by low socio-economic status, including poverty and poor educational standards. The NWU relies mostly on students from the disadvantaged areas in the province (NWU 2005:16).

In his opening address, Professor Dan Kgwadi (2005:5), the Campus Rector stated that NWU, Mafikeng Campus relied on “street clients” or students who did not apply early but made application at the beginning of the year. Furthermore, these students could not be accepted at other universities because of their inadequate secondary education and inability to pay fees in the historically advantaged universities, which still select the top performers with high matriculation (Grade 12) score ratings. These students still have to go through upgrading programmes. The students in the Nursing Department,

who were exposed to PBL, were among these students therefore the researcher was of the opinion that their experiences should be explored and described in order to modify the instructional approach.

Unlike institutions recognised for PBL (Woods, Marshall & Hrymak 1988:107-127), “the Department of Nursing, NWU has been offering traditional nursing education for the last three decades. A change or move to PBL for NWU’s Nursing Department would therefore constitute what Woods (1994) refers to as a ‘giant change’ (Gwele 1997:276).

The staff members in the Department of Nursing, NWU, and other educators in all the provinces attended workshops for almost eight (8) years in preparation for moving to PBL and CBL. This included visits to the Universities of Natal and Transkei to look, listen and learn how PBL is implemented. A professor who is an expert on PBL from the University of Natal offered workshops on facilitating PBL groups and other aspects of PBL implementation. The NWU subsequently started presenting problem-based and case-based learning.

The Department admitted 29 students in 2002, 50 in 2003, 45 in 2004, 30 in 2005 and 30 in 2006. Students follow CBL at first- and second-year levels, and PBL at third- and fourth-year levels. The clinical placement for first- and second-year students is two days per week and semester vacations and for third- and fourth-year students, three days per week and semester vacations (North West University 2000:32).

Today nurses need to be autonomous individuals capable of critical, independent thinkers (Rideout 2001:147). Education programmes are mandated to produce graduates who can explore options, are articulate and have the capacity to develop appropriate strategies, based on reflective decision. As a result, many nursing schools appreciate the potential of PBL as an appropriate andragogic technique to develop such nurses (Haith-Cooper 2003:68; Rideout 2001:147). When facilitators expressed concern over and criticism of PBL regarding students’ performance, the researcher considered it necessary to conduct a study to explore and describe the students’ experiences of PBL.

Despite increased attention to PBL as an appropriate andragogic approach to teaching in professional practice, the researcher found little research on evaluating the process

outside of the medical and educational professions. Moreover, few studies have explored the perceptions of PBL graduates and undergraduates. Consequently, there is still a need to explore the effects of PBL in nursing education, from both undergraduate and graduate perspectives. Given that students are the primary customers of teaching and learning, it is important to determine their experiences and perceptions of teaching and learning. Accordingly, this study wished to assess the effects of PBL through students' descriptions of their experience of PBL.

Programme or curriculum evaluation is established throughout the higher education sector and forms a significant aspect of educational quality assurance (SAQA 2005:50). Evaluation of a service needs to be done on a regular and continuous basis (Billings & Halstead 2005:298; Quinn 2005:52). Nursing education increasingly emphasises quality monitoring and improvement. Consumers/students expect it; funders, government and Education and Training Quality Assurors (ETQAs) require it, and educators need it for contemporary practice.

Billings and Halstead (2005:283) emphasise that nursing is practised in complex environments with people, who are complex beings. Advanced technology and knowledge have changed the face of health care thereby emphasising nurses' thinking skills. As health care reform extends patient care from the predominantly structured inpatient arena to more unstructured outpatient or community arenas, critical thinking skills and empowerment become more important.

Camp (1996:2) points out that in the institutions where it was first introduced, faculty and students perceived PBL as successful. PBL was successful in the United Kingdom (UK), Australia and other developed countries and in historically advantaged universities such as the universities of Natal, Bloemfontein, Witwatersrand and Pretoria. As a historically disadvantaged university, however, NWU needed to understand PBL from the students' perspective. Camp (1996:2) indicates that PBL is expected to influence the "whole" student, or at least many aspects of learning. Based on the assumption that PBL seemed successful in the aforementioned institutions, the researcher wished to explore the experiences of students from disadvantaged backgrounds. Determining how students at NWU experienced PBL would assist the University to effectively use PBL.

In a study at the University of Transkei, Meel (2002:14) found that medical students reported more opportunities than threats in PBL. In the present researcher's experience in nursing education, students' experiences and opinions are vital in shaping and reforming nursing programmes. Students regard themselves as important stakeholders in nursing education. During accreditation, the SANC and ETQA invite students' perceptions and experiences. Obtaining students' views and experiences is therefore mandatory in order to offer client sensitive, compliant and acceptable education.

Since its introduction in educational practice, PBL and its outcomes have been examined, but little research has been done on its application in different cultural backgrounds (Connolly & Seneque 1999:738; Delva, Woodhouse, Hains, Birtwhistle, Knapper & Kirby 2000:168; Morales-Mann & Kaitell 2001:14).

The nursing students at the NWU are 100% Black and from different cultural backgrounds to students at universities in Western, English-speaking countries, hence the researcher was of the opinion that it would be enriching to obtain their experiences of PBL. The students from the English speaking countries learn in English as their first language whereas the students in North West University English is their second or third language and this will influence their argumentation and problem solving skills. Cultural and linguistic differences between students can lead some to avoid actively participating, which can lead to dysfunctional tutorial groups (Hendry, Ryan & Harris, 2003:610). Hence, the cultural influences on the functioning of the small group in PBL cannot be overlooked (McLean , van Wyk, Peters-Futre & Higgins- Opitz 2006:94)

Although many schools of medicine and of nursing have adopted PBL curricula, concern has been expressed primarily because of the substantial human and other resources required. For example, contact hours with students are three to four times higher for educators than in traditional curricula (Koh, Khoo & Wong 2008:34). The economic viability of PBL is consequently of concern if the NWU intake is to be increased according to the national demands. Given the limited resources in NWU, evidence-based evaluation of students' experience of PBL in improving personal and learning skills would strengthen justification of the adoption of PBL programme.

1.3 PROBLEM STATEMENT

The Department of Nursing at NWU is a small department, consisting of nine (9) academic staff members; two of whom joined the university two years after PBL was introduced. Concern and criticism were raised regarding the use of PBL with students who come from the traditional teaching approach of content-driven and teacher-centred strategies. Concern expressed that PBL was not ideal for the type of students at NWU (i.e., from rural areas with disadvantaged educational backgrounds). This motivated the researcher to examine and determine the students' experiences of PBL. In order to evaluate the acceptability of the learning-teaching process, the study wished to explore and explain the nursing students' experiences of PBL as a teaching strategy in the Nursing Department of NWU.

1.4 PURPOSE OF THE STUDY

The purpose of the study was to explore and describe nursing students' experiences of PBL at NWU. The aim was to develop guidelines to facilitate learning and teaching in the institution.

1.5 OBJECTIVES OF THE STUDY

In order to achieve the purpose, the objectives of the study were to

- explore and describe the experiences of the nursing students on PBL in NWU.
- recommend guidelines for the implementation of PBL in NWU. Accordingly, inputs from NWU nursing students were essential for the development of guidelines.

1.6 RESEARCH QUESTIONS

Based on the problem and the purpose, the study wished to answer the following questions:

- What are nursing students' experiences of PBL?

- How can PBL be improved?

1.7 ASSUMPTIONS

Assumptions are “basic principles that are accepted on faith, or assumed to be true without proof or verification” (Burns & Grove 2005:44). Polit and Beck (2004:13) describe assumptions as “statements, ideas or beliefs that are taken for granted or considered to be true, even though they have not been scientifically tested”. This study was based on the following assumption:

Problem-based learning is ideal for North West University nursing students despite their disadvantaged educational backgrounds, as the strategy will improve their motivational and critical thinking skills.

1.8 PARADIGM PERSPECTIVE

A paradigm is “an organising framework that contains concepts, theories and assumptions, beliefs, values and principles that inform researchers on how to interpret phenomena under study” (George 2002:594; Polit & Beck 2004:726; Holloway & Wheeler 2002:6). The following metatheoretical and methodological statements formed the paradigm perspectives and parameters for the study:

1.9 METATHEORETICAL STATEMENTS

Collins English Dictionary (1991:983) defines metatheory as “philosophical discussion of the foundations, structure, or results of some theory, such as metamathematics; a formal system that describes the structure of some other system”. A metatheory is a global perspective of a phenomenon (Meleis 1998:330; Fitzpatrick & Wahl 1999:273). Metatheory deals with a phenomenon in a unique manner. In this study, the phenomenon was the domains of nursing, namely *person* (student), *environment* (problem-based learning in nursing education), and *nursing education*.

- **Person**

A person (student) is a social personal system that is in continuous interaction with the environment. Individuals are social, sentient, rational, reacting and perceiving beings (George 2002:252; Meleis 1998:330).

- **Nursing education**

Nursing education is social system perceived as an organised boundary system of social roles, behaviours and practices developed to maintain values and mechanisms to regulate practice and rules (Meleis 1998:330).

- **Environment**

Environment is an open system with permeable boundaries allowing exchange of matter, energy, and information with people (Meleis 1998:330).

- **Health**

Health is a dynamic human experience in continuous adjustment to stressors in the internal and external environment through optimum use of one's resources to achieve maximum potential for daily living (Meleis 1998:330; Fitzpatrick & Wahl 1999:273).

- **Nursing**

Nursing is a process of human interaction between the nurse and the client whereby each perceives the other and the situation; through communication, they set goals, explore means, and agree on means to achieve the goals (Meleis 1998:330; Fitzpatrick & Wahl 1999:273).

1.10 RESEARCH DESIGN AND METHODOLOGY

The study used a qualitative design with a phenomenological approach to explore, describe and explain the participants' personal experience and perceptions (see chapter 2). According to Polit, Beck and Hungler (2001:65) and Clifford (2002:76),

qualitative research is suitable for establishing the success of a programme or aspects of it. Qualitative methods are powerful tools for enhancing an understanding of teaching and learning, and have “gained acceptance in recent years” (Tucker, Power & Meyer 1999:386).

Wilson (1999:217) and Seaman (1999:169) point out that qualitative research is suitable to

- explore, describe and explain social and psychological processes, themes and patterns, or a social world culture or setting
- interpret individuals’ lived experience in their natural context
- analyse communicative patterns

Qualitative designs are structured to look for what is special and different; what distinguishes the case or group (Seaman 1999:171). Qualitative research explores, describes and focuses on people’s experiences, opinions, beliefs and views, and stresses individuals’ uniqueness (Burns & Grove 2005:55; Holloway & Wheeler 2002:10; Parahoo 1997:287; Seaman 1999:173). The study wished to produce descriptive data, depicting the participants’ words and observed behaviour (Bogdan & Biklen 1998:7).

Phenomenology focuses on the people who live an experience of the phenomenon under study, and how they interpret these experiences (Polit et al 2001:197; Burns & Grove 2005:58; Wilson 1999:217; Holloway & Wheeler 2002:170).

1.11 POPULATION AND SAMPLE

The population in this study consisted of nursing students registered for the Bachelor of Nursing Sciences (pre-registration programme). The participants were selected on the basis of their first-hand experience of PBL.

The researcher selected a random and representative sample to select the students with which to conduct the study (Burns & Grove 2005:352). The purpose of sampling

was subsequent generalisation to the population (see chapter 2 for population, sampling and sample).

1.12 DATA COLLECTION

Data was collected by means of individual face-to-face (in-depth) interviews. The researcher selected this data-collection technique in order to probe and clarify issues, if necessary. In-depth interviews are open-ended, discovery-oriented methods that are well suited for describing both the programme and outcomes from the target audience or key stakeholders (Burns & Grove 2005:544; Parahoo 1997:287; Streubert & Carpenter 1998:76). In addition, field notes were also used to capture the researcher's observations (see chapter 2 for data collection).

1.13 DATA ANALYSIS

Data analysis commenced with data collection. Data analysis refers to “working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned, and deciding what to tell others” (Bogdan & Biklen 1998:145). According to Du Plooy (2004:83), qualitative research uses inductive analysis to identify critical themes that emerge from data. The reporting used “voice” in the text; that is, the researcher gave participants' quotes to illustrate the themes described. Qualitative reports are descriptive, incorporative, expressive language and the “presence of voice in the text” (Eisner 1999:36).

1.14 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. *Collins English Dictionary* (1991:533) defines ethics as “a social, religious, or civil code of behaviour considered correct, esp. that of a particular group, profession, or individual”.

The researcher obtained permission to conduct the study from the Department of Nursing and NWU School of Environmental and Health Sciences. The researcher explained the purpose and significance of the study to the respondents before obtaining written informed consent from them. The respondents assured of confidentiality and

anonymity, and informed what would be done with the findings. In addition, the respondents were given the option throughout the study to withdraw at any time, if they so wished. Confidentiality was ensured by not linking inputs to individual respondents (Streubert & Carpenter 1998:38). Scientific honesty on the part of the researcher was ensured through establishing a relationship of trust with the respondents (Streubert & Carpenter 1998:36, 37).

1.15 LITERATURE REVIEW

The purpose of a literature review is “to determine the extent to which the topic under study is covered in the existing body of knowledge” (Babbie & Mouton 2002:565). A literature review thus generates a picture of what is known and not known about a particular topic or phenomenon (Burns & Grove 2005:141). Furthermore, in qualitative research, the purpose and timing of the literature review may vary, based on the type of study to be conducted (Burns & Grove 2005:141).

In this study, the researcher reviewed the literature before and after data collection and analysis. This assisted comparing and combining the findings with the literature to determine the current knowledge of PBL.

1.16 DEFINITIONS OF CONCEPTS

For the purposes of this study, the following concepts are used as defined below:

- **University.** A university is “an institution of higher education having authority to award bachelors’ and higher degrees, usually having research facilities; the buildings, members, staff, or campus of a university” (*Collins English Dictionary* 1991:1679). In this study, it refers to the NWU, the tertiary learning institution at Mafikeng offering post-matriculation education and training, with the focus on nursing students at NWU.
- **Student.** A student is “a person following a course of study, as in a school, college, university, etc.; a person who makes a thorough study of a subject” (*Collins English Dictionary* 1991:1532). Students enter the educational process

with varied life experiences, values, and goals. Education promotes self-direction and personal growth, allowing for individual differences within a changing society. A student is also a learner, namely an individual who is participating in a learning programme with the purpose of achieving credits for standards and/or qualifications.

The role of the student is to be responsible and accountable for the acquisition of knowledge and skills. In this study, a student is specifically registered or enrolled in a programme of study to fulfil the requirements for a degree in nursing at the NWU.

- **Experience.** *Collins English Dictionary* (1991:546) defines *experience* as “1. direct personal participation or observation; actual knowledge or contact; 2. a particular incident, feeling, etc. that a person has undergone; 3. accumulated knowledge, esp. of practical matters”. Experience refers to what people have done and what has happened to them in the past. In this study, involvement or exposure to PBL forms the experience. The focus is on the nursing students’ experience of PBL.
- **Problem-based learning (PBL).** PBL is any learning environment in which the problem drives the learning. That is, before students acquire knowledge they are given a problem (Barrows 1986:134; Wood 2003:328). The problem is posed so that the students discover that they need to learn some new knowledge before they can solve the problem. PBL is a teaching strategy in which a problem is used to drive the learning process.

1.17 OUTLINE OF THE STUDY

Chapter 1 outlines the problem, purpose and significance of the study, the research design and methodology, data collection and analysis, and defines key terms.

Chapter 2 outlines the research design and methodology.

Chapter 3 describes the literature review relevant to PBL.

Chapter 4 discusses the data analysis and interpretation and literature control.

Chapter 5 concludes the study, discusses its limitations, and makes recommendations for practice (successful PBL implementation) and further research.

1.18 CONCLUSION

This chapter discussed the problem, purpose and significance of the study; briefly described the research design and methodology, data collection and analysis, and ethical considerations, and defined key terms.

Chapter 2 describes the research design and methodology.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

Chapter 1 outlined the problem, purpose and significance of the study. This chapter describes the research design and methodology used in the study.

2.2 RATIONALE FOR THE STUDY

The Department of Nursing at NWU is a small department of nine (9) academic staff members, two of whom joined the university two years after PBL was introduced. Concern was raised over the use of PBL with students who come from the traditional content-driven and teacher-centred teaching approach. Most of the teaching staff were concerned that PBL was not ideal for the type of students NWU has, namely from rural areas with disadvantaged educational backgrounds. In their view, the students' secondary education had inadequately prepared them for PBL and they would consequently not cope. This motivated the researcher to examine and obtain the students' experience and perceptions of PBL.

Gwele (1997:276) points out that the "Department of Nursing (NWU) has been offering traditional nursing education for the last three decades. A change or move to PBL for North West University's Nursing Department would therefore constitute what Woods (1994) refers to as a 'giant change'."

To date, research on the outcomes of PBL on students in a non-English speaking context has been done in China, Egypt and Hong Kong (Lee, Wong & Mok 2003:137). This prompted the researcher to explore and describe English speaking South African Black or historically disadvantaged students' experiences of PBL.

2.3 PURPOSE OF THE STUDY

The purpose of the study was to explore and describe nursing students' experiences of PBL at NWU. The aim was to develop guidelines to facilitate client-compliant learning and teaching in the institution. The objectives, therefore, were to

- explore and describe the experiences of the nursing students on PBL in NWU
- recommend guidelines for the implementation of PBL in NWU

2.4 RESEARCH QUESTIONS

In order to achieve the objectives, the study wished to answer the following questions:

- What are nursing students' experiences of PBL?
- How can PBL be improved?

2.5 RESEARCH DESIGN

A research design refers to a plan that describes how, when and where data is to be collected and analysed (Holloway & Wheeler 2002:285; Parahoo 1997:159). Mouton (1996:107) describes it as "a framework within which decisions about the research process can be made".

A qualitative approach was selected because the study focused on nursing students' experiences. A qualitative approach was best suited, therefore, to determine the respondents' views and beliefs regarding the phenomenon of PBL. The essence of qualitative research is a belief that multiple realities do exist and thus create meaning for individuals studied. Individuals who participate in social actions come to know and understand phenomena through these interactions (Streubert & Carpenter 1998:16).

Creswell (1998:18) states that the design in qualitative research constitutes a general approach. The researcher considered a qualitative design ideal for this study because qualitative research has a broad, subjective and holistic focus; uses dialectic and inductive reasoning; results in shared interpretation from researcher involvement, and

uses unstructured interviews and words to describe data (Burns & Grove 2005:27; Polit, Beck & Hungler 2001:279; Parahoo 1997:15).

Qualitative research is most suitable when aiming to understand a phenomenon from participants' points of view (Creswell 1998:17; Field & Morse 1989:11; Strauss & Corbin 1998:11). Strauss and Corbin (1998:11) maintain that qualitative research is appropriate when the goal is to elicit details of thought processes and feelings.

The aim of this study was to explore and describe the respondents' experiences of PBL. Mouton (2001:43) describes exploring as a process that includes surveying people to be studied, and a descriptive study involves the depiction of this experience within its practical context in terms of the individuals' affected. Context refers to the time, area, culture, and individuals' orientation with regard to the circumstances in which research takes place. In this study, the context comprised the NWU nursing students who had gone through PBL in their third and fourth years of study.

The researcher adopted a phenomenological approach to explain the way the respondents' experienced PBL (Parahoo 1997:394). Phenomenology stresses that only people who have experienced phenomena are capable of communicating them to the outside world and the researcher's empirical observation is limited in understanding people's perceptions (Burns & Grove 2005:806; Parahoo 1997:394). The researcher wished to capture the respondents "lived experiences" in order to determine how they gave meaning to or perceived PBL (Burns & Grove 2005:66).

2.6 POPULATION

A population is the entire group of people or objects of interest to the researcher or, in other words, that meet the criteria the researcher is interested in studying (Brink & Wood 1998:319; Burns & Grove 2005:746; Polit et al 2001:651). In this study, the population consisted of all the NWU nursing students who had registered for the pre-registration programme (SANC R425 Nursing degree) and gone through PBL in their third- and fourth- year of study and were invited to participate in the study.

In order to participate, the respondents had to

- be South African citizens from disadvantaged backgrounds
- have done PBL nurse training in the third- and fourth-year programme
- be registered for Bachelor of Nursing Sciences (pre-registration programme)

2.7 SAMPLE AND SAMPLING

Sampling involves selecting a group of people, events, or elements with which to conduct a study (Burns & Grove 2005:352). Burns and Grove (2005:365) and Polit et al (2001:234) describe sampling as the process of selecting a portion of the population to represent the entire population. The purpose of sampling is to identify the parameters for data collection.

In qualitative studies, data collected should be “rich in description” to best reflect the population (Schurink 1998:253). Sample size is influenced by information richness (Streubert & Carpenter 1998:12).

Purposive or judgmental sampling was used for this study. Burns and Grove (2005:352) point out that a sample is purposive when participants are consciously selected for a study.

The researcher deliberately chose who was to be included in the study on the basis that those selected could provide the necessary data to contribute to an understanding of phenomenon (PBL) (Parahoo 1997:252). In qualitative inquiry, the dominant sampling strategy is probability sampling, which depends on the selection of a random and representative sample from the larger population. The purpose of probability sampling is subsequent generalisation to the population.

According to Schurink, Schurink and Poggenpoel (1998:317), the selection of participants, or sampling, depends on the goal of the study. Since the goal of this study is to determine the experiences of the nursing students regarding PBL, purposive sampling was considered the most appropriate method for this study.

The researcher used her knowledge of potential participants to recruit them for the purpose of obtaining as many perspectives of PBL as possible. According to Holloway and Wheeler (2002:122), however, too many participants could serve to cloud the issues and overcomplicate analysis hence sample size is important. In this study there was no danger of having too many respondents, because the population consisted of one hundred and twenty and the sample consisted of eight (8) students. In this study, the sample size was determined means of data saturation (Burns & Grove 2005:307).

2.8 DATA COLLECTION

Data was collected by means of unstructured, individual face-to-face (in-depth) interviews. The purpose of this method is to probe further and clarify issues, if necessary. The researcher interviewed the respondents and probed their experiences in order to discover their underlying motivation, beliefs, attitudes and feelings. The respondents were interviewed until data saturation occurred; that is, no new data emerged (Kvale 1996:102).

Guion (2001:12) emphasises that in-depth, qualitative interviews are excellent tools to use in planning and evaluating programmes. In-depth interviews are open-ended, discovery-oriented methods that are well suited for describing programmes and outcomes from the target audience or key stakeholders (Burns & Grove 2005:544; Parahoo 1997:289; Streubert & Carpenter 1998:67). According to Rossman and Rallis (2003:125), an interview is a good means of acquiring “rich and detailed data” about participants’ worlds. An interview is a “meaning making process” in which individuals describe their experiences and the meaning attached to them (Schurink 1998:298). Moreover, intense or in-depth interviews are topic rather than setting specific, and lend themselves appropriately to understanding conditions (Schurink 1998:298). In this study, the goal of the interviews was to explore the respondents’ views, feelings, and perspectives.

In qualitative research, the researcher is the primary instrument for data collection (Creswell 1998:145) and therefore need to possess the following skills and attitudes.

Respect for the participants. Kvale (1996:118) states that the researcher should respect the participants’ ideas, values and opinions as well as their cultural background. The

researcher conveyed this respect by listening and creating an atmosphere that encouraged the participants to speak freely without being judged or ridiculed. The researcher also conveyed the attitude that the participants are experts in terms of PBL experiences.

Communication skills. The researcher needs to be competent in both sending and receiving verbal and non-verbal messages (Schurink 1998:308). Minimal verbal responses, as well as eye contact and relaxed posture were used to encourage the participants to speak freely.

Bracketing and intuition. According to Burns and Grove (2005:362), bracketing involves putting aside the researcher's own preconceived ideas about the phenomenon, so as not to affect the data being collected. In this study, the researcher entered each interview with an open mind. Intuition refers to gaining insight into the phenomenon that cannot be logically explained, but is based on the researcher's interpretation of the situation and previous knowledge (Burns & Grove 2005:362). During the interview, the researcher focused all attention on the participants in order to actively engage with her or him, and this process increased insight into PBL experiences.

The researcher acted as the "human instrument" of data collection. The interviews were audio-taped and transcribed verbatim in order to reduce potential errors and to capture non-verbal nuances, such as hesitation and pauses.

In unstructured interviews, the questions serve to focus the interview, but should remain as unstructured as possible in order to avoid 'leading' the participants. Open-ended questions allow participants to answer freely and in-depth (Schurink et al 1998:315). Accordingly, the researcher asked the respondents: How did you experience PBL? or What was your experience of PBL?, and How could PBL be improved?

Probing was used to obtain additional information and to clarify answers, where necessary, by further questions, asking for clarification, and restating or paraphrasing the respondents' views and feelings, to reflect understanding. In data collection, silence can indicate participants' need to think and researchers should allow time and not rush them (Kvale 1996:135). In addition, the researcher took field notes on her observations, and the context.

2.9 DATA ANALYSIS

Bogdan and Bilken (1998:145) define qualitative data analysis as “working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned and deciding to tell others”.

According to Du Plooy (2004:83), qualitative researchers use inductive analysis, as critical themes emerge from data. Rather than the data being used to prove pre-determined theories or hypotheses, then, patterns and themes emerge from the data collected. Qualitative analysis requires creativity to place raw data into logical, meaningful categories, examine them in a holistic fashion, and find a way to communicate this interpretation to others. Hoepfl (1997:72) emphasises that data collection and initial analysis should be done simultaneously through a cyclical process of sampling, data collection, analysis, reflection and interpretation. Consequently, analysis commences with data collection.

After each interview the researcher briefly analysed and reflected on the data obtained so as to interpret the inherent meaning. These analyses influenced the next interview in terms of questions asked and focus during analysis.

The researcher started identifying the themes emerging from the raw data by using “open coding” (Hoepfl 1997:72). In open coding, the researcher identified and tentatively named the themes and categories to form a preliminary framework for analysis. Similar words and phrases were grouped into the same category. The researcher used “voice in the text”, namely respondents’ quotations, to illustrate themes. Eisner (1999:36) points out those qualitative reports are “descriptive, incorporative, and expressive in language and use the presence of voice in the text”.

2.10 VALIDITY AND RELIABILITY

The quality of research and research instruments is determined by their validity and reliability. Burns and Grove (2005:28) describe study validity as “a measure of the truth or accuracy of the claim and an important concern throughout the research process”.

Validity is “the degree to which an instrument measures what it is supposed to measure” and reliability is “the degree of consistency or dependability with which the instrument measures the attribute it is designed to measure. If the instrument is reliable, the results will be the same each time the test is repeated” (Polit et al 2001:308).

According to Du Plooy (2004:83), Tucker et al (1999:388), and Wolcott (1999:207), the researcher should maintain the validity of qualitative research by being a good listener: and the participants should provide the majority of the inputs. It is the researcher's task to accurately record and interpret participants' responses. The records should be developed during data collection and maintained. Researchers should allow professional colleagues and others to critique the research manuscript to ensure that the information is reported accurately and completely.

Trustworthiness, credibility, dependability, transferability and confirmability are measures to ensure validity.

2.10.1 Trustworthiness

Krefting (1991:212) describes trustworthiness as the truth-value, applicability, consistency and neutrality of the research. Lincoln and Guba (1985:290) refer to trustworthiness as “how researchers ensure that the findings are worth accounting for”.

For the purposes of data verification, the researcher utilised Guba's model of trustworthiness for qualitative research, (Krefting 1991:214; & Polit et al 2001:312). The four criteria used to ensure trustworthiness were: truth value, applicability, consistency and neutrality, using the following strategies:

- *Truth value.* Data were gathered through one-on-one interviews using the phenomenological research approach. Leading of participants during the interview sessions was prevented through the application of bracketing. At the end of each interview participants' contact details were exchanged (the researcher and the students' details) for use should the need arise.
- *Applicability.* Results of the study were compared to those of similar studies done previously.

- *Consistency.* A full description of the data collection and analysis findings of the study were verified through existing literature, other relevant research studies, as well as experts in the field of health sciences education and in the field of qualitative research.
- *Neutrality.* Data collection and analysis were free from bias.

In this study, the following steps were taken to ensure truth-value (Polit et al 2001:313):

- The researcher established a trusting relationship with the respondents so that they would be relaxed during the interview.
- The researcher performed a literature control in order to compare and validate the findings of the study.
- The researcher observed the respondents and listened carefully to their experiences.

2.10.2 Credibility

Credibility refers to confidence in the truth of the data. Credibility involves conducting the investigation in a way that enhances and demonstrates believability (Holloway & Wheeler 2002:255; Polit et al 2001:313). According to Streubert and Carpenter (1998:29), credibility is required to ensure that the people who have lived the described experience have an opportunity to validate the reported findings that describe their experience.

2.10.3 Transferability

Transferability refers to the extent to which findings can be transferred to other settings or groups (Polit et al 2001:316). Streubert and Carpenter (1998:29) refer to transferability as “the probability that the findings will have meaning to others in similar situations”. Polit and Beck (2004:435) emphasise that the researcher must provide sufficient thick, descriptions so that consumers can evaluate the applicability of the data to other contexts. In this study, sufficient data was generated for other researchers to judge transferability, if so desired.

2.10.4 Neutrality

Poggenpoel (1998:350) defines neutrality as “freedom from bias in research procedure and results”. While the possibility of a total absence of bias is arguable, conformability can be used to increase neutrality (Krefting 1991:217).

The researcher took the following steps to increase neutrality:

- *Literature control.* Compare findings with other research findings and literature.
- *Member-checking.* Check the categories/themes found in the data with the respondents.
- *Auditing.* Make all raw data, field notes, interview schedules, data analysis and interpretation available for auditing.
- *Conformability.* Use conformability to ensure neutrality (Krefting 1991:217). Conformability refers to how far an outsider can follow the logic in the findings and how explicit the respondents’ various perspectives have been made (Holloway & Wheeler 2002:255).

2.11 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. *Collins English Dictionary* (1991:533) defines ethics as “a social, religious, or civil code of behaviour considered correct, esp. that of a particular group, profession, or individual”. In research that involves human subjects, it is important to respect the participants’ rights, values, wishes and needs (Burns & Grove 2003:200; Parahoo 1997:301; Creswell 1994:162).

In this study, the researcher observed the following ethical considerations:

➤ **Permission**

The researcher applied for and obtained permission to conduct the study from Department of Nursing Sciences (see annexure 2). The Director of School of Environmental and Health gave permission for the respondents to be interviewed in classrooms or offices (see annexure 1).

➤ **Informed consent**

The researcher informed the participants of the purpose and significance of the study, their role as participants, and what would be done with the findings. Written informed consent was obtained from the participants (see annexure 3). Furthermore, the participants were given the option to withdraw from the study at any time, should they so wish. Polit and Hungler (1999:134) point out that participants should have adequate information regarding the research, be capable of comprehending the information and have power of free choice, enabling them to consent voluntarily to participate in the research or decline participation.

➤ **Voluntary participation**

The respondents were free to choose to participate in the study. No coercion or pressure was exercised. Moreover, the respondents were free to leave the study at any chosen time (Poggenpoel 1998:350).

➤ **Confidentiality**

Confidentiality was maintained during data collection. Confidentiality was ensured by not linking inputs to individual participants (Streubert & Carpenter 1998:38). Pseudonyms were used and all personal identifiers were removed from the transcripts. The respondents were informed that the taped interviews would be erased as soon as the study was completed (Biley & Smith 1999:1012).

➤ **Protection from harm**

No invasive procedures were used in this study.

2.12 CONCLUSION

This chapter described the research design and methodology chosen to explore and describe the respondents' experiences of PBL.

Chapter 3 discusses the literature review conducted for the study.

CHAPTER 3

LITERATURE REVIEW

3.1 INTRODUCTION

A literature review is a systematic search to determine the existing body of knowledge on the problem or phenomenon under study (Burns & Grove 2005:116). The purpose of a literature review is “to determine the extent to which the topic under study is covered in the existing body of knowledge” (Babbie & Mouton 2002:565). This chapter discusses the literature review on PBL.

3.2 SCOPE OF THE LITERATURE REVIEW

The researcher conducted a traditional literature review. The literature review covered the key concepts of and available information on PBL and related areas.

According to Holloway and Wheeler (2002:134), in qualitative research extensive literature reviews are not generally done prior to the study as this might result in researchers leading participants in the direction of what has been discovered. In this study pre- and post-literature reviews were done as to form a thorough understanding of the PBL principles. Bracketing was done when interviewing took place (see chapter 2).

3.3 PROBLEM-BASED LEARNING (PBL)

Boud and Feletti (2001:13) describe PBL as both a curriculum and a process of confronting students with problems from practice, which provides a stimulus for learning. PBL is an instructional approach that challenges students to “learn working cooperatively in groups to seek solutions to real-world problems. These problems are used to engage students’ curiosity and initiate learning of subject matter” (Roberts & Ousey 2004:155). Carlisie and Ibbotson (2005:269) and Morales-Mann and Kaitell

(2001:13) maintain that PBL can also be used as a framework for modules, courses, programmes and curricula.

PBL begins with students working in small groups delving into and determining key issues and then solving “real-world” problems under the guidance of facilitators focusing upon a realistic problem. In this way, students develop a varied and deeper perspective and knowledge of the subject (Lowenstein & Bradshaw 2004:83).

PBL is an educational approach that organises curriculum and instruction around carefully crafted “ill-structured” problems. Students gather and apply knowledge from multiple disciplines in their quest for solutions. Guided by teachers acting as cognitive coaches, they develop critical thinking, problem solving, and collaborative skills as they identify problems, formulate hypotheses, conduct data searches, perform experiments, formulate solutions and determine the best “fit of solutions to the conditions of the problem” (Haith-Cooper 2000:528). PBL enables students to embrace complexity, find relevance and joy in their learning, and enhance their capacity for creative and responsible real-world problem-solving (Haith-Cooper 2000:539; Delva et al 2000:169).

Carlisle and Ibbotson (2005:271) emphasise that PBL must not be confused with problem-solving learning, which involves students dealing with problems created and constructed by the educator, and is a useful strategy in many learning situations. During PBL, however, it is the students themselves who develop and construct the problems that they perceive inherent to the trigger material provided to them. This principle is crucial in differentiating PBL from other learning strategies, and is also the key in enhancing “how to learn” as well as “what to learn”.

In PBL, students engage in self-directed learning, unlike a traditional teacher-centred approach, in which the key facts and concepts are presented to the students. Alessio (2004:26) identifies the following key features of PBL:

- Learning in context, where real-life problems are presented.
- Elaboration of knowledge through social interaction, where the students work together in small groups.

- Meta-cognitive reasoning and self-directed learning with independent thinking and life-long learning. In the process of solving problems, students develop knowledge of theory, practice and facts, concepts and appropriate inquiry strategies related to the initial problem.

3.4 PBL PROCESS

PBL is a process and not an event. Andrews and Jones (1996:358); Savery (2006:21) and Schmidt (1997:423) identified the following steps in PBL.

- Divide students into small groups.
- Introduce ill-structured problems.
- Generate hypotheses; discuss the problems.
- Write down what information is.
- Know what information is needed and what steps to take.

When gaps are identified in needed information, constitute learning issues. These “learning issues” are divided among group members for further research (see figure 3.1).

In NWU, the scenario/trigger, which includes a problem, is presented to students who then find information from the facilitator (identify or establish facts about the problem). The students formulate ideas about the problem (hypothesis formulation). The learning needs/issues are identified in the form of questions from the facilitator, followed by identification of learning resources. The students then proceed with planning investigations; seeking information, such as consulting experts, and revisiting the stated hypothesis with new knowledge gained from investigations. This generates new ideas/hypotheses and recycling through the process until the hypothesis is accepted or rejected.

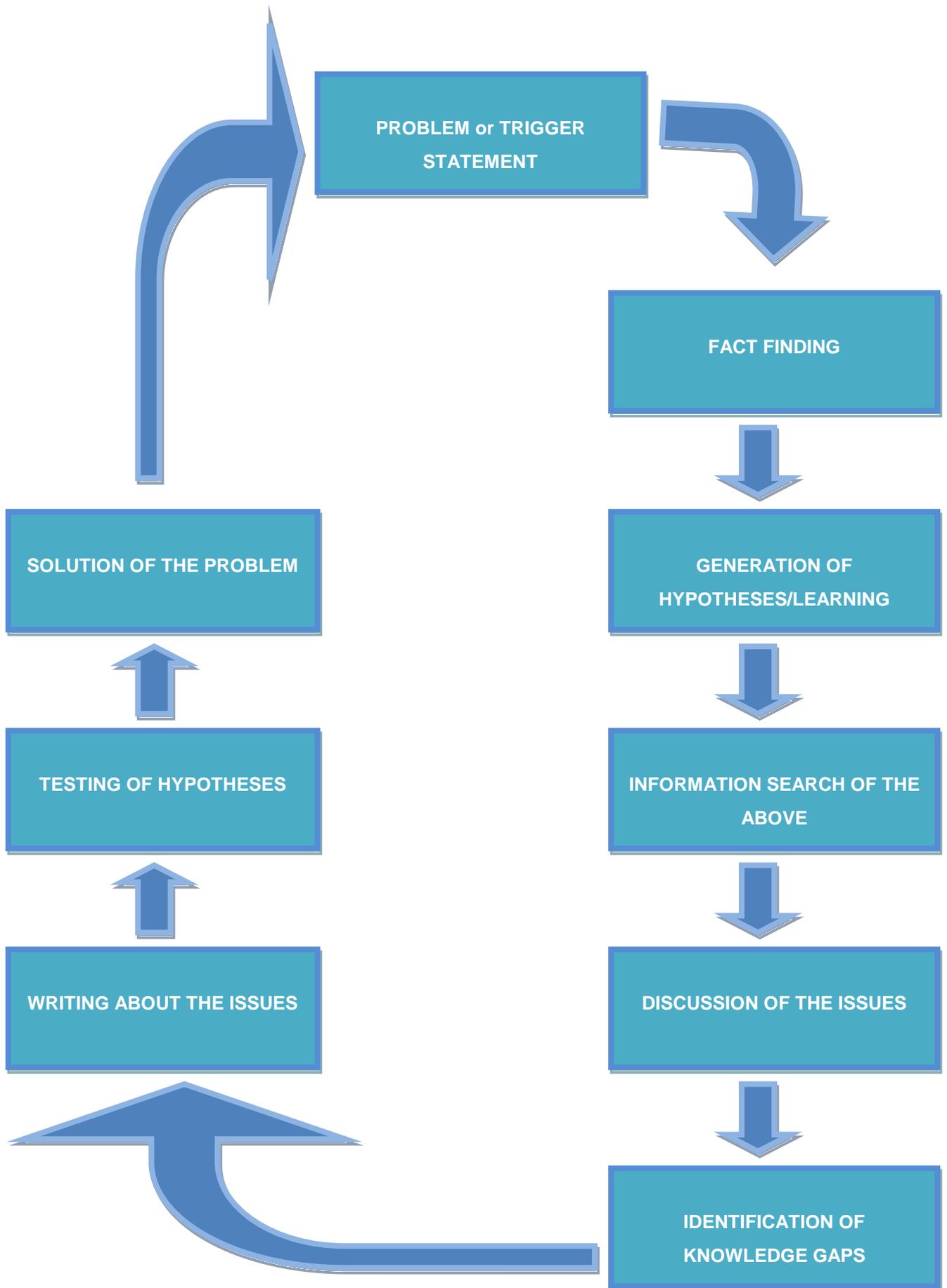


Figure 3.1 The process of PBL

The students are given ill-defined and complex problems/triggers that have many possible solutions. Alexander, McDaniel, Baldwin and Money (2002:249), Pastirik (2006:262) and Roberts and Ousey (2004:155) describe a trigger as a brief but broad statement of the patients' problems that is the initial stimulus used to introduce each situation. Problems should be authentic and similar to those faced by professionals in a given field. For example, the students in NWU are given the following management problem in the health unit as a trigger/driver for a study unit in management:

Scenario/problem or trigger

Ward 2 is characterised by many problems including poor patient care.

Facts about the problem

- This is a surgical unit with bed occupancy of forty (40).
- Staff establishment = twelve (12) with 4 professional nurses, 3 staff nurses, 4 nursing auxiliaries, 2 cleaners, and 1 administration officer.
- Staff members absent themselves from work and take longer tea and lunch breaks.
- The doctors complained of treatment not given to patients.
- Relatives complained of loved ones who were not properly cared for.
- The ward stocks do not last despite adequate ordering and supplies.
- Enrolled/staff nurses have been working in this unit for the past twelve months.
- The staff members believe that they are doing their best and relatives are not appreciative of the nurses' work.

Ideas generation or hypotheses formulation

- Poor management
- Ineffective leadership
- Ineffective supervision
- Ineffective quality control
- Poor delegation

Exploration is accomplished by activating the students' prior knowledge, illustrating similarity of contexts in which information is learned, and later applied, and providing the opportunity for students to elaborate information.

Learning issues or needs identification

- What is management?
- What is leadership?
- What is the difference between management and leadership?
- What is delegation?
- What is quality control?

Plan of investigation and information seeking

The students are divided into small groups to obtain information on the identified learning issues and plan how to share information issues, and are given deadlines for individual or group work (self-directed learning).

PBL is done in small discussion groups of students accompanied by a faculty tutor/facilitator. A constructed, but guess-realistic problem ("paper case") is presented in consecutive sections, mimicking the gradual organisation of potentially incomplete information in real-life problems. The students discuss the case, define the problem, derive learning goals, and organise future work (such as literature and information search). Results are presented and discussed in the following session. When the participants agree that the relevant questions have been appropriately discussed, the case is hypothesised.

3.5 TENETS OF PBL

3.5.1 Authentic open-ended problems

PBL requires solving authentic open-ended questions with several correct answers; that is, authentic problems faced by nurses in the "real world". According to Boud and Feletti (2001:98), Price (2003:34) and Schmidt (1997:422), a good PBL problem

- is engaging and orientated to real life
- generates multiple hypotheses
- requires team effort
- is consistent with desired learning outcomes
- builds upon previous knowledge and experiences
- promotes development of higher order cognitive skills

The problems must allow students to freely inquire through history, physical examination and checking of laboratory results in order to obtain information to support or verify their hypotheses (Lowenstein & Bradshaw 2004:84).

3.5.2 Student and educator roles change

In PBL, the traditional teacher and student roles change. Boud and Feletti (2001:98) and Schmidt (1997:422) found that students assume increasing responsibility for their learning, giving them more motivation and a greater feeling of accomplishment, setting the pattern for them to become successful lifelong learners. The lecturers, in turn, become resources, tutors and evaluators guiding the students in their problem-solving efforts. Figure 3.2 illustrates the student and educator/lecturer roles.

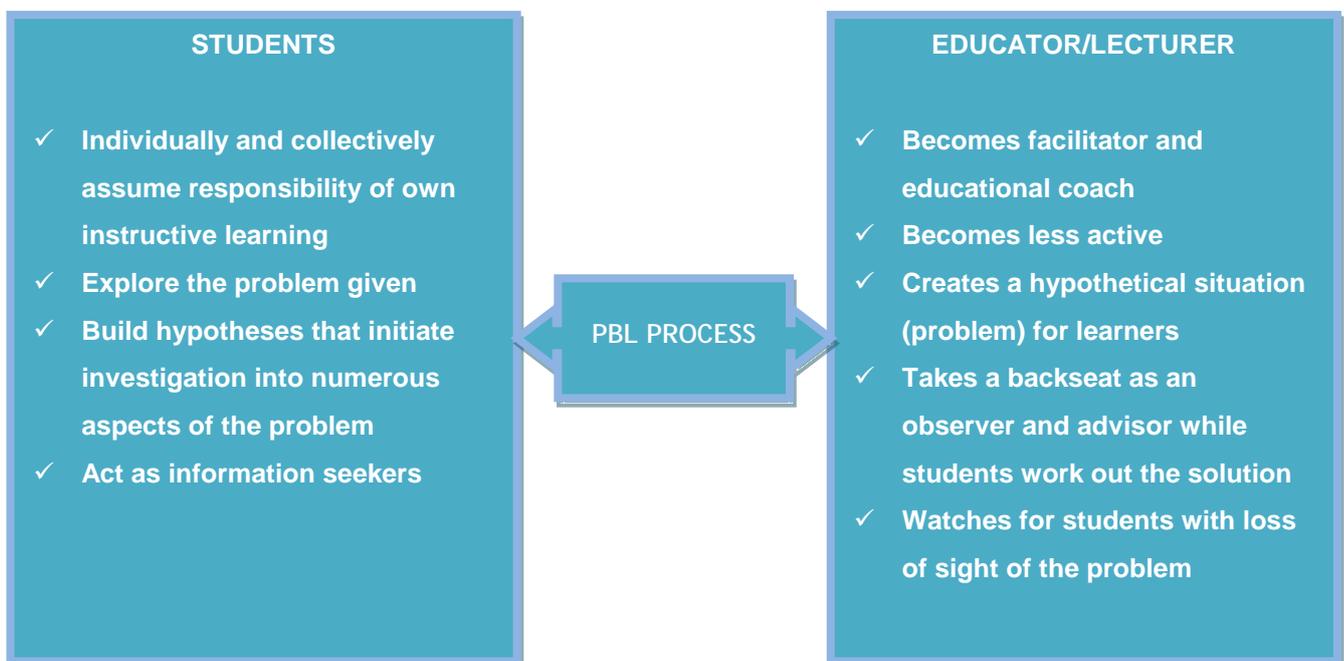


Figure 3.2 Student and educator/tutor/lecturer roles

Adapted from Lowenstein and Bradshaw (2004:86); Price (2003:34) and Rideout (2001:194)

Newman (2002:98) identifies the following techniques and roles to assist facilitators to effectively implement PBL (see table 3.1).

Table 3.1 Techniques for the PBL teacher

COMMUNICATIVE ACTIONS	ROLE PERSONAE
<ul style="list-style-type: none"> • Staying silent • Probing questions: Why? What do you mean? What does that mean? • Reflecting questions: How does this idea help you? • Involvement questions: Who else has ideas on this? • Physical positioning in group • Educational diagnosis questions: How do you feel about the way you formulated your ideas? • Stimulating interest • Decreasing challenge where there are signs of boredom or “over challenge” • Helping students to address issues with interpersonal dynamics, e.g. by asking questions about dysfunctional group behaviours 	<ul style="list-style-type: none"> • Learner/student • Creator • Director • Challenger • Evaluator • Negotiator • Modeller • Designer • Facilitator • Supporter

Source: Newman (2002:98)

According to Price (2003:34) and Wolff (2000:312), students have eight tasks in PBL, namely:

- Explore the problem: clarify terms and concepts that are not understandable; create hypotheses; identify issues.
- Identify what you know already that is pertinent.
- Identify what you do not know.
- As a group, prioritise the learning needs, set learning goals, and objectives, allocate resources; members identify which task they will do.
- Engage in a self-directed search for knowledge.
- Return to the group; share your new knowledge effectively so that the whole group learns the information.
- Apply the knowledge – try to integrate the knowledge acquired into a comprehensive explanation.
- Reflect on what has been learnt and the process of learning.

3.5.3 Collaboration is essential

Collins English Dictionary (1991:317) defines collaboration as “to work with another or others on a joint project (from Latin *com-* together + *labōrāre* to work).” A critical feature of PBL is its collaborative structure. Collaboration engages students in cognitive activities that cannot be carried out individually. Faidley, Evensen, Salisbury-Glennon, Glenn and Hmelo (2000:110) emphasise that the social interaction establishes the context in which shared cognition can occur and “collaboration grounds knowledge within a community of and serves to model an aspect of professional expertise associated with teamwork and consultation”. Collaborative learning is a form of learning that involves students working together to accomplish a common goal. It incorporates collaboration as a philosophy of interaction, where students are responsible for their learning actions and respect the abilities and contribution of peers (Lowenstein & Bradshaw 2004:86; Stover 1998:4).

Collaboration occurs naturally during the group discussions with the facilitator. Stover (1998:4) points out that student need to be encouraged to collaborate during self-directed study. Student collaborative work at this time can be a most rewarding and productive part of their learning as the students work together, helping each other to gain an understanding of the learning issues. Students have to work collaboratively in the groups to discuss and debate learning issues. At NWU, the objective of collaborative learning is to encourage a group of students to work together to solve a problem. The students are asked to work together to solve problems, discuss ideas, and compare ideas about a concept, or to do a task (an assignment). Collaborative learning strives to foster teamwork, individual accountability, prompt feedback, high self-expectations and a respect for diversity among group members (Lowenstein & Bradshaw 2004:86; Stover 1998:4).

Regarding collaborative learning, Barrows (2003:1) emphasises that:

- What students learn during their self-directed learning must be applied back to the problem with re-analysis and resolution.
- A closing analysis of what has been learned from work with the problem and a discussion of what concepts and principles have been learned is essential.

- Self- and peer assessment should be carried out at the completion of each problem and at the end of every curricular unit.
- The activities carried out in PBL must be those valued in the real world.
- Student examinations must measure student progress towards the goals of PBL.
- PBL must be the pedagogical base in the curriculum and not part of a didactic curriculum.

Collaboration allows students to develop the security and authority they need to be responsible for their own learning. Collaboration is an essential skill for students to have in their careers, as they will invariably be working as members of teams (Barrows 2003:1; Lowenstein & Bradshaw 2004:86).

3.5.4 Self- and peer assessment

Students must become proficient in assessing their own individual learning progress and that of others. Price (2003:25) maintains that the ability to accurately monitor the adequacy of personal performance is essential to develop lifelong self-directed skills. The ability to provide colleagues with accurate feedback is an important skill in life and career (Rideout 2001:151). At NWU, peers are a valuable source of feedback that is prompt and individualised.

3.5.5 Student orientation

Orientating students in PBL is crucial. One approach is to introduce the concept and rationale for the use of PBL in the programme (Lowenstein & Bradshaw 2004:87). This orientation defines the goals and objectives, and clarifies the roles and responsibilities of the facilitator and students in the group. Barrows (2003:1) identifies the following “essentials” or principles for the design of PBL as a practical approach to curriculum design for students to take responsibility for their own learning:

- The problem simulations used in PBL must be ill structured and allow for free enquiry.
- Learning should be integrated from a wide range of disciplines or subjects.

3.6 BENEFITS OF PBL

PBL is widely accepted and effective in a variety of disciplines in higher education (Yates & Gerders 1996:138). Peterson (2006:2) and Albanese and Mitchell (1998:56) point out that PBL satisfies three important criteria that promote optimal learning, namely:

- PBL provides an environment where students are immersed in a practical, ongoing activity in which they receive feedback from the other students and the instructor or facilitator.
- Students receive guidance and support from their friends and peers. Learning is not unidirectional (teacher to student), but multidirectional (including other students, tutors and professors).
- Learning is functional as it is based on solving real problems.

There is general consensus in the field of education that PBL emphasises the integration of the foundational programmes (Gwele 1997:275). This results in cessation of compartmentalisation and fragmentation of the learning prevailing in most learning environments. Gwele (1997:276) lists the following advantages of PBL:

- The subject matter in PBL is practised in the context of problems rather than a list of predetermined areas.
- Small group tutorials and out-of-class self-directed learning activities form core student learning experiences.
- Student-to-student discourse is encouraged with the teacher/tutor acting as the facilitator of the process of learning rather than providing the content to be learned.

Barrows (1986:483) emphasises that PBL has the following benefits for students:

- They are encouraged to work cooperatively, sharing experiences, opinions, and expertise and learning resources.
- They learn to be comfortable with saying “I don’t know” compared to competition with peers for “honours” in traditional learning.

In Australia, Creedy, Horsfall and Hand (1999:728) found that PBL was adopted in nursing education in an effort to address problems perceived to occur in more traditional practice-based programmes, including:

- An increasing body of knowledge that contributes to overloads and fragmented curricula.
- Irrelevance of subject material from the students' perspective.
- Students' lack of problem-solving capabilities.
- Absence of positive attitudes towards ongoing learning.

The benefits of PBL include learning teamwork and effective interaction with peers, supported by collaborative working, improved communication skills, respect for different perspectives, and cognitive skills (Biley & Smith 1999:1206; Creedy & Hand 1998:696; Morales-Mann & Kaitell 2001:14).

In China, Mok, Lee and Wong (2002:320) found that the graduate nurses from PBL have a strong sense of responsibility of widening their own learning and are adaptable to change and innovation.

In a study of the outcomes or effects of clinical education using PBL, Tiwari, Lam, Yuen, Fung and Chan (2005:299) found motivation to learn; self-direction in learning; active, interactive and student-centred learning, and enjoyment of learning. The students significantly improved their approach to and methods of learning (Tiwari et al 2005:299).

3.7 CHALLENGES OF PBL

PBL has advantages and disadvantages. Although student participation in PBL is highly motivational, student motivation remains a problem. Lowenstein and Bradshaw (2004:98) emphasise that self-study is a large component, and some students may need assistance to maintain the motivation required with independent learning.

Biley and Smith (1999:1206) point out that PBL relies for its success on group dynamics and this can present problems. Group cooperation and cohesiveness are significant factors in the learning process (Barrows, Lyte & Butterworth 2002:56).

Kalaian and Mullan (1996:391) emphasise that although tutor effectiveness is crucial in learning at the start of the curriculum, in the end learning is more a function of the effectiveness of the small group process. At the same time, Peterson (1997:197) points out that the assumption that students can work together effectively is misleading. From elementary school, students are educated through teacher-centred or text book-generated learning, and suddenly are forced to learn by trial and error and work in a group setting. As a result of their formal education, these students' communication and group interaction habits differ from student to student. Johnson and Johnson (1997:289) found that some students try to take control of the group; others become passive; others become overly verbose, and still others shy away from commenting.

Medical and health professionals who have used PBL in the classroom reported symptoms of weak group processes and interaction skill among students (Hitchcock & Anderson 1997:510; Kalaian & Mullan 1996:391; Tipping, Freeman & Raclis 1995:1051). These problems compromise the learning process. Students may find themselves in small groups that actually harm individuals and the learning climate.

Hitchcock and Anderson (1997:510) identify the following different small group dysfunctions:

- Apathy or lack of meaningful interaction.
- Limited or focus discussions that ignore other aspects of an issue.
- Dysfunctional group members who do not participate or perform work equally with others in the group.
- Scapegoat students, who become ignored by other group members.
- Domineering students who disrupt, or prevent others from learning through the process.
- A class becoming hostile towards the instructor due to the frustrations over learning.

- An over-reliance on tutors or educators in solving problems and completing tasks.

According to Peterson (2006:2), students who do not have interpersonal skills frequently cause communication breakdown and a decline in motivation.

Hitchcock and Anderson (1997:510) contend that conflict is common and necessary for team growth, but can be destructive to students' learning when it is personal and becomes an obstacle to task completion. Conflict can occur when students lack the skills necessary for team function, such as confusion and lack of shared meaning, which could ultimately lead to conflict and resentment. At NWU, facilitators also found conflicts among the students and at times some students wished to work or submit individual work.

Biley (1999:588) points out that the transition from traditional to PBL student is often associated with feelings of frustration and uncertainty. At the same time, however, once students undertake the transition, negative perceptions of PBL will be reduced and the benefits realised. Alessio (2004:26) concurs with Biley (1999:588), stating that PBL had created tension in undergraduate students, who reported dissatisfaction and fear. These students recognised that PBL is dependant on group collaboration for success, which raised concerns about teamwork and group dynamics, particularly attendance, equality of input and division of labour. Difficulties can arise when tutors are faced with students who either do not prepare for, or do not attend meetings and let others do the work (Biley & Smith 1995:587; Dolmans, Wolfhagen, Van Der Vleuten & Wijnen 2001:885; O'Hanlon, Winfield, Hejka & Chur-Hansen 1995:203).

3.8 PBL ASSESSMENT STRATEGIES

With the introduction of outcomes-based education (OBE) and PBL, assessment plays a different and vital role. Previously, assessment focused mainly on examinations and tests or what students had passed or failed, especially in the traditional methodologies. In PBL, the educator's role is one of facilitating and requires the student's active participation and involvement in assessment. Students are to participate in assessment through self assessment, peer assessment and facilitator or tutor assessment. In PBL, assessment forms part of learning and not separated from it and the process is called

continuous assessment (Independent Examination Board [IEB] 2004:20; SAQA 2002:37). The students are to be involved from planning to evaluation of the assessment process. This is particularly a requisite in learning plan which Rideout (2001:241) describe as an agreement between the student and facilitator or tutor delineating what the student will learn, how and within what time frame this will be accomplished, the evidence required to show that the objectives have been accomplished, and how the evidence will be evaluated.

Outcome-based assessment in PBL promotes and facilitates learning, diagnosis of problems, decision-making, improving products, and judging effectiveness (Billings & Halstead 2005:352; SAQA 2002:52; IEB 2004:45).

3.8.1 Purpose/aims of assessment in PBL

Assessment refers to “the act of assessing, esp. (in Britain) the evaluation of a student’s achievement on a course” (*Collins English Dictionary* 1991:91).

Assessment is an integral part of PBL and consists of (IEB 2004:47):

- *Formulation of learning outcomes and assessment criteria.* This entails establishing competencies that students have to achieve at the end of the learning experience and identifying how those competencies are to be assessed.
- *Provision of learning opportunity.* Students must be allowed opportunity and time to engage in self-directed learning utilising resources such as media, consulting the multidisciplinary health team, and participating in health care services.
- *Assessment and provision of evidence.* Assessment entails evaluation or checking the achievement of learning outcomes.

3.8.2 Assessment methodology in PBL

The commonly used methods in assessing PBL include objective item questions, portfolios, triple jump tests (TJT), learning contracts and reflective clinical journals (Gwele 2003:22; Price 2003:184).

Objective-item questions have often been rejected for use in PBL programmes for various reasons, including the belief that they are only suitable to measure lower levels of taxonomic cognitive functioning (Van der Vleuten et al 1996:105). However, others argue that there is no reason why objective items questions cannot be used in PBL assessment as the key issue is the quality of the design and administration of the test rather than the method itself (Swanson, Case & Van der Vleuten 1991:59). The progress test used with slight variation in the PBL programmes in several medical schools uses the multiple-choice question format (Blake, Norman, Keane, Mueller, Cunnington & Didyk 1996:1002).

3.8.3 Triple jump test (TJT)

Triple Jump Test (TJT) is described as a three (3) staged assessment involving primary analysis of clinical scenario, followed by evidence collections and the final presentation of verbal or written report that justifies the course of action to be taken. Rideout (2001:228) describes triple jump test as a method of evaluating application of knowledge to clinical situation in a controlled setting outside the clinical environment. Nendaz and Tekian (1999:236) refer to Painvin, Neufeld, Norman, Walker and Whelan's (1979: 75) description of triple jump exercises as "activities involving students in discussing a written scenario, identifying the relevant learning goals, and regrouping to present a conclusion as well as evaluate their own performance". Problem-solving and self-directed learning skills are assessed for formative purposes. Reliability for use in summative evaluation is limited due to the small number of cases that can be considered under these circumstances (Nendaz & Tekian 1999:236).

TJT consists of three steps (Nendaz & Tekian 1999:236; Price 2003:153-157; Rideout 2001:228):

- **Step 1.** Present a case scenario, involving one or more problems, and invite the students to make an initial assessment of the situation and suggest the most critical issues involved. In other words, the students are allowed to "tease out" what is important in the situation. The students ask a series of questions to assist in hypothesis formulation.

- **Step 2.** Ask the students to research the learning issues they have identified, read further about their diagnosis, consult resources, and other support information.
- **Step 3.** The students return to present a revised and updated analysis of the situation and account of the interventions suggested. In other words, the students may be given additional clinical data and asked to further support the hypothesis or modify it if based on new information.

The suggested time varies according to subject or module. Price (2003:157) and Rideout (2001:228) advocate 90 minutes, with 15 minutes allocated to step1, and an hour for review of resource material and planning a revised/updated response, and quarter of an hour allocated for presentation of revised/updated analysis and checking their hypothesis. TJT can be potentially stressful although facilitators must work hard to put learners at ease. Time management is also critical.

TJT is a learning process measure widely used as an assessment tool in PBL programmes (Painvin et al 1979:152). The TJT consists of a structured oral examination based on one or more patient problems; a time-limited study assignment on the patient problems in the first oral test, and a repeat oral examination in which the quality of self-learning around the assigned topic is assessed. TJT is currently used in a number of PBL programmes around the world. TJT is considered a very time-consuming, costly method of assessment with poor measurement characteristics (Blake et al 1996:1003).

3.8.4 Portfolios of learning

Portfolios are another learning and assessment strategy suitable for promoting initial thinking and active learning (Billings & Halstead 2005:294; Lowenstein & Bradshaw 2004:360; Rideout 2001:225). A portfolio is a collection of evidence, usually in written form, of both the products and process of learning. It attests to achievement of personal and professional development by providing critical analysis of its content (Price 2003:160; Webb, Endacott, Gray, Jasper, McMillan & Scholes 2003:600).

Portfolios are important for clinical learning in PBL because students participate in solving problems in the clinical area, develop competencies and provide evidence thereof (Lowenstein & Bradshaw 2004:360; Spence & El-Ansari 2004:394).

Rideout (2001:225) points out that while portfolios do provide an individualised format for students, there is concern regarding the appropriateness of assigning a grade to personal reflective component of student submissions since the presence of external evaluation may intimidate the students and limit the very self-disclosure the strategy purports to encourage. The disadvantage of using portfolio requires being combined with reflective strategies to encourage student ownership of learning (Billings & Halstead 2005:302).

3.8.5 Learning contracts

Billings and Halstead (2005:301) and Price (2003:162) describe learning contract as “a written agreement between the learner and the educator”. Learning contracts can be used for both learning and assessment strategy in PBL, and may be teacher or student initiated (Chan & Wai-Tong 2000:298-305). Codde (2006:3) and Rideout (2001:63) maintain that learning contracts should include the following critical components:

- *Learning outcomes*, which include the knowledge, skills, attitudes, and values to be acquired by the student (learning objectives).
- *Assessment criteria*, which state the aspects to be assessed.
- *Learning strategies and resources*, which indicate how these objectives are to be accomplished (learning strategies and resources).
- *Assessment dates*, times and methods.
- *Evidence of achievement* of learning outcomes. Stipulation of evidence to be presented to demonstrate that the objectives have been accomplished, and how this evidence will be judged or validated. In academic settings, the contract should also specify how much credit is to be awarded and what grade is to be given.

According to Billings and Halstead (2005:301), learning contracts:

- Maximise adult students' opportunity to direct their own learning.
- Provide the structure needed by some adult students.
- Build on prior knowledge and life experiences.
- Allow students to work at their own pace.
- Teacher-initiated contracts are motivating for some students.

At the same time, Billings and Halstead (2005:301) point out that learning contract have the following disadvantages:

- Students may not be familiar with the process of developing a learning contract and may become frustrated.
- Students must be self-disciplined to complete the contract.
- Additional time is required for students' self-assessment of learning needs and development of the contract.
- Educators and faculty administrators may need in-service training on development, management and acceptance of contracts.

Learning contracts are useful tools that encourage students to become active participants in their learning. Education must be an active rather than a passive process. To be active, students must participate in the process of education and become more independent and responsible for their own learning (Chan & Wai-Tong 2000:298-305; Rideout 2001:63; Billings & Halstead 2005:301).

3.8.6 Reflective clinical logs or journals

A journal is "a book in which a daily record of happenings, etc. is kept" (*Collins English Dictionary* 1991:836). In reflective clinical journals, students detail their personal experiences and connect them to classroom concepts (Gwele 2003:19). The main aims of clinical learning journals are to focus clinical learning experience, and allow students to set their own agendas reflect on nursing as a career, and transform learning (Gwele 2003:20). It is essential to stipulate clear objectives and expectations for the journal in order to decrease students' perception of exercise as "busywork". Using different

approaches to journal writing may increase student interest in the assignment. Billings and Halstead (2005:303) emphasise that thoughtful feedback from the teacher is important to student learning. Group discussion about the journal and what students are saying may increase learning for all students.

3.8.7 Standardised patient (SP)-based tests

Standardised patients (SP's) are individuals who portray patients during simulated medical encounters, thus providing rich educational opportunities for students to practise and refine core skills in medical interviewing and physical diagnosis without using actual patients (Fleek 2003:75).

Rideout (2001:283) and Nendaz and Tekian (1999:237) describe a standardised patient as a health person carefully trained to simulate the historical, physical and emotional features of a patient with sufficient realism to prevent detection by experienced clinicians. Nendaz and Tekian (1999:237) point out that this type of test is used most often to assess history taking, physical examination, and interpersonal and communication skills. Bosek, Li and Hicks (2007:4) describe SP encounters as an alternative to clinical experiences and a standardised criterion for student performance evaluation. Careful development of encounters, selection and training of SPs, support and debriefing of all participants are essential for positive SP encounters. SP encounters should be developed on the basis of objectives and competency criteria and relate to actual events. Encounter scripts incorporating any "traditional" language often associated with a specific medical condition are beneficial to standardising the process. SP preparation involves providing background on medical conditions, feedback when practising the role-play, and validation of performance consistency (Bosek et al 2007:4).

According to Rideout (2001:286), orientation of students and faculty to the SP experience ensures that participants stay in role. These authors further point out that SP's can also be utilised to complete written evaluation tools and provide verbal feedback to students. Bosek et al (2007:5) and Fleek (2003:75) stress that all participants should evaluate the encounter process for future improvement.

If the questions are constructed thoughtfully, SP's can be useful in covering a broad spectrum of competences and provide sound psychometric properties. The advantages of SPs include availability, reliability, adaptability, acceptability and accurate feedback (Rideout 2001:283). The disadvantages of SP are that they are costly in terms of training and payment with a fully developed standardised programme, and some conditions and situations cannot be simulated (Rideout 2001:283).

3.8.8 Objective structured clinical examination (OSCE)

Objective structured clinical examination (OSCE) has been used to assess medical students since the mid 1970s, and is increasingly utilised to assess students from nursing and the allied health professions (Rushforth 2007:481). Watson, Simpson, Topping and Porock (2002:424) describe OSCE as an examination where "students demonstrate their competence under a variety of simulated conditions". Often using standardised patients, the OSCE assesses multiple components in a single setting. Raters and or assessors are located at different stations, and students move from one to another performing various activities, such as history taking, physical exams and communication skills (Nendaz & Tekian 1999:237; Rideout 2001:223).

Compared to other forms of assessment, OSCE has a number of strengths and limitations. Rushforth (2007:483) identify the following benefits:

- Greater objectivity than in most assessment of practice.
- Wide range of different examiners hence reduced risk of examiner bias.
- Reduced risk of different students being assessed by different assessors.
- Positively viewed by students and lecturers.
- Broader range of skills tested.
- Reduced 'luck of the draw'/increased consistency of experience between students.
- High level of reliability and validity.

These benefits have increased the popularity of OSCE in nursing education and other health-related sciences.

Rushforth (2007:483), Bartfay, Rombough, Howse and Le Blanc (2004:18) and Mavis, Henry, Ogle and Hoppe (1996:448) list the following disadvantages:

- *Student stress.* Students clearly find the process enormously stressful, and stress could, in turn, adversely affect performance.
- *Costs in terms of resources* due to the complex orchestration of the process, including faculty time, cost, staffing.
- *Confidentiality risk.* Ensuring confidentiality of the OSCE stations when students' need to be assessed in separate subgroups can create challenge.
- *Fragmentation of patient care.* Concern that OSCE undermines holism, fragmenting holistic patient care into discrete and unrelated elements, as the students move between stations.

3.9 CONCLUSION

This chapter discussed the literature review on PBL, including the benefits, challenges and assessment methods. Within the framework of PBL, students develop skills that lead to lifelong learning.

Chapter 4 discusses the data analysis and interpretation and the findings.

CHAPTER 4

FINDINGS AND LITERATURE CONTROL

4.1 INTRODUCTION

Having described the literature view undertaken for the study in chapter 3, this chapter presents the data analysis and interpretation and findings of the respondents' experiences of PBL. In discussing the findings, the researcher gives respondents' direct quotations and compares them with the literature. The purpose is to confirm the findings; indicate those unique to this study, and point out those found in the literature but not confirmed by this study. Since in qualitative research the literature control is used inductively in line with the specific research paradigm, the research findings are discussed with reference to the literature (Creswell 1994:20).

The sample size is determined by means of data saturation (Burns & Grove 2005:306) and the interviews with the students were conducted with the students until a pattern of repetition was reached. Saturation point was reached after eight interviews. The respondents seemed relaxed and responded readily, with minimal encouragement or input from the researcher. Two respondents initially appeared nervous, but this soon disappeared as the interview progressed. The respondents were enthusiastic about the study and the prospect of having a platform to air their experience.

The collected data was transcribed verbatim from the audiotapes and analysed firstly by identifying themes from the raw data, also called "open coding" (Hoepfel 1997:60). The raw data was divided into paragraphs and sentences with the same meaning, sorted into categories, and then coded.

4.2 RESPONDENTS' GENDER, LANGUAGE AND YEAR OF TRAINING COMMENCEMENT

The table below depicts the gender, language and year of training commencement of the eight respondents who were purposively invited to participate. Burns and Grove

(2005:306) consider a sample purposive when participants are consciously selected in qualitative research.

Table 4.1 Respondents' gender, language and year of training commencement

Gender	Number of students	Year of training commencement		Language		
		2003	2004	Tswana	Sepedi	Xhosa
Female	4	2	2	3	0	1
Male	4	1	3	3	1	0
Total	8	3	5	6	1	1

During the initial interview, the students from third and fourth year level were not comfortable providing information for they feared victimisation and gave only the positive experiences and the researcher then used the final year students who already had their results. These nursing students had registered for the pre-registration programme (SANC R425 Nursing degree) and gone through PBL in their third and fourth years of study.

The results reflect that although nursing is still a predominately female profession, males have joined. The results depict that the campus is still a Black institution with Batswana in the majority (NWU 2005:5).

4.3 CATEGORIES, THEMES AND SUB-THEMES

The following themes, sub-themes and categories emerged from the data (see table 4.2):

Table 4.2 Categories, themes and sub-themes from the data

Category	Theme	Sub-theme
4.3.1 PBL is challenging	4.3.1.1 Unfamiliar with PBL	4.3.1.1.1 Students not used to the strategy
		4.3.1.1.2 PBL only used by Nursing
	4.3.1.2 Library	4.3.1.2.1 Search for information
		4.3.1.2.2 Information not available
4.3.1.3 Computer laboratories	4.3.1.3.1 Laboratories always full	
	4.3.1.3.2 Closing times	
4.3.1.4 Time pressures	4.3.1.4.1 Overload	
	4.3.1.4.2 Clinical placement	
4.3.2 Group collaboration	4.3.2.1 Group cohesion	4.3.2.1.1 Group domination
		4.3.2.1.2 Uneven group participation
	4.3.2.2 Meetings	4.3.2.2.1 Attendance
4.3.2.2.2 Cooperation		
4.3.2.3 Work allocation	4.3.2.3.1 Completion of work.	
	4.3.2.3.2 Excuses	
4.3.3 PBL is good	4.3.3.1 Learning	4.3.3.1.1 Promotion of critical thinking
		4.3.3.1.2 Learning from others
		4.3.3.1.3 Promotion of broad and wide reading
	4.3.3.2 Teamwork	4.3.3.2.1 Diversity management
		4.3.3.2.2 Cooperation
	4.3.3.3 Communication	4.3.3.3.1 Improvement of oral communication
4.3.3.3.2 Improved presentation		
4.3.3.3.3 Improved information seeking skills		
4.3.4 Improvement of PBL	4.3.4.1 Orientation on PBL	4.3.4.1.1 Development of facilitators
		4.3.4.1.2 Orientation of students
	4.3.4.2 Focus on clinical learning	4.3.4.2.1 Clinical follow-up by facilitators
		4.3.4.2.2 Engagement of preceptors
		4.3.4.2.3 Change of professional nurses' attitudes

The categories, themes and sub-themes are discussed with reference to the literature review and respondents' remarks quoted to support the findings.

4.3.1 PBL is challenging

Table 4.3 depicts the respondents' challenges experienced in PBL.

Table 4.3 PBL challenges experienced by respondents

Category	Theme	Sub-theme
4.3.1 PBL is challenging	4.3.1.1 Unfamiliarity with PBL	4.3.1.1.1 Students not used to the strategy
		4.3.1.1.2 PBL only used by Nursing
	4.3.1.2 Library	4.3.1.2.1 Search for information
		4.3.1.2.2 Information not available
	4.3.1.3 Computer laboratories	4.3.1.3.1 Laboratories always full
		4.3.1.3.2 Closing times
	4.3.1.4 Time pressures	4.3.1.4.1 Overload
		4.3.1.4.2 Clinical placement

All the respondents found PBL challenging. The challenges included unfamiliarity with the strategy; library and computer laboratory challenges, and time consumption.

4.3.1.1 Unfamiliarity with PBL

All the respondents indicated that PBL was new to them and they were used to traditional teaching methods because most secondary schools in the province still used teacher-centred teaching

4.3.1.1.1 Students not used to the strategy

The respondents indicated that at the beginning they found it difficult to seek information on their own even though they were orientated to be information seekers.

It was challenging because at first I was not acquainted with it, with the process, and going to the library looking for information for myself was something that I was not used to.

PBL is challenging and demanding because as a student you have to look up information yourself. The facilitators do not give you information. They just give you a scenario and problems and you have to search for information.

This coincided with Barrows et al's (2002:255) finding that many students initially found PBL stressful due to the deliberate ambiguous nature of the scenario and the requirement that students direct their own learning.

The respondents were from rural areas of the North West Province where high schools provided teacher-centred or traditional teaching. Consequently, they had expected the lecturers to be information providers and in this instance the roles changed dramatically.

Like I had to look for information in the library, and searching all this time was challenging because I was used to the lecture method where you are given information.

Unlike the lecture method, in PBL you have to find information by yourself ... and this is challenging.

It is a challenge because you have to take efforts to unpack the information you have.

It is a challenge because ... I am used to the lecture method in which information is provided by the lecturer. In PBL, you have to look for information yourself from the library.

Peterson (1997:197) found that from elementary school, students went through teacher-centred or text book-generated learning, and at tertiary level were suddenly expected to learn by trial and error and work best in a group setting. According to Harris (2001:31), Avalos (2000:20) and Johnson, Monk and Hodges (2000:180), current education systems do not adequately prepare students for life after school. Harris (2001:31) maintains that there is a need for a paradigm shift from the traditional method of education, namely that of imparting knowledge to students, to a more student-controlled approach. This student-centred approach emphasises self-directed learning and a holistic view of education. Through such a paradigm shift, students appropriate skills, attitudes and knowledge.

Smyth (2005:129) found that post-graduate nursing students initially had difficulty getting into the process of PBL and having to take responsibility for their own learning.

Williams (2004:282) found that as students made the transition from traditional high school or university programmes to self-directed learning in a PBL programme, they most frequently described themselves as overwhelmed and uncertain.

4.3.1.1.2 PBL only used by nursing

The respondents stated that initially they felt abused, as only the Nursing Department in the university uses the strategy.

Initially, we felt abused, as you will only find the nursing students in the library searching and discussing the learning issues while students from other departments just attend their lectures or are given notes to study.

The students from other faculties and departments view our programme as unnecessarily demanding because we are the only department that is always running around to look for the information.

It was worse when we were expected to use more resources from books, and the Internet.

The nursing students are the only group in the whole university who do not have time to socialise with other students on campus because they are always looking for information in the library or working in the health care services.

Even law students were surprised to see us working so hard and spending so much time discussing and searching for information ourselves.

If you go to the 24-hour library, you would find only nursing students discussing whilst our colleagues from other departments are having it easy ... The Nursing Department is the only department that uses this strategy.

The results coincided with those of Lam (2008:2) at the University of Hong Kong in the social work programme where students expressed great anxiety upon the introduction of PBL in 2000.

O'Shea (2003:67) found that students in PBL initially experience anxiety and fear about self-directed learning and report the need for an orientation and introduction to the concept. Furthermore, students may find self-directed learning stressful and may require support and direction, particularly at the beginning of the course.

4.3.1.2 Library

The respondents found the library challenging in terms of availability of information and operational hours. Having to search for information by themselves, and the unavailability of books in the library, which made it difficult to obtain the variety of information required in PBL, emerged as sub-themes.

4.3.1.2.1 Search for information

The students felt overwhelmed by searching information by themselves and the following are how they verbalised their experiences:

It was not easy to go to the library by yourself especially during the limited hours of after classes of four modules. Searching was not a challenge in some other modules because we were given the handouts and material by the facilitators.

The facilitators would always remind us to act as information seekers which was challenging whilst Facilitator X gave us information readily available for us to read. This used to make our life easier.

In their study on faculty and student perceptions of self-directed learning, Lunyk-Child, Crooks, Ellis, Ofuso, O'Mara and Rideout (2001:120) found that students undergo a transformation that begins with negative feelings (i.e., confusion, frustration and dissatisfaction).

4.3.1.2.2 Information not available

Because the information is not available in the library, some students tear pages out of the books, especially the bound journals, and this can be frustrating.

Mathatha ke gore o fitlhela gore dibuka ga di yo ko library ... ke gore o re fitlhela ke dirisa, buka e le ngwe e ke nang le yone ... PBL e batla gore o consulte different books. (The challenge experience includes lack of books in the library ... You use the book you have ... and end up with little information. PBL requires use of different books and you find they are not available.)

It is frustrating when you look for certain information when in the library and most books are not there.

Going to the library, you will find that the books have already been taken by other students and you end up using the prescribed book you have.

Some selfish students keep renewing books within their group and depriving other groups of an opportunity of using the books and this is just because there are fewer resources in the library.

Lack of resources is a major challenge felt by most historically disadvantaged educational institutions. MacGregor (1999:11) emphasises that budget constraints in South African educational institutions impact negatively on the ability to focus on students' holistic education. Spending on education is not keeping abreast of the growing population's needs.

4.3.1.3 Computer laboratories

The respondents experienced challenges with the use of the computer laboratories when seeking information. The principal problems were full labs and inaccessibility in terms of operational hours.

4.3.1.3.1 Laboratories always full

All the respondents experienced inability to access the Internet because the computer laboratories were always full, especially the undergraduate laboratories.

Regarding the use of the Internet, you find that the computer lab is full and you have to wait for others to finish waiting for others to finish. You end up not getting a chance to use the computer and you end up leaving.

You go because you cannot get access to the computer to check the Internet.

The computer lab is always full ... especially the undergraduate lab.

Students from information technology departments are always occupying the computers ... and we don't have a chance.

Students who are not attending classes are always on the computers and when we go there after classes and group discussion, we do not get a chance to use the computers.

The Tertiary Education Linkage Project (TELP) (1998:42) found that “the lack of computers makes it difficult to teach the students’ learning skills”. Tertiary institutions and HDIs in particular, are not equal in terms of their access to resources; they have very different levels of infrastructure (Department of Education [DOE] 2004:3).

4.3.1.3.2 Closing times

The respondents were unable to use the computer laboratories after hours when they came back from the clinical services because if they came back from the services late, the labs were closed.

The nursing students are at the services three days per week and two days only on campus for theoretical learning.

And most of us stay out of campus because of financial problems and cannot access the computer labs when we knock off from the services.

The nursing students are at the services three days per week and only on campus two days for theoretical learning.

Most of the students at NWU are from disadvantaged communities of the North-West Province, which is predominantly rural. These students cannot afford residential fees and opted to stay in the local villages.

A lack of resources in most historically disadvantaged educational institutions creates additional challenges for learning/teaching. This confirmed Norman's (1999:2) finding that higher education has inherited an unpleasant legacy after decades of racial and economic inequality, namely the inadequate resources of historically disadvantaged institutions, that is the formerly Black universities or bush colleges of the apartheid

system. Ten of the universities and seven of the technikons fall in this category. These historically Black universities cannot match the rich infrastructure of the formerly White universities, and they remain impoverished both by comparison and in real terms (Norman 1999:2).

4.3.1.4 Time pressure

The respondents experienced PBL as time consuming and felt overwhelmed, especially since four facilitators expected them to search for information, and discuss the learning issues on four modules (General, Community, and Psychiatric Nursing, and Midwifery).

4.3.1.4.1 Overload

The respondents felt that they were overloaded with work, spending most of their time looking for information.

In the library, you would only find the nursing students while other students were not stressed up. We felt abused by the facilitators.

As nursing students, we had no social life and this is how I felt in my room when I had to do the work:



One other challenge was minimal time given to work on our learning issues.

In the sense that I have to go to the library, look for certain information in the library for certain concepts and at the end you find I am not able to cover all the things I am supposed to for the next lesson.

In the beginning when I started PBL, it was not easy for me to adjust because I was not used to it and my findings were that during the strategy ... eh ... eh ... I found it to be time consuming.

4.3.1.4.2 Clinical placement

The respondents reported that PBL was time consuming as they spent most of their time looking for information and discussing the learning issues. The challenge was aggravated by the fact that they only came to campus for theoretical learning two days per week and the other three days were spent at the clinical services, which were very busy and short staffed.

We were given learning issues by four facilitators on a weekly basis and all of them wanted their work during the next class. The challenge was worsened by the fact that we had to work in the health services for three days every week and only came to class for two days.

It is not easy, as this takes a lot of time. We are expected to do this during our own time. We are expected to come to classes two days per week and the other three days go to health care services for working. In the wards we are as the working force because of shortage of staff. We don't get a chance to learn and discuss issues.

This concurred with Biley's (1999:589) finding that students reported that it was time consuming, with a large volume of knowledge to learn, and they could see themselves spending days in the library under piles of books and having great difficulty getting other work done. In Seaberry's study (2002:12), students found it way too much, and needed more explanation about how to work with the case material and the groups.

With regard to Chinese international students' perceptions of PBL, Huang (2005:39) found that 32.9% claimed time was wasted in class; 32.9% felt that teaching was not focused, and 28.2% complained that the workload was heavy and required extra effort and work outside of class.

4.3.2 Group collaboration

Three themes emerged from group collaboration, namely group cohesion, meetings, and work allocation (see table 4.4).

Table 4.4 Group collaboration

Category	Themes	Sub-themes
4.3.2 Group collaboration	4.3.2.1 Group cohesion	4.3.2.1.1 Group domination
		4.3.2.1.2 Uneven group participation
	4.3.2.2 Meetings	4.3.2.2.1 Attendance
		4.3.2.2.2 Cooperation
	4.3.2.3 Work allocation	4.3.2.3.1 Completion of work
		4.3.2.3.2 Excuses

It was clear from the data that all the respondents experienced difficulties in the groups despite group rules formulated for each group. Three themes emerged from group collaboration, namely group cohesion, meetings, and work allocation.

4.3.2.1 Group cohesion

With regard to group collaboration, the respondents indicated that group cohesion was often lacking due to domination and uneven participation.

4.3.2.1.1 Group domination

Some of the respondents were of the opinion that groups did not work as some members were overbearing and domineering. They recognised that collaboration was necessary, but there were problems.

I don't understand other people ... they are bullies at times. I can't stand it.

When these ladies talk to us ... it is as if we are small children.

Some group members do not talk to us nicely ... they are rough and it is not right, and they even forget that we are males.

I was angry when they excluded me without informing me. They only told me when we were given our portfolios back from the facilitator ... There was nothing I could do because they decided to exclude me.

Some group members are bullies and rude. Some of the females would talk to us as they pleased and not show respect. ... At times you would lose it and say, "Klap haar" ("slap her").

The results concurred with Johnson and Johnson's (1997:289) finding that some students might try to take control of the group, others might become passive, and still others might become overly verbose, while others shy away from commenting.

Tipping et al (1995:1050) and Hitchcock and Anderson (1997:509) found weak group processes and interaction skills among medical students in small groups that actually harmed individual and learning climate.

Biley (1999:586-591) found that making the transition to PBL from a more traditional learning format created significant tension in groups for students, requiring tutors to reiterate the process and aims of PBL.

According to Smyth (2005:130), however, PBL helped students not only to look out for each other, but also to work better in a team. Furthermore, students developed a sense of loyalty to the group and if absent felt as if they were letting the group down.

Biley and Smith (1999:1206), Morales-Mann and Kaitell (2001:14) and Creedy and Hand (1998:696) outline the following benefits of PBL: learning teamwork and effective interaction with peers; collaborative working; communication skills, and respect for different opinions.

Peterson (2006:2) points out those students who do not have interpersonal skills, however, are likely to cause a communication breakdown and a decline in motivation.

Hitchcock and Anderson (1997:509) state that conflict is common and necessary for team growth, but can be destructive to students' learning when it is personal and

becomes an obstacle to task completion. Conflict can occur when students lack the skills necessary to function as a team, such as a lack of shared meaning.

4.3.2.1.2 *Uneven group participation*

All the respondents indicated that uneven or unequal group participation was a problem:

Our experiences are that some are troubling us ... they don't work, but we have ground rules, which they don't follow.

Some group members when assigned work within the group, do not do it or they just copy information from the book without understanding it and when asked to explain to the group they can't.

Some members would disappoint you when given work to type for presentation ... and they would come with excuses.

My experience when working as a group was that when we started there was group cohesion ... but as time went on we had difficulties working together.

It was frustrating when people did not do their work.

You find that students excuse themselves unnecessarily when we are supposed to meet.

The respondents' comments supported Gibbon's (2004:3) finding that group members did not put similar effort into PBL when working together as a group. Peterson (1997:198) maintains that the assumption that students can work together effectively is misleading. Students' communication and group interaction habits have been developed over years of formal education and differ from student to student (Johnson & Johnson 1997:289). Some students try to take control of the group, others become passive, still others become overly verbose, and some shy away from commenting (Johnson & Johnson 1997:289).

Several of the respondents felt that some of the group members had the ability to be productive but just could not “be bothered”, thereby disadvantaging the rest of the group while profiting from the diligence of others. In addition, some of the more competitive students withheld their best information to have the edge on others when coming to the assessments.

4.3.2.2 Meetings

The respondents reported challenges with group discussion meetings’ attendance and cooperation. Most of the students who lived outside of campus did not honour given appointments.

4.3.2.2.1 Attendance

The respondents referred to the following problems encountered regarding attendance of scheduled meetings for group work:

They always give excuses; some just don’t come to groups.

We experienced a lot of difficulties with attendance of group discussion meetings; people would absent themselves without a very good reason.

Those who are staying far from the campus always absent themselves from group discussions and the group meetings. Some even go to the extent of turning off their phones.

I always waste my airtime trying to call those who are not in the group discussions and they would come with different excuses like ... having to take a child to the doctor, or attending a funeral.

Because of time constraints, we normally meet over the weekends, and this is when people come with excuses for absenteeism.

These results were consistent with Smyth’s (2005:130) finding that a percentage of the group let the group down by not turning up or not pulling their weight on given learning

issues. Furthermore, concern over this issue was raised at various levels and included blame and resentment.

4.3.2.2.2 Cooperation

Cooperation was lacking in some groups particularly when work was not evaluated or given marks:

At times when people are not cooperating, you will do the group work alone just to save the situation in the class, but this would be obvious because we are questioned as a group to clarify issues or to elaborate on them. The group members would fail to answer or just keep quiet and the concerned facilitator would send us out to go and work as a group.

It was so frustrating when people did not do their work and we were sent out of class to do the work.

The discussions at times were time wasting when people didn't cooperate by doing their share.

In the last group portfolio assessment, I looked for information and asked the group members to ensure that the work was typed, but it was not done. I had to engage the typist as agreed by the group, but they were reluctant to pay for the services.

This contrasted with Smyth's (2005:130) finding that students reported that PBL helped them not only to look for each other, but to work better in a team. Furthermore, students developed a sense of loyalty to the group and if absent, they felt like they were letting the group down (Smyth 2005:130).

4.3.2.3 Work allocation

The two sub-themes that emerged under work allocation were completion of work, and excuses.

4.3.2.3.1 Completion of work

All the participants reported challenges in completion of assigned tasks by some of the group members and this created tension in the class when facilitators expected presentations and discussions. These are the quotes from students.

At times, when the works is shared amongst ourselves as group members, some do not complete the work and this create a lot of discomfort in the class during discussion.

In our group, we experienced problems with members who do not complete the work given and don't come for group discussions. This was problematic because the facilitators would want a complete group effort.

We are given a lot of work by the four different facilitators, it becomes very difficult to complete the work and we share the work and at times we do not complete the work for the next tutorial class.

4.3.2.3.2 Excuses

Some of the respondents reported being frustrated, disappointed and angry when some members of the group constantly made excuses for not attending or not doing their share of the research or work.

Some group members are very bullying when they talk to us, and at times they don't accept our excuses when we can't come. But they also give excuses themselves.

They always give excuses; some just don't come to groups.

You find that students excuse themselves unnecessarily when we are supposed to meet.

These results again concurred with Smyth's (2005:130) finding that a percentage of the group let the group down by not turning up or not pulling their weight on given learning issues.

4.3.3 PBL is good

Table 4.5 depicts the positive themes and sub-themes that emerged from the data analysis.

Table 4.5 PBL is good

Category	Theme	Sub-theme
4.3.3 PBL is good	4.3.3.1 Empowerment	4.3.3.1.1 Promotion of critical thinking
		4.3.3.1.2 Learning from others
		4.3.3.1.3 Promotion of broad and wide reading
4.3.3.2 Teamwork	4.3.3.2.1 Diversity management	4.3.3.2.2 Cooperation
		4.3.3.3 Communication
4.3.3.3.1 Improvement of oral communication	4.3.2.3.2 Improved presentation	4.3.2.3.4 Improved information seeking skills

The respondents indicated that PBL was good in terms of empowerment, teamwork and communication.

4.3.3.1 Empowerment

The respondents indicated that PBL empowered them through promoting critical thinking, learning from others, and promoting broad and wide reading.

4.3.3.1.1 Promotion of critical thinking

The respondents indicated that PBL promotes critical learning especially because they had to search for information themselves as individuals and as groups.

So, PBL makes you think critically. You don't just take the information and read it to the facilitator. You think critically, you want to know everything about that subject.

It also helps you to think critically and read broadly. Because the facilitator will always ask the following questions:

“What do you mean?”

Can you please say in your own understanding?

How does this differ from other concepts or issues?

Please, unpack your statement” ... and you have to do that.

When studying or discussing issues, you always have to take these questions into account. The facilitators also when you ask questions in class as students, they don't provide answers.

Biley and Smith (1999:1210) found that students entered practice not only adequately knowledgeable and skilful but also equipped to cope with change. They were comfortable with the idea of having personal responsibility for their ongoing learning; sought additional knowledge or confirmation of their knowledge base daily; showed initiative; were self-directed in their learning, and used the problem-solving approach automatically on most occasions.

Lee et al (2003:138) found that during group discussions, students develop effective cognitive strategies for problem solving through clarifying thoughts, sharing ideas, exploring and thinking through problems, proposing and evaluating possible solutions. As the group tries to work on a common task, the discussion provides members with an opportunity for group interaction by explaining and elaborating the problem-solving process (Lee et al 2003:138).

4.3.3.1.2 Learning from others

The respondents acknowledged the benefit of gaining from other students through collaborative learning:

PBL is good because you gain from others, and one is able to discuss and understand other people. One is able to talk in front of others and argue with others on the subjects to be discussed.

PBL help us in that we benefit from others especially if everyone did her work.

We get different views and approaches to the learning issues.

Another experience is that ... each time we come, we come with different ideas and we don't look at the subject the same way. Others will want to be broad and others will just come with a narrow definition, then when we are a group we come with different ideas, which I think is a good idea.

I got the information, but here and there I did not understand some of the information. But when I come to the group, one has an idea of what the information is all about.

When the group members did their work, it can be very good in the sense that we get different views and approaches to the learning issues and concepts.

PBL when the groups worked as agreed, we really learn from each other.

Well, I also learnt from the cooperative and unselfish team members who were able to share information from their sources.

The respondents' responses were in line with Williams's (2004:278) study on self-direction in PBL where students reported, "in our group we start to question each other. When we question each other, we help each other out in the group. We question our own work and that helps us understand it a lot better."

4.3.3.1.3 Promotion of broad and wide reading

The respondents reported that PBL had led them to broaden and widen their reading.

PBL gives you the courage to go and look for information yourself and after getting the information ... And looking for information, you don't just take the information; you want to know what that really means. For example, when you go to the library you want information about certain subject, you want to know exactly what that subject is and you want to know how it worked.

The facilitators expect you to read many books on a learning issue. They do not expect information from one source or prescribed book.

Facilitator X normally sent us out of the class to go to read more, especially if we were not able to answer the questions or discuss adequately. This would make us to read more to avoid being chased out of class and become better informed.

These results supported Lee et al's (2003:136) finding that students develop effective cognitive strategies for problem solving through clarifying thoughts, sharing ideas, exploring and thinking through problems, and proposing and evaluating possible solutions.

4.3.3.2 Teamwork

The respondents acknowledged that PBL helped them to work as a team. Koh et al (2008:35) found that PBL promoted affective competencies such as team skills and appreciation of social and emotional aspects of health care. Furthermore, PBL in medical school had positive effects on students' social and cognitive dimensions.

4.3.3.2.1 Diversity management

The respondents stated that teamwork improved as time went by.

We also learn to understand different personalities. For example, there are those who by nature are domineering and others are submissive.

This helps us to be able to work with different people and approach them differently.

There were people that I never thought I may be able to work with because of their difficult nature, but we ended up being able to work with on different projects from different facilitators.

PBL also helped us to understand the different facilitators and to do the work according to what they needed. As indicated earlier the facilitators don't approach PBL the same way.

The researcher found no literature on improvement of diversity management in nursing education or health sciences.

4.3.3.2.2 Cooperation

The respondents reported that initially there was a lack of cooperation among the group members but this improved with time.

As we became more senior there was cooperation among the group members and this was evident when we were organising seminars.

At third-year level I was very impressed by the cooperation from the team members. Everyone played her/his part in organising the seminar presentation.

These results supported Koh et al's (2008:36) finding that problem-based learning during medical school had positive effects on physician competencies, especially in the social and cognitive dimensions. PBL promotes affective competencies such as team skills appreciation of social and emotional aspect of health care (Koh et al 2008:39).

4.3.3.3 Communication

The students commented positively on the benefits of PBL, which included improvement of oral communication and presentation skills.

4.3.3.3.1 Improvement of oral communication

The respondents commented that PBL contributed to improvement in the communication and argumentation skills, which they lacked when they started with nursing.

PBL empowered me in many ways. I am now able to discuss and argue with my colleagues, something that I could not do before.

Smyth (2005:131) found that students experienced personal and professional development in technical skills, particularly formal presentation skills. According to Biley

and Smith (1998:1208), graduates reported confidence in their thought processes and decision making and perceived themselves as more than capable of functioning independently.

4.3.2.3.2 Improved presentation

The respondents reported improvement in their presentation skills and the ability to do PowerPoint presentations during seminars, which would assist them in their professional careers.

PBL has really helped me ... I can now stand in front of my colleagues and junior students and present topics on health-related issues.

The use of technology is no more a problem because I can use PowerPoint to present.

In Ireland, Smyth (2005:129) found that nursing students benefited from PBL and became more proficient. The students reported that their IT skills and presentation improved and they learned time management skills, among other things (Smyth 2005:129).

Horne, Woodhead, Morgan, Smithies, Megson and Lyte (2006:107) found that the benefits of PBL included working as a team; improvement of interpersonal/communication skills; development of teaching and presentation skills; encouragement of independent learning skills, and encouragement of more effective utilisation of resources.

According to Murray (2003:9), students reported that PBL promoted individual learning as well as working together; was a good way to learn; encouraged them to read more and investigate problems themselves; encouraged student participation in research; was particularly helpful on placement; enabled the group to research information thus doing the work themselves, and taught them to do teamwork. Furthermore, they enjoyed PBL sessions as they began to gain self-confidence.

4.3.4 Improvement of PBL

The respondents were asked to suggest ways to improve PBL at NWU. Table 4.6 represents their suggestions, including orientation and development of staff, introduction of PBL at first-year and not at third-year level, focusing on the clinical learning, and changing professional nurses' attitudes.

Table 4.6 Respondents' suggestions to improve PBL

Category	Themes	Sub-themes
4.3.4 Improvement of PBL	4.3.4.1 Orientation on PBL	4.3.4.1.1 Introduction of PBL earlier 4.3.4.1.2 Development of facilitators 4.3.4.1.3 Orientation of students
	4.3.4.2 Focus on clinical learning	4.3.4.2.1 Clinical follow-up by facilitators 4.3.4.2.2 Engagement of preceptors 4.3.4.2.3 Change of professional nurses' attitudes

4.3.4.1 Orientation on PBL

The respondents appreciated PBL and recommended a longer students' orientation on PBL and the development of facilitators in this student-centred approach. In addition, the students appealed for introduction of PBL at first-year instead of third-year level of training.

4.3.4.1.1 Introduction of PBL earlier

All the respondents indicated that PBL should be introduced at first-year level so that students get used to it.

Firstly, I would suggest that PBL must be introduced at first year level to allow students to be acquainted with the method.

By introducing this from first year so that everybody becomes acquainted with this strategy. This is a good strategy because it improves our reading and communication skills.

The respondents' comments support the McMaster medical school PBL approach used as a model for other PBL programmes, and still used as a benchmark for PBL (Barrows 1998:630). Today, few Western medical schools do not include at least some aspect of problem-based learning in their instructional itinerary, and conversely many have built their entire curriculum and instructional procedures around problem-based learning (Barrows 1998:630).

4.3.4.1.2 *Development of facilitators*

The respondents commented that facilitators should be developed and trained in PBL:

I think work shopping of facilitators, and work shopping of the students before they start PBL ... the facilitators don't use PBL the same way.

Work-shopping and training of other facilitators in PBL as all facilitators do not apply it the same way.

Other facilitators give us topics to go and read so that we come and present in the class, while others give us scenarios and allow us to hypothesise and identify the learning issues and come to discuss them in class, reject the hypotheses or accept them. Some others even give us notes in class.

Other facilitators give us topics from the study guides or course outlines to go and read on and come and present in class. Some give us scenarios and ask us to identify the problems and learning issues. They want us to formulate the hypotheses and take those as learning issues to read broadly and come and discuss those in class. That is why I am saying that they approach PBL differently. Again, others give us notes and photocopied material in class while others would say we should go and look for information on our own from the library and Internet.

I therefore suggest that the facilitators must be trained in PBL so that they use the approach the same. This would ensure uniformity.

The respondents' comments were in line with the general principles of effective utilisation of personnel, and improvement of productivity and competence requires orientation and induction of personnel (Booyens 2004:27). Murray and Savin-Baden (2000:231) emphasise that the preparation of facilitators is crucial in developing a sense of consistency across a large group of facilitators. The facilitator's role is to encourage wide debate around the issues raised by the trigger and to assist the group to identify individual and group learning needs (Murray & Savin-Baden 2000:231). One approach would be to introduce the concept and rationale for the use of PBL in the programme.

McLoughlin and Darvill (2007:272) emphasise that for teaching and learning quality improvement, the PBL curriculum team need to visit centres of excellence in PBL as a way of capacitating and empowering the facilitators. It is essential to prepare and support students and facilitators for the change to PBL (McLoughlin & Darvill 2007:272).

Staff development is at the heart of institutional development and any organisation that neglects this factor will fail to adapt to change and be relevant to its clientele and society (Van der Linde 2002:516).

4.3.4.1.3 Orientation of students

The respondents acknowledged that orientation was provided during the first two days of third year but maintained that the experience was not enough. The respondents perceived two days as not enough for orientation to this huge change from teacher- to learner-centred learning.

Orientation should take at least a week or two on PBL' or we should be taken out to other institutions and observe how the do it.

Just like the first group of PBL within the department, we should be taken out to learn from other students.

The one demonstration by the facilitators on PBL is not enough to be regarded as an orientation.

The tenets of PBL obligate orientation of students particularly on changed roles, group dynamics and problem-solving.

Barrows (2003:1) maintains that for the design of PBL, students must have responsibility for their own learning; the problem simulations used in PBL must be ill structured and allow for free enquiry, and learning should be integrated from a wide range of disciplines or subjects. Facilitators need to be orientated on role changes. In PBL, the traditional teacher and student roles change.

Boud and Feletti (2001:98) and Schmidt (1997:422) state that students assume increasing responsibility for their learning, giving them more motivation and a greater feeling of accomplishment, setting the pattern for them to become successful lifelong learners. The lecturers, in turn, become resources, tutors and evaluators guiding the students in their problem-solving efforts.

4.3.4.2 Focus on clinical learning

The respondents urged attention to clinical learning, as the professional nurses were too busy to teach them. The respondents expressed the need to be followed by their facilitators, and a change of professional nurses' attitude towards students.

4.3.4.2.1 Clinical follow-up by facilitators

The respondents reported a need to focus on clinical learning, which is given little attention:

The other important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures.

Always at the end of the semester we are assessed by means of triple jump for clinical procedures, which are not real-life situation. As students, we wish the facilitators could come to the hospitals and clinics and check on how we are doing, especially with the procedures.

One other challenge is that facilitators focus mainly on theoretical knowledge and less attention is given to clinical knowledge. At the hospital we are called theory nurses.

At times the facilitators themselves verbalise that in the academic life there is not much time to go to the clinical facilities and this is made worse by a shortage of staff in the department or faculty.

Secondly, the facilitators should also focus on clinical learning and come to evaluate us at the services instead of the triple jump tests that are imitations of the real situation.

These results concurred with McKenna and Wellard's (2004:230) finding that the move of nursing education to tertiary educational environments has placed great demands on educators with increased focus on academic achievement and nurse academics, subsequently leading them to question their roles and expectations in the clinical setting.

Ehrenberg and Häggblom (2007:68) point out that new approaches to learning and teaching including PBL have been implemented in theoretical aspects, but limited efforts have been directed to clinical education. Furthermore, clinical learning is still traditionally regarded as an apprentice system mainly left to professional and registered nurses in the wards instead of facilitators intertwining theoretical and practical experiences (Ehrenberg & Häggblom 2007:69).

4.3.4.2.2 Engagement of preceptors

All the respondents expressed a need for the employment of full-time preceptors to address the clinical learning needs.

Lastly, please get preceptors like in 2006 when those ladies helped us a lot in midwifery.

I suggest that the department should get preceptors to teach and evaluate the procedures because the facilitators do not have time to come to us in the services.

We are sometimes referred to as theoretical nurses by doctors in the wards as we are not so good in the clinical skills.

Another important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures.

These comments coincided with Johnston and Mohine (2008:4) who emphasise that the important contribution of preceptorship as an educational model for professional practice development and the need to support the members of the preceptorship triad (student, preceptor and nursing faculty member) provide the rationale for the Nursing programme's creation. Specifically, the programme's mission is to strengthen senior undergraduate clinical nursing education, foster the professional development of the triad members, and enhance senior student preparation for professional practice.

4.3.4.2.3 Change of professional nurses' attitudes

The respondents experienced challenges and negative attitudes from the professional nurses when they needed assistance in clinical learning:

The professional nurses don't wish to assist us in the wards ... instead they preferred the college students ... and labelled us theoretical nurses.

The professional nurses refuse to sign our contract hour list at the end of our stay in the services and say we are not regular in the services like the college students who appear on their off duty time ... and this can be frustrating. We wished that our facilitators could just come once and see what is happening to us.

Because we don't stay for longer periods in the wards like college students who stay the whole unbroken month, the sisters in the units don't call us for deliveries and instead give those maternity cases to the college students ... and this is frustrating.

At times we feel insecure because we know a lot of theory and little of practica as compared to college students. Practically, the college students are good because they spend a lot of time in the services for the whole month or two.

Professional nurses in the services don't have time for us because we come on certain days of the week and they focus on the college students who appear to be part of the staff.

Some professional nurses state that if we don't come with our learning objectives every time when we come to the services, they won't help us.

We are sometimes, if not on many occasions, told to tell our lecturers to come to teach us clinical skills ... and this is because our facilitators do not come to the services to see what we are doing.

I was told to go back to my lecturers to be taught the necessary skills in midwifery before I come to the wards, and I believe if our facilitators were coming to check on us in the clinical services, they would understand better what we are going through.

These results concurred with McKenna and Wellard's (2004:230) finding that some nurses in the clinical areas perceive students as burdens and "intra- nursing tension" has become part of clinical education, which impacts on student learning. Moreover, in some cases clinical staff has little understanding of the curriculum hence may be poorly informed about students' learning needs, resulting in reluctance to allow the students to apply their knowledge and skills by carrying out particular procedures (Naphine 1996:22; Reid 1994:184).

4.4 CONCLUSION

This chapter discussed the findings, supported by quotations from the respondents and comparison with relevant literature. The results reflected the benefits and challenges of PBL and the respondents' proposals for improving PBL were also presented.

Chapter 5 discusses the conclusions and limitations of the study, and makes recommendations for practice and further research.

CHAPTER 5

FINDINGS, LIMITATIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

In this chapter, the summary of findings, conclusions and shortcomings are discussed and recommendations are made for nursing education, research as well as nursing practice. The categories, themes and sub themes that emerged from the data are included in the discussions.

5.2 PROBLEM STATEMENT

The Department of Nursing at NWU is a small department, consisting of nine (9) academic staff members; two of whom joined the university two years after PBL was introduced. Concern and criticism were raised regarding the use of PBL with students who come from the traditional teaching approach of content-driven and teacher-centred strategies. Concern was also expressed that PBL was not ideal for the type of students at NWU (i.e., from rural areas with disadvantaged educational backgrounds). This motivated the researcher to examine and determine the students' experiences of PBL.

Unlike institutions recognised for PBL (Woods et al 1988:107-127), "the Department of Nursing, NWU has been offering traditional nursing education for the last three decades. A change or move to PBL for North West University's Nursing Department would therefore constitute what Woods (1994) refers to as a 'giant change'" (Gwele 1997:276).

5.3 PURPOSE OF THE STUDY

The purpose of the study was to explore and describe nursing students' experiences of PBL at NWU. The aim was to develop guidelines to facilitate learning and teaching in the institution.

5.4 OBJECTIVES OF THE STUDY

In order to achieve the purpose, the objectives of the study included the following:

- Explore and describe the experiences of the nursing students on PBL in NWU.
- Recommend guidelines for the implementation of PBL in NWU. Accordingly, inputs from NWU nursing students were essential for the development of guidelines.

5.5 THE MAIN RESEARCH QUESTIONS

The guiding questions that were posed and negotiated with the participants were during unstructured interviews included the following:

- What are your experiences regarding PBL?
- How can PBL Be improved?

Alternatively the students were requested to

- explain their experiences regarding PBL; and also explain how PBL can be improved

5.6 RESEARCH DESIGN

The need to capture the personal experiences of participants stimulated consideration and use of qualitative research design. A qualitative research study is suitable for this study because it is interpretative and naturalistic, in that it seeks to understand and explain the beliefs, experiences and behaviors in the context that they occur.

A qualitative study was used in this study, as Drapper (2004:644) puts it; the approach is concerned with opinions, experiences of individuals producing through a holistic perception, subjective and rich understanding of the situation. A qualitative approach was selected because the study focused on nursing students' experiences. A qualitative

approach was best suited, therefore, to determine the respondents' views, experiences and beliefs regarding the phenomenon of PBL.

Methodology

The research question focused mainly on the lived experiences of students on PBL and phenomenological approach was used to depict the students' words and observed behavior (Taylor & Bogdan 1998:7).

Assumptions

The assumption of this study is as follows:-Problem based learning is ideal for North West University nursing students despite their disadvantaged educational backgrounds as the strategy will improve motivational and critical thinking skills of student nurses.

Sampling

Purposive sampling was used wherein graduating students of Bachelor of Nursing Science were invited to participate in the study. The students who met the inclusion criteria of the study (i.e South African citizens from disadvantaged backgrounds, have done PBL nurse training in the third- and fourth-year programme and registered for Bachelor of Nursing Sciences and willing to participate were interviewed.

Data collection

The data was collected through individual in depth unstructured interview. The process included obtaining verbal permission from the participants, posing a guiding research questions and requesting participants to describe and exhaust the experiences regarding PBL. The participants were allowed to use their own home language (i.e. Setswana). Audio-tape recorder was used to capture and record information during the interviews. The researcher also took field notes during the interviews.

Data analysis

After each interview the researcher briefly analysed and reflected on the data obtained so as to interpret the inherent meaning. These analyses influenced the next interview in terms of questions asked and focus during analysis.

Qualitative data analysis followed included 'working with data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what is important and what is to be learned and deciding to tell others'.

In this study, the researcher began with the identification of categories emerging from the raw data. Similar words and phrases were grouped into the same category. The reporting used included the use of 'voice in the text; that is, participants' quotes that illustrate categories being described.

Literature support review

The researcher conducted a traditional literature review. The literature review covered the key concepts of and available information on PBL and related areas.

In this study, the literature was reviewed both before and after data collection and analysis. This assisted in comparing and combining findings from the study with the literature to determine the current knowledge of the PBL.

Trustworthiness

Within this study, the researcher adopted the following strategies to ensure the true value: Established trusting relationship with learners to ensure relaxation during interview. Literature control was adhered to, and assisted the process of validating the findings in this research.

The researcher took the following steps to increase neutrality:

- *Literature control.* Compare findings with other research findings and literature.

- *Member-checking.* Check the categories/themes found in the data with the respondents.
- *Auditing.* Make all raw data, field notes, interview schedules, data analysis and interpretation available for auditing.

Ethical considerations

A written permission was obtained from the School Director of Environmental and Health Sciences and Head of the Department Nursing Sciences. Informed Consent was also obtained from the participants who were allowed to withdraw if they so wished.

The respondents were free to choose to participate in the study and no coercion or pressure was exercised. Confidentiality was maintained during data collection. Confidentiality was ensured by not linking inputs to individual participants. Pseudonyms were used and all personal identifiers were removed from the transcripts. The respondents were informed that the taped interviews would be erased as soon as the study was completed. No invasive procedures were used in this study, thus no harm was inflicted to participants.

5.7 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

In this section, the categories, themes and sub-themes of findings emerged and selected according to connectedness are discussed as findings. Conclusions are made from the findings, literature study and confirmations as well as field notes.

CATEGORY 1: PBL IS CHALLENGING

THEME 1: UNFAMILIARITY WITH PBL

Sub-theme 1: Students not used to the strategy

Finding

In this category, all nursing students indicated that PBL is challenging and are not used to this strategy as well as looking for information themselves.

Conclusion

Most students experienced difficulties or challenges to move from teacher centered to self directed learning. This is influenced greatly by the fact that most are from secondary institutions that used traditional method of teaching. This challenge happens besides the fact that students are orientated and inducted on PBL at the beginning of their training and education.

Recommendation

Both the students and facilitators require intensive orientation, induction, and regular workshops on PBL as well as a mentoring programme wherein senior students are used to mentor the newcomers into the programme. The mentoring programme (Peer Mentoring) may be established in collaboration with Student Counseling Centre (SCC) and Academic Development centre (ADC).

Sub-theme 2: PBL only used in Nursing

Finding

When the Nursing department is the only one in the university using the strategy and the students feel abused when they are to engage in self directed learning.

Conclusion

Only one Department within the University uses the PBL whilst the majority in the university is still using the traditional methodologies especially the lecture method

Recommendation

The strategy needs to be strengthened and modeled to other smaller department or used inter- professionally or interdisciplinary.

THEME 2: LIBRARY

Sub-theme1: Search of information

Finding

The students felt challenged by searching information by themselves during a very short space of time.

Conclusion

Searching of information can be challenging to students particularly those that are not staying on campus.

Recommendation

Orientation and probably introduction of PBL at first year level to allow students to get used to self directed learning at an early stage.

Sub-theme 2: Information not available

Finding

The students experienced unavailability of study materials in the library and they resort to use of few references and this does not auger well with the facilitators. One particular facilitator will send you back to use more books on the learning issue/s.

Conclusion

The students appear to have accepted their role and responsibility of information seeking, but the ill equipped library creates a challenge of obtaining variety of information as required in PBL.

Recommendation

For the library to be well equipped with the relevant reading materials, adequate budget needs to be planned and availed. The facilitators in the Nursing Department are also responsible to recommend the study materials such as books, journals, and video clips to the library yearly and do follow ups with the subject librarian and acquisition officer/s.

THEME 3: COMPUTER LABORATORIES

Sub-theme 1: Laboratories always full

Finding

All participants echoed that the computer labs are always full especially the undergraduate laboratories which operates for eight hours per day and are non functional over the weekends. This is aggravated by the limited stay on campus for

theoretical learning as other days they have to be in the clinical services for experiential and work-based learning. In addition to those, most learners are not staying on campus because of socio-economic reasons and have to travel home on daily basis.

Conclusion

The minimal space and number of computers in the labs, as well as the number of clinical placement hours contribute to inaccessibility of the labs.

Recommendation

In order to strengthen and make sure that PBL is appreciated by students and for the institution to achieve the stipulated critical cross field outcome (CCFO's) the following may be very instrumental:

- Decentralisation of computer labs and establishment of more computer labs within the faculties and departments or
- Scheduling of computer labs according to the Faculties and Departments to allow each sector a few period of use of the computer labs.

Sub-theme 2: Closing times

Finding

The operating hours of the labs are not suitable for the nursing students because of clinical placement and the fact that most of them are staying off campus because of financial problems. And even if the computer labs can open up to late, they won't be able to come to campus because of security reasons.

Conclusion

The operational hours of computer laboratories as well as the number of clinical placement hours create inaccessibility.

Recommendation

Decentralisation of the computer labs and establishment of nursing learning centre will make life easy for students and assist in accessing the services. The establishment of

learning centre within the nursing department which will be helpful during PBL classes and triple jump assessments.

THEME 4: TIME PRESSURES

All students experienced PBL as time consuming and felt overwhelmed with the work given and the time allocated for the learning issues.

Sub-theme 1: Overload

Findings

All participants perceived problem based learning as time consuming and experienced overloading with self study & group work from four facilitators. The participants were also concerned about coming to classes only two days per week (to attend classes and go and search for information from the library and internet and still to engage in group discussion) and the remaining three days they are expected to be in the clinical facilities and this created challenges in working as groups. This is aggravated by the allocation that does not place the group members in the same clinical areas. At times students would work as individuals and present the work as if that was a group effort. This practice was picked up by some facilitators who sent the students back to go and work as groups on the learning issues.

Conclusion

The students experienced overload of work from self studies, group work and discussions, information seeking from variety of sources and clinical services where they are used as the working force because of the staff shortage by the professional nurses who were not very keen on having nursing students in the units.

Recommendation

Awareness and empowerment is the key to understanding students' roles and responsibilities. Therefore what was stated in earlier is reiterated that students need to be inducted on competencies such as: time management and study skills.

Sub-theme 2: Clinical placement

Finding

The students were dissatisfied with the amount of work done during clinical placement in the health care services.

Conclusion

Students are used as working force in the clinical services because of staff shortages and learning opportunities are negatively affected.

Recommendation

The review of the clinical model used by the institution should be reviewed and probably use the Block system at third year and fourth year level which will allow students to stay at least four uninterrupted weeks at clinical service.

CATEGORY 2: GROUP COLLABORATION

All participants experienced challenges with their study groups and these challenges were expressed in various terms which are discussed here as categories.

THEME 1: GROUP COHESION

Finding

Group cohesion which is a must in PBL is usually a challenge at the beginning of PBL.

Conclusion

Group solidarity or unity is a problem and thus ability to encourage deviant members is a challenge.

Recommendation

Effective group climate can be encouraged by allowing the students to establish own groups. The students staying on campus should be grouped together and those staying off campus should also be grouped together.

Sub-theme 1: Group domination

Finding

Participants experienced domination by other group members. The participants reported ineffective group work especially out of class contact period because of overbearing and domineering group members. They recognised that collaboration is necessary, but there were control freaks in the groups. Most male participants felt that the female students tend to forget that “they are talking to men and become disrespectful”. Some of the participants nearly resorted to violence to straighten issues within the group members.

Conclusion

It became very clear that ensuring diversity in group formulation always have its own pros and cons. One prominent disadvantage was overbearing and domineering and associated with students who have previous nursing experience, namely the enrolled nurses and nursing assistants.

Recommendation

It is the responsibility of the facilitators and tutors to ensure that the domineering group members are assisted to work on their undesirable attributes. Concerted efforts should be made by both the facilitators and students to work on the undesirable traits that render the group work ineffective.

Sub-theme 2: Group formation

Finding

Group formation is characterised by a lot of intra-group conflict which had a distasteful effect on most students.

Conclusion

Conflict is normal and the critical issue is how it is managed. Differing opinions, priorities, values, experiences and beliefs are the main sources of conflicts.

Recommendation

As part of the orientation, induction and mentoring programme in PBL is essential. It is reiterated that issues such conflict resolution, diversity management, problem solving, decision making and group dynamics be addressed. In addition, reflections on group dynamics and activities should be done on continuous basis. Self, peer and facilitator evaluation should be done for evidence based practice in PBL.

THEME 2: MEETINGS

Sub-theme 1: Attendance

Finding

Attendance of group meetings is not regular because all participants experienced poor meeting attendance especially by those staying off campus.

Conclusion

Group members staying off campus are not attending group discussion meetings regularly and this creates dissatisfaction among the group members.

Recommendation

Use of group records of attendance & development or growth will help the group to grow and use full potential of its members (Dimock & Kass 2007:68).

Sub-theme 2: Cooperation

Finding

Cooperation from some of the other group members is lacking and delays group productivity.

Conclusion

Students who are new to learning in small groups are faced with variety of challenges and obligatory group discussion is also threatening to most students.

Recommendation

Educators and facilitators have a pivotal influence on moderating tensions within groups, although some variables such as issues within a student's personal life, need to work and study are not within the facilitator's role.

Rideout (2004:91) recommended the following for enhancement of cooperation:

- Tutors and facilitators can influence group cooperation through orientating new group members to group life, allowing individual choices in group assignments, establishing a climate conducive to motivating learners, taking personal interest in the learners and influencing group activities.
- The heightened awareness of group functions and promotion of safe environment that support uncertainties, experimentation and brain storming is vital in PBL.
- Lastly, group learning requires a transition not only by students but also the facilitators e.g. by consistency in expectations and to avoid being too directive which has deleterious action on groups.

Sub-theme 3: Uneven group participation

Finding

Uneven group participation was experienced by all participants in their study groups in class and in projects and assignments despite the formulation of group norms and ground rules.

Conclusion

Group and team work is a challenge because of varying backgrounds. A conflict is inherent to human behaviour, normal and inevitable consequence of social life and occurs in all settings; personal, group, team and institution.

Recommendation

In addition to orientation and induction on life skills such as problem solving, conflict management is very important, team building exercises maybe helpful in dealing with

group dynamics. This will be reinforcement of mentoring programme suggested in 5.5.1.

CATEGORY 3: PBL IS GOOD

Positive sentiments were verbalised by all participants who said that in various terms.

THEME 1: LEARNING

The positive effects of PBL outweigh the negative ones as students learned effectively from this strategy.

Sub-theme 1: Promotion of critical thinking

Finding

The students appreciate PBL as it promotes their interpersonal skills, understanding different personalities. It prepares them to work with different people in the ward and the clinics.

Conclusion

PBL is empowering and appropriate for humane, relevant and interactive learning environment which is ideal to promote achievement of critical cross-field outcomes as stipulated by SAQA and SANC.

Recommendation

PBL to be strengthened at all costs by faculty management so that the strategy may be used by other departments and probably by other faculties within the institution.

Sub-theme 2: Learning from others

Finding

The students learn from others especially if every student did their part within the group.

Conclusion

The students value PBL because they learning from others and help each other. They are also able to question their own work and develop effective cognitive skills for problem solving through sharing of ideas.

Sub-theme 3: Promotion of broad and wide reading

Finding

Although students were bothered about being sent off to more reading, they perceived PBL positively as it encouraged them to read broadly and intensively.

Conclusion

PBL is beneficial for students to:

- Read broadly and intensively for preparation to function effectively within the multidisciplinary team.
- Deepen the search for knowledge, critical thinking and problem solving as well as develop personally and professionally.

Recommendation

The reinforcement of PBL with Inter-professional Education is necessary wherein students (e.g. from social work and other disciplines) work together in shared problem solving and active decision-making.

THEME 2: TEAM WORK

The students perceived PBL as a strategy that promoted team work as time went on. The following are the findings of the team work skills learned from PBL:

Sub-theme 1: Diversity management

Finding

The students appreciated the strategy for helping them to be able to work with different students and facilitators.

Conclusion

PBL empowers the students with the ability for diversity management which is needed in health care services particularly in South Africa which is multicultural in nature. The skills included familiarity with others' styles of learning and learning to get on with others and overcoming tensions.

Recommendation

It is reiterated that the strategy needs to be strengthened through the support from the authorities so that it is used throughout the programme and probably be marketed to other Departments

Sub-theme 2: Cooperation

Finding

Although at initial stages PBL, cooperation was a challenge students at the end learned to work cooperatively within the groups.

Conclusion

PBL is a powerful tool needed for achievement of CCFO's as stipulated by SAQA because it empowers students to work effectively within a team or group.

Recommendation

Team and relationship building exercises need to be introduced early in the programme so that students do not view their peers as competitors.

THEME 3: COMMUNICATION

Sub-theme 1: Oral communication

Finding

Students appreciate PBL as it helped them to be empowered in communication and ability to present in class.

Conclusion

PBL promotes communication despite the educational background of the students and the availability of the recourse. These skills will help the graduates to enter health practice with necessary skills.

Recommendation

PBL must be introduced at first year level to harness the skills appreciated by the students.

Sub-theme 2: Improved presentation skills

Finding

Class presentations and seminars which were used as learning and assessment strategies in PBL were appreciated as empowering tool in communication and presentation skills and improved confidence of many students.

Conclusion

PBL improved students' confidence and this is a good motivation for learning. It will definitely encourage lifelong and independent learning as required by SAQA.

Recommendation

It must be reiterated here that PBL is to be introduced at first year level so that these much appreciated skills should be learned early in the programme.

Sub theme 3: Improved information seeking skills

Finding

In addition to the competencies mentioned above, the students reported improvement in information seeking skills.

Conclusion

PBL empower students in information seeking skills which are valuable for lifelong learning.

Recommendation

The introduction of PBL earlier in the first year level of training is vital.

CATEGORY 4: IMPROVEMENT OF PBL

THEME 1: ORIENTATION ON PBL

Sub-theme 1: Development of facilitators

Finding

The students expressed the need for empowerment of every facilitator on this valuable strategy so that it can be applied uniformly.

Conclusion

Some of the staff members are still using the traditional method of teaching and offering the students the learning material. Students' expectations include not only competence on the part of the facilitator but also same approach to PBL from the facilitators.

Recommendation

Competence of facilitator depends mainly on staff development programme and activities in the institutions. Staff development needs to be a collaborative effort from academic development and supportive services. Induction on PBL should be an ongoing process and not a once off activity. New staff members need to be mentored until they are competent and ready to mentor others on PBL. Linkages and collaboration with centers of excellence on PBL especially internationally will definitely strengthen PBL and development of staff members.

Rideout (2001:202) pointed other issues which need to be considered in staff development and predominantly challenging the staff. Included are:

- Reframing the theoretical basis of education.
- Developing understanding of PBL; acquiring and maintain of effective educators and developing leadership for the future.

The author further indicated that “the success of any curriculum that incorporate PBL is dependent on the staff members who are committed to the method, the self awareness and intellectual sensitivity to adopt the role of facilitation” (Rideout 2001:202).

The staff development is therefore crucial to prepare members for this new role.

Sub-theme 2: Introduction of PBL earlier

Finding

The students indicated the importance of introducing PBL at first year level instead of third year level.

Conclusion

Even though students are oriented on the use of the two strategies; namely case based and problem based learning, students feel PBL should be introduced at first year so that at third year they are already used to it.

Recommendation

The Department and Faculty to provide the students with mentoring and counseling programmes. Nursing Department to review the curriculum to commence PBL at the first year and support by the Faculty Management is very important.

THEME 2: FOCUS ON CLINICAL LEARNING

Sub-theme 1: Clinical follow up by facilitators

Finding

The students identified the need to pay attention to clinical learning which is neglected and staff members concentrating only on theory. They perceived clinical learning as a responsibility of the facilitator.

Conclusion

The clinical learning is not given much attention as the focus is much on theory and development of critical thinkers. The students expect facilitators to visit them frequently in the clinical services. They were comparing themselves with their counter parts from the college who are visited regularly by their tutors.

Recommendation

Because clinical practice is an important component of any educational programme designed to prepare health professionals such as nurses, physicians and occupational therapist, then the following may be helpful:

- The use of preceptors for addressing clinical learning a critical element of nursing. A preceptor acts as a clinical teacher, role model and colleague to nursing students in clinical and experiential learning. The focus will be on observing, supervising the development and progression of skills and behaviors as determined by the learning need and outcomes of the programme.
- Collaboration with clinical service managers in learning planning, implementation and evaluation will strengthen clinical learning.
- Use of clinical learning plans, portfolio of evidence; and reflective journal may also be very helpful in reinforcing clinical learning.

Sub-theme 2: Engagement of preceptors

Finding

The student identified the dire need of preceptors for effective clinical learning.

Conclusion

Preceptor model of clinical teaching is an effective strategy for PBL.

Recommendation

The introduction of sessional preceptor or clinical teacher can also be helpful in addressing the clinical learning needs of the PBL students. In this model of managing clinical learning, individuals are employed casually for a period of clinical placement therefore providing a more cost effective option (McKenna & Wellard 2004:235).

Sub-theme 3: Change of professional nurses' attitude

Finding

The students showed a great concern about the attitudes of some professional nurses towards university students.

Conclusion

Some professional nurses are not keen in teaching or offering learning opportunities to the University students.

Recommendation

Partnership and collaboration between the University and the clinical services with a memorandum of agreement spelling out the responsibilities of the facilitator or educator, professional personnel in the services and the students.

5.8 SHORTCOMINGS

The following are the discussions of the shortcomings experienced and observed by the researcher during the study.

Initially the researcher invited the final year nursing students to participate and during the interview they reported only the positive experiences. They were reluctant to report the negative experiences as they feared victimisation as the researcher was also a member of the facilitating team. Some of them kept on postponing the appointment for the interviews. The researcher then changed focus and interviewed the students who were through with training but awaiting the graduation and already in the community service. Another shortcoming is that the researcher formed part of facilitation team and this might have influenced the participants.

Most of the graduating students did not honour their appointments and the researcher had to reschedule the appointment and even follow the participants at the working places.

When doing member checking, it was difficult to locate some of the participants.

5.9 RECOMMENDATIONS FOR NURSING EDUCATION, RESEARCH AND PRACTICE

In this section, recommendations for nursing education, research and practice are given on the bases of the findings, conclusions as well as literature.

5.9.1 Recommendations for nursing education

Recommendations for nursing education aim at assisting the educators to provide a relevant, humane, interactive, and interpersonal learning that will assist the students to be lifelong learners.

The following are the recommendations for nursing education:

- The findings of this study will be valuable when re-curriculating and aligning the programmes within the universities especially when attempting to incorporate the critical learning outcomes as stipulate by the Education Quality assurors such as SAQA and SANC.
- The findings should also be used in the establishment of support programmes for students especially where team building exercise and mentoring programme are established or reviewed.
- Strengthening of staff and faculty development on this vital learning strategy to bring all staff members on par when it comes to PBL so that uniformity is practiced and the facilitators “ let go” on the traditional ways of teaching to promote self directed learning.
- Prolonged orientation and induction of students on PBL and introduction of the strategy at first year level and the use of inter-professional PBL instead of only one department using the strategy.
- The result from the study may also be very helpful in development of clinical learning model which would suit the arrangement in the university where preceptors are expensive.

- Establishment of International collaboration with centers of Excellence in PBL may very fruitful in addressing the following areas: staff development and exchange programmes to develop our staff members; PBL training for all staff members; collaborative research on PBL and mentoring at least for 5 years if possible.

5.9.2 Recommendations for nursing research

According to the findings, conclusions and literature of this study the potential for further research in the field of PBL suggest the following possible areas particularly in the developing countries where resources are minimal:

- The experiences and or the views/perceptions of facilitators or educators on problem-based learning in the historically disadvantaged higher education institutions.
- The impact of PBL on the clinical learning in the various health care setting.
- Evaluation of the graduate from PBL programme in the health care services or community service before registration as professional nurses.
- Comparison of the graduate from PBL programme and those from the traditional methodologies from the historically disadvantaged institutions (HDI's).
- The Exploration effectiveness of PBL in stimulation of critical and lateral thinking in the HDI's

5.9.3 Recommendations for nursing practice

The results show the need for serious review of staff establishment in the health care settings so that the second important (teaching) role of the professional nurse is strengthened.

The clinical learning needs of the students should be taken into account and this is only possible with the reestablishment of clinical teaching departments in the academic hospital especially in Central region where students are placed for learning.

Joint or collaborative appointment of professional nurses who will cater for service provision, education and supervision or mentoring of students when in the clinical area may be very helpful in addressing the learning of students in the clinical services.

5.10 GUIDELINES FOR EFFECTIVE PBL IMPLEMENTATION

The table below depicts the guidelines recommended for effective implementation of PBL.

Table 5.1 Guidelines for effective implementation of PBL

AREA	GUIDELINES
Curriculum	<ol style="list-style-type: none"> 1. PBL to be used as part of the faculty philosophy and introduced from first year level to socialise all nursing student to the values and beliefs of PBL. 2. Strengthening of Partnership with health service providers and other stakeholders in curriculum review so that the stakeholders in education widely recognise the need to be more aware of the clinical realities which affect the application of theory. 3. Unlike other parts of the curricula, clinical learning relies on both higher education and health care sector to meet the prescribed goals for effective student to occur (McKenna & Wellard 2004:229).
Staff development and empowerment	<ol style="list-style-type: none"> 1. Workshop and training of current lectures/staff; this should be in partnership or collaboration with Centers of Excellent in PBL so that the lecturers/staff are work closely with colleagues in practice, education and research. 2. Increase in number of sessional preceptors to support current lecturers/staff in mentoring students in the clinical services. 3. Collaborative arrangements or employment of preceptors between the service and academic sectors. This move is influenced by the realisation that both the health care and education sector have significant roles to play in undergraduate clinical education (Atack, Comacu, Kenny, LaBelle & Miller 2000:388; McKenna & Wellards 2004:6). This will result in stronger relationships and lead to mutual benefits, including streamlining of clinical placement with increased rationalisation of the number of clinical services utilised, along with professional recognition for registered nurses in the clinical teaching (Beeman 2001:133). 4. Management support and buying in of the PBL approach would be helpful.
Clinical learning	<ol style="list-style-type: none"> 1. The Nursing Department should review the Clinical Placement Model and probably utilise the Block System and team teaching to strengthen this much valued learning strategy and methodology. 2. The students should be allocated according to their study groups to allow working on the given projects together whilst in the clinical areas. 3. Reinforcement of prerequisites for all students so that there are no students who proceed to higher levels with outstanding lower level modules which create problems for group discussions and clinical placement. 4. Champion bringing expert clinical nurses into the mainstream of nursing education and endorsement of the concept of partnerships and collaboration leading to expert clinician participation in the education of students.
Group cohesion	<ol style="list-style-type: none"> 1. In addition to orientation and induction on life skills such as problem solving, conflict management is very important, team building exercises once or twice a year may be helpful in dealing with group dynamics. 2. The students need to be prepared and empowered on issues such as:

AREA	GUIDELINES
	<ul style="list-style-type: none"> ⇒ Diversity management ⇒ Self-reflection ⇒ Peer evaluation <p>3. It is the responsibility of the facilitators and tutors to ensure that the domineering group members are assisted to work on their undesirable attributes. Concerted efforts should be made by both the facilitators and students to work on the undesirable traits that render the group work ineffective.</p>
Overworked students	<ol style="list-style-type: none"> 1. The facilitator of the various components of Nursing (General, Psychiatry, Community and Midwifery) to jointly work on health problems or cases so that one problem can allow students to work on those aspects instead of having problems for each component. 2. The use of interdisciplinary approach may also be helpful in PBL and may reduce the overload on the students.
Limited resources and operational hours of the computer laboratories	<ol style="list-style-type: none"> 1. Successful adoption of the PBL Model depends largely on the acceptance of the institution and participation by all including management which is responsible for providing an enabling environment. 2. Development of administrative processes and resources that are aligned with educational philosophy of PBL are crucial for effective implementation, e.g. reference resources; which may take any form such as print; non print; audiovisual and computer assisted instruction packages (Rideout 2001:261).
Full computer laboratories	<ol style="list-style-type: none"> 1. While centralised computer facilities are easier to control in terms of security and to support in terms of equipments and their user assistance, computer workstations in tutorial rooms, the anatomy laboratory, the clinical skills laboratory and the library, may increase accessibility and enhance learning (Rideout 2001:276; Price 2003:85). 2. The following suggestions provide a useful checklist for planning any computer facility: <ul style="list-style-type: none"> • Environmental concerns: conducive environment. • Ergonomic concerns: making the laboratory comfortable. • Security aspect: protection of property and safe operations. • Institutional support: immediate and ongoing.

5.11 CONCLUSION

The reason for embarking on this study was to explore and describe the experiences of the nursing students on PBL and recommend the guidelines for implementing PBL in the North West University. The value of this study lies in the fact that it highlights the experiences of the students which the facilitators, faculty and authorities require in the restructuring and review of curriculum. The highlights from this study will assist in providing a customer compliant or sensitive PBL which is comparable with other higher education institutions.

The data and results emerging from this study are encouraging. It is evident that despite the limited resources the students value the strategy and recommended that it just needs strengthening through staff development and introduction of PBL.

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ANNEXURE 1: REQUEST FOR PERMISSION TO CONDUCT THE RESEARCH

519 CUL 18, UNIT 2 MMABATHO. 2735

P O BOX 3965,

MMABATHO.

2735.

25 February, 2007

Attention: Dr. N Kgabi

Director: School of Environmental & Health Sciences.

P/Bag X 2046.

**MMABATHO.
2735**

Madam Director,

Request For Permission To Collect Data From The Nursing Students.

I hereby tender my request to conduct research study on ***“Nursing students’ experiences on Problem Based Learning (PBL) at North West University.*** This research project is part of my studies for Masters in Nursing Education at UNISA.

The purpose of the study is to explore and describe the students’ experiences of PBL at this campus with the aim of developing guidelines for PBL within the department and probably the faculty should some departments opt for PBL. Individual in depth interviews will be conducted on purposively sampled students who meet the following criteria:

1. Registered for Bachelor of Nursing Sciences.
2. North West citizens from Disadvantaged educational backgrounds.
3. Must have gone through PBL at 3rd & 4th year levels.

Please find enclosed proposal for further information.

Sincerely,

M A Rakhudu.(Mrs)

ANNEXURE 2: PERMISSION TO CONDUCT THE RESEARCH



FACULTY OF AGRICULTURE, SCIENCE AND TECHNOLOGY.

SCHOOL OF SCIENCE AND TECHNOLOGY.
PRIVATE BAG X2046.
MMABATHO. 2735

Enquiries: Dr. N Kgabi.

Tel: 0183892174.

Mrs. M A Rakhudu.

PO Box 3965

Mmabatho

2735.

Dear Mrs. Rakhudu

Permission to Conduct Research Study.

Receipt of your letter requesting permission to conduct research on the topic *"Nursing students' experiences on Problem Based Learning (PBL) at North West University Mafikeng Campus"* is acknowledged. It is a pleasure to inform you that you are granted the permission to conduct the research with the hope that the department of nursing will benefit from the study. It is hoped that you will contact the Department of Nursing whenever you need help.

Dr. N Kgabi

School Director: Environmental & Health Sciences

A decorative graphic at the bottom of the page consisting of three overlapping, curved bands in blue, red, and green, extending from the left edge towards the right.



NORTH-WEST UNIVERSITY
YUNIBESITHI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
MAFIKENG CAMPUS

DEPARTMENT OF NURSING SCIENCE

E-mail: Eva.Manyedi@nwu.ac.za. Tel: 0183892361 Fax: 0183892052/2582

To : 3rd & 4th Year Nursing Students.

Date : 27th November, 2007

Re: RESEARCH ON EXPERIENCES OF NURSING STUDENTS IN RELATION TO PROBLEM BASED LEARNING.

Mrs. M A Rakhudu is undertaking the research project on the above topic for he studies with UNISA. The research that she is undertaking is of great value. This will assist in developing the guidelines for PBL and offering a client compliant teaching learning.

Mrs. Rakhudu has the permission of the department to approach the nursing students to undertake the research. Please give her all your assistance and support in her project.

Dr. E M MANYEDI.

Programme Coordinator: Department of Nursing Sciences

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ANNEXURE 3

CONSENT BY STUDENTS TO PARTICIPATE IN RESEARCH

TITLE: THE NURSING STUDENTS' EXPERIENCES OF PBL AT NORTH WEST UNIVERSITY

I hereby voluntarily consent to participate in the above mentioned research project. I accept to be interviewed and that the interview will be recorded on an audio taped that would be transcribed later.

Signed aton thisday of2007.

.....
PARTICIPANT

FIELD NOTES FOR STUDENTS PARTICIPANTS

INTERVIEW 1. (Bi)

DESCRIPTIVE NOTES.

Mr. Bi joined the university in 2003 and started with Bridging Course because of low university entry requirements to the programme. He has never failed any module in the programme. The interview was conducted in one of the empty tutorial rooms at the Health Care Centre at the university. The participant was from the rural area in Bophirima Region of North Province where he obtained his Matric. He appreciated having being selected to participate because he really wanted to give inputs regarding PBL strategy and was eloquent in communication in English.

REFLECTIVE NOTES.

On receiving the letter requesting him to participate he was enthusiastic to participate in the research because he felt that he was an independent worker and was contributing a lot in the class. He had much to say and emphasized the need to check on group work and development of facilitators to improve uniformity. He maintained that PBL is good and just need improvement in specific area.

INTERVIEW 2. (MV)

DESCRIPTIVE NOTES.

Ms. MS was a 24year old Tswana lady from the Central Region who joined the nursing programme in 2004. She was a volunteer worker at the community clinic in her village before she joined the university. She actually preferred to communicate in Setswana which actually made her comfortable although in the process she mixed that with English.

REFLECTIVE NOTES.

The participant was participant was nervous at the beginning especially that she thought she was to communicate only in English. She was biting her nails now and again and for a very long time talked about the challenges she experienced in PBL and only towards the end she actually she appreciated PBL emphasizing that she does not actually saying that PBL is bad but require that

group work should seriously be given attention. She further emphasized the need to introduce PBL to be introduced at first year level to allow students to get used to the strategy early in the programme

INTERVIEW 3 (THM)

DESCRIPTIVE NOTES.

Ms. TG was 23 years of age and Xhosa speaking from Bophirima Region of the North West Province. She joined the university in 2003 following Animal Health programme and requested transfer to Nursing in 2004. She had repeated two non-nursing modules in her second year of training.

REFLECTIVE NOTES.

Her responses were initially restricted but as time went on she was free to share her experiences. She expressed her bitterness in letting them search information by themselves and the unfairness of members from other groups who keep library books among themselves for a very long time. She further indicated repeatedly that PBL is overburdening and complicated by the clinical placement which does not allow them to continue with group discussion. Her tone was pitched up when she share her experiences in the clinical serves wherein less attention was given to the college students by some of the professional nurses. She reiterated that preference was given to the college students in maternity section at the expenses of the university students

INTERVIEW 4 (KEN)

DESCRIPTIVE NOTES.

Ms. KG was a 25 year old Tswana student from the Central Region of North West Province who joined the university in 2004 and had never failed any module in the programme. She was at home for 2 years after passing her Grade 12 because of lack of finances to go for any studies.

REFLECTIVE NOTES.

She seemed very uneasy and took a very deep sigh after reading the letter requesting her to participate and after the verbal explanation by the researcher. When explaining her experiences in the group, tears were welling in her eyes and the tone of her voice was quivering especially when she explained lack of cooperation in the group. She was allowed to express her emotions and some tissue papers offered as well as a glass of water. The researcher learnt that at some stage when the group portfolio was to be done the group agreed to pay for typing services but only this participant paid alone. It was evident that in her group, only students staying on campus do much work for the

group and include every member for peace sake and for fear of being send back to work as a group. She appreciated PBL for empowering her to be able to understand different personalities and ability to work independently.

INTERVIEW 5 (HR)

DESCRIPTIVE NOTES.

Mr. HR was a 36 year old married Tswana man from the local village in Mafikeng with two children and unemployed wife. He joined the University in 2003 after the company he was working for seven years was liquidated. He repeated third year nursing modules in 2006.

REFLECTIVE NOTES.

He was open, relaxed and willing to share his experiences. The researcher noticed however that the student was a very emotional person who was not very happy on how the female students talked to her as a male. When sharing the experiences in the group, he was emotional, twisted his hands, bit his lower lips and repeatedly mentioned that he felt like slapping her. It was evident that the group in one final group work did not allow him to get the group mark because of his non participation. It was also evident that he was not effectively participating in meetings because he stayed far from the campus and could not attend the group meetings regularly because of transport problems

INTERVIEW 6(KP)

DESCRIPTIVE NOTES.

Mr. KOP was a 22year old male who failed commerce and management programme from a different university in Gauteng Province. He joined NWU in 2004 to pursue the nursing degree. He never failed any module in nursing and was credited social sciences from the previous university. He is the eldest son in the family and lost the father six months before the interview.

REFLECTIVE NOTES.

The participant was enthusiastic about sharing the experiences, particularly because he thought he would not be selected to participate following the announcement on the project and the initial project run. He initially felt they were abused when they had to do information seeking and overwhelmed with the amount of learning issues given by the facilitators. He even requested to draw the emotions he experienced when in his room, and he indicated that they lacked social life as compared to their

counterparts from other departments within the faculty and the university. He frequently shook his head indicating his disapproval of the heavy workload from the facilitators. It was evident that his group spent most of the time at 24 hour service study centre in the Library trying to discuss the learning issues in preparation for the classes. The participant only started to appreciate this teaching strategy when he released its benefits such as empowerment in communication, critical thinking, self directed and independent learning.

INTERVIEW 7 (IR)

DESCRIPTIVE NOTES.

IR was 24-years old and worked as a domestic worker with in her mother in Gauteng because of lack of finances to proceed to tertiary education. She was sent to the university by her mother's employer. She joined the university in 2004 and has never failed any module in the programme. She comes from Bophirima Region of the North West Province and stay out of campus in the neighbouring village and walks daily to the university.

REFLECTIVE NOTES.

She was very happy to share her experiences and hoped that some improvements would be implemented in this much valued teaching strategy. She appreciated PBL as it equipped her with the skills to search information on her own, learned from others,, communicate verbally, present in class and read broadly and in depth. She emphasized that the facilitators should ensure that the library and computer laboratories are well equipped for easy access to information. She was also not happy with the attitude of the professional nurses in the clinical services wherein preference was given to the college staff. She experienced unpleasant attitude from the some professional nurses in maternity section and wished that the facilitators should accompany them in the clinical services and see what they experience as university students.

INTERVIEW 8 (VIP)

DESCRIPTIVE NOTES.

Mr. VI was a 27 years of age who did private teaching for one year in a primary school before he joining the university in 2004. He is from the Central Region of the North West Province. The participant never failed any module in the programme and instead he is doing extra science modules for non degree purposes with the intention of following medicine on completion of the nursing programme. The participant did not honour the initial appointment of the interview and this was scheduled for the following week.

REFLECTIVE NOTES.

The participant appreciated very much for being invited to the interview as he wanted to have an input in PBL. He learnt about the research from the Initial meeting when the researcher briefed the Nursing student society about the study. Like other participants, he relaxed and willing to give information. He openly indicated the challenges experienced in looking for information in the under-resourced library, ever full computer laboratories and time constraints created by overwork from four different facilitators (Midwifery, Psychiatry, General Nursing and Community Health) and shortage in the clinical areas wherein student are used as working force. He was doubtful about the preparedness and attitude of all facilitators on PBL as a result he repeatedly emphasized the need for orientation and development of facilitators on PBL. He perceived PBL as a good strategy that need to be strengthened. He indicated that his colleagues from Law Department were envious of nursing students' seminars. He reiterated that that PBL must not be discontinued instead be strengthened.

ANNEXURE 5: INTERVIEW TRANSCRIPTS

The Nursing Students' Experiences of PBL at North West University

INTERVIEW OF PARTICIPANT BI.

Researcher (R)

Participant (P)

R: Good afternoon and thanks for agreeing to participate in this study.

P: Good afternoon mam.

R: I am conducting a research study to obtain the nursing students experiences on Problem based learning at North West University as part of my Masters programme.

P: (Took a deep breath and sighed) Ok.

R: I am going to request you to tell me your experiences of PBL as a student at this university

P: PBL was challenging because you had to search for information and come up with findings, and the advantage of that as compared to lecture method is that you read broadly and widely. So at the end of you find that you come with a lot of information on a lot of concepts

R: Ok. Can you tell more how you experienced this PBL?

P: The way I experienced it? Eh Eh. You mean the benefits?

R: I mean the experiences or how you went through that.

P: In the beginning when I started PBL, it was not easy for me to adjust because I was not used to it and my findings were that during the strategy.... eh Eh I found it to be time consuming.

R: Uhm ... uhm

P: In the sense that I have to go to the library, look for certain information in the library for certain concepts and at the end you find I am not able to cover all the things I am supposed to for the next lesson.

R: Uhm ... uhm... this searching of information how you experienced it.

P: Uhm. Searching of information? Sometimes it is good that you find the information that you want, but sometimes it can be frustrating.

R: What was frustrating? Can you tell about the experiences?

P: At times you don't find the sources in the library. Most books are not there and the computer labs are always full, especially that of the undergraduate students. The facilitation can also be frustrating.

R: Can you tell more about the facilitation. i.e. The experiences on facilitation of PBL.

P: The facilitation of PBL according to me is fair, it is ok, but with eh... eh..., because there are so many facilitators, there is a need of more and more work shopping on PBL approach, because the approached used is different within the facilitators. Some facilitators do their own things and do not follow the PBL approach.

R: How different were the approaches between the facilitators.

P: I would say different, because before I went into the PBL and I was work shopped. I was given a workshop of how it is going to operate, but it is like the facilitators are not acquainted with the strategy and they don't use it the same way. I would say some of the facilitators turn it into discussion method than PBL. Ok. Looking into PBL, you are given a scenario and you have to come up with a hypothesis. In some other instances you are just given the concepts and you go and learn about those concepts and come and present that in class. At times conditions of various systems are shared amongst students for presentations in the next class.

R: Ok. What can you pinpoint as you say that was challenging. What was challenging?

P: It was challenging because at first I was not acquainted with it, with the process, and going to the library looking for information for my self was something that I was not used to. Like I had to look for information in the library, and searching all this time was challenging because I was used to lecture method where you are given information.

R: You keep on saying you were challenged. How did you work to get the information?

P: To get the information, you find that you or we go out as individuals to look for information then we come as a group to look at this information to come up with comprehensive information for a certain topic.

R: Ok... What are your experiences when working as a group?

P: My experiences when working as a group is that at the beginning when we started the process there was a bit of cohesion. We were working together, but as time goes on we had difficulties in working together, because some people did not attend the groups. Then if they don't attend the groups you find that some don't have the information we have. When we address the learning issues people don't have the information. So making people work as groups created difficulties if they don't attend.

R: What types of difficulties were there? Can you explain?

P: You find that learners excuse themselves unnecessary when we are supposed to meet as a group and give reasons like they are going to see the doctor, they have to go and fetch the kids and maybe they have certain appointment somewhere. When they come, they don't have that

information that they were supposed to bring. At the end what frustrate more is that they don't have the information they were supposed to bring.

R: Ok. Can you tell the experiences in addressing those difficulties or problems?

P: Usually you find that we try to make ground rules or group rules to say that if you don't abide by the rules you will be excluded for mark allocation or we don't write you name in the assignment. But, because when discussing in class marks are not given but for information purposes it does not help. We try to talk to people and say let us try to talk to people and say let us try to abide by the rules and tell people to say let's look at the reasons why we are here, but people still don't adhere to that easily.

R: Ok, but if I may ask you, for those who attended, what were other experiences in the group.

P: The experiences that I noted when in the groups are that concepts are discussed and if we don't understand we consult the appropriate persons or go back to find more information. The benefit of the group is understanding the concepts and understanding of each other.

R: If you were to suggest improvement, what would you say? How could we make this PBL better?

P: I think work shopping of facilitators, and work shopping of the learners before they start PBL. Reviewing and continuous assessment of how they (learners) are coping with the strategy.

R: Why the coping with the strategy?

P: Because continuous assessment meaning that as they are dealing with this, or just check whether they are adjusting well, or their understanding of the process.

R: You mean the experiences of ... (The participant interrupted.)

P: The learners just to make review of whether they are coping and adjusting to the PBL.

R: Were the students not orientated?

P: They were orientated, but they don't adjust well to the strategy of PBL.

R: When you say they don't adjust well, can you tell what you mean?

P: Ok. You find that some students they don't like totally cope with the approach. You find they don't even have any understanding. They can't apply because in PBL you must apply the information.

R: Ok. I want your own experiences. How did you experience PBL?

P: To me when I started, it was not easy, but when as time went on, I started to understand what it is and saw its advantages. It was not much of a problem. The only problem that it needs more of my time.

Another challenge in PBL is clinical learning which is not given much attention by the lecturers or facilitators. We are sometimes referred to as theoretical nurses by doctors in the wards as we are not so good in the clinical skills. We hardly see our facilitators in the clinical

areas. Another important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures. Some professional nurses state that if we don't come with our learning objectives every time when we come to the services, they won't help us.

R: Ok. Any other experience that you need to share?

P: For the overload it means that I have to look at my time management.(kept quite for sometime) I think I am done .

R: For now, I think I should thank you, but if I may need more information or repeat the interview, I will always bank on you. Thank you.

The Nursing Students' Experiences of PBL at North West University

Interview of participant THM.

Researcher (R)

Participant (P)

R : Good afternoon and thanks for agreeing to participate in this study.

P: Good afternoon mam.

R: I am conducting a research study to obtain the nursing students experiences on Problem based learning at North West University as part of my Masters programme.

R: The intention is to get your opinions regarding PBL. I have one main question, that is What are your experiences on PBL?

P: OK . Thank you mam. My experiences about PBL....is thatPBL gives you the courage to go and look for information herself and after getting the information.... . And looking for information, you don't just take the information; you want to know what that really means. For example, when you go to the library you want information about certain subject, you want to know exactly what that subject is and you want to know how it worked. So, PBL makes you think critically. You don't just take the information and read it to the facilitator.. You think critically, you want to know everything about that subject.

R: Ok. What are the other experiences.

P: Ok. The other experiences are..... is... that it is time consuming because you have to go ,sit there , look for information everywhere you can. it is time consuming and challenging because you are

without your group mates. if you don't understand you have to look for whatever you don't understand.

R: so, when you look for information, how do you do that?

P: We... we work as a group. as a group we agree that everyone is going to look information. We agree that we are going to meet on a certain day and bring all the information everyone have and we go through all the information and check if it corresponds. If it corresponds, we all agree on what that issue means. we want to know all the books that have been used.

R: Uhm..... Uhm....

P: We want to take different authors and mix the information and see if it takes us to one thing that we are looking for.

R: Ok. You mentioned time challenges. Can you explain what you mean?

P: The challenges are that you go there, get the books and get the information. as we know that the information... eh.. eh... you can't just take it and present it. The challenges are that you have to unpack the information and understand what it means.

R: Is that a challenge?

P: Yes it is a challenge mam, in that you have to make efforts to unpack that information.

R: What are the experiences when working as the groups?

P: Our experiences are that eh.. Eh.. Some are troubling us. they do not work. but we have the ground rules that if one don't come to the group we excludes her. But at the end.... as you know we students we kind of make favors we include her. But otherwise the group helps as one may come with other information meaning that when others bring information we check which one i.e. relevant and use it.

R: When you say the group troubles you, what do you mean?

P: They will always have excuses, some do not come to the groups,, but some we push to come to the group.

R : What do you do about those who troubles you?

P: We ... eh..eh... threaten them by saying we will exclude them and you will not get the marks and they end up coming.

R: Besides the troublesome group members, what are the other experiences within the groups?

P : Other experiences is that..... Each time we come, we come with different ideas and we don't look at the subject the same way. Others will want to be broad and others will just come with a narrow definition, then when we are a group we come with different ideas which I think is a good idea.

R: Ok. What are you experiences when you were in the group?

P: Ok I got the information, but here and there I did not understand some of the information. But when I come to the group, one has an idea of what the information is all about.

R: What were your experiences when you go to the library?

P: Going to the library?..... eh ...eh... we have our own books and when we go to the library, we wanted to read more information. When going to the library you find that some of the books are taken by other students. The problem is that sometimes you don't get books and you end up using the prescribed book you have. Regarding use of the internet, the computers lab is always full and you wait for others to finish. You end up not getting the chance and you end up going away. You go because you cannot get access to the computer to check on the internet.

R: If I were to ask about facilitation, what are your experiences?

P: Because we come with different information, the facilitator is to check if we are on the right tract. I think this is good. When we are out of tract, the facilitator takes us back and does not provide us with answers, but showing us the right way of doing things.

R: How can PBL be made better?

P: I think PBL should be introduced at first year level as it is a good strategy and the facilitators to apply the PBL in the same manner. this is because other lecturers divide the work among the students and make us to come and present in the class while others give us a problem that occurred in the hospital or clinic and allow us to form hypotheses and learning issues and let us share the work among ourselves and come and discuss that in class and accept or reject the hypothesis

R: What do you mean when you say it is good?

P: It is good because you gain from other, and one is able to discuss and understand other people. One is able to talk in front of others and argue with other on the subjects to be discussed. It also encourages you to read more deeply and broadly. I am saying PBL make you thick broadly and critically because in the class the facilitator will ask to explain the issue in you to explain the issue in your own words or according to you own understanding. You cannot do that if you have read superficially or consulted few books. This strategy is good it only requires books in the library and more computers in the library.

R: Ok and thank you very much. If I have to repeat these interviews I will always bank on your participation.

P: Thank you.

INTERVIEW TRANSCRIPTS.

The Nursing Students' Experiences of PBL at North West University

INTERVIEW WITH KP.

R: Good afternoon Mr. KP and how are you today?

P: I am fine and Thanks.

R: Mr. KP, thanks for allowing me to interview you regarding PBL. I am following a study programme with UNISA and required to have a study. The title of my study is "the students' experiences of PBL at North West University.

P: oh... yes this was mentioned. And I am happy to participate as I also wanted to give my feelings about PBL.

R: the main purpose of the study is to explore and describe the experiences of the students regarding PBL so that improvements can be made and guidelines for effective implementation may be recommended. The main question that I am going to ask you is "what are your experiences regarding PBL in this institution?"

P: oh ... Mam. PBL has its own good and bad sides. I am going to start with good aspects and maybe later talk about the bad side or the challenges of PBL.

R: yes... go on and explain your experiences.

R: PBL is a good strategy as it forces us to think critically about learning issues. In PBL we learn almost everything by ourselves. We are to look for information ourselves as we were told that we are information seekers. We have to go to the library and computer labs after classes and search for information. This can be frustrating because of inadequate books in the library and computer labs that are always occupied by IT students. As nursing students we have only two days to be on campus to search for information of our facilitators each with different discipline for example general, psychiatry, community nursing and midwifery. The other three days we are to go to the clinical services where we are used as working force because of the shortage in the wards. If we failed to get and discuss the information in the two days on campus, then we have to meet over the weekends and the computer labs are closed.

In the services, we used as working force because of shortage and after work it becomes difficult to continue with discussions as we are tired and the work is just too much with learning issues from four different facilitators. This is a real challenge.

R: Uhm ... Uhm... I hear you. Can you unpack this challenge?

P: Ja... For example some of the study group members are allocated in different clinics and stay out of campus and meeting after hours becomes a problem, thus we don't have enough time to discuss learning issues and you end up doing it alone and when you present in the class without participation of other group members the facilitators do not like it. This other particular facilitator will even send you out as a group to go and discuss the issue and this is time consuming and unfair on the part of you who have done the work.

R: Ok I see ... and please continue...

P: over the weekends when we agreed to meet some members do not come and always give family excuses and some come unprepared and this is a problem. Groups at times don't work. It is even better if those staying on campus could be grouped together and even allocated together so that they may continue discussion learning issues when they are in the wards and do group project together with ease.

But, when the group has done its work, it is good because we learn from others. You gain additional information especially if different sources have been used. During facilitation questions such as "what do you mean, can you explain that in your own word? And can you please unpack your statement? ... Encourage us to read more broadly and deeper. This kind of promotes critical thinking.

Again discussions and presentations in class improve our communication skills and argumentation skills. At this pointing time I am able to communicate effectively with other health team members and able to do presentation confidently during morning lectures in the wards. Recently as community service workers we were asked to do a presentation in the ward and we did that so well we surprised some of the professional staff.

R: Ok... Any other experience that you need to share with us?

P: Ja.... The challenges of PBL. Eh...Eh... Initially, we felt abused, as you will only find the nursing students in the library searching and discussing the learning issues while students from other departments just attend their lectures or are given notes to study.

The nursing students are the only group in the whole university who do not have time to socialize with other students on campus because they are always looking for information in the library or working in the health care services. (The student moved in his chair and shook his head frequently to indicate his disapproval of the work overload from the facilitators.)

R: uhm... Uhm... I am listening.Go on . I am Listening.

P: Ja... Group cohesion is a problem in the class and outside the class. Some students are selfish and want to learn from others.

R: What do you mean?

P: At times some students have the information, but do not contribute in class. They keep quiet until the facilitators get annoyed. one particular facilitator if there is no effective participation from the students would send us out of class to go to read and discuss the issues and this can be time consuming and unfair for those who did the work. Students need to be motivated to do their job.

R: what do you mean?

P: Maybe the group interactions need to be checked regularly and suggestions be given by the facilitator on how to improve group work.

R: any other experience to share?

P: I think I am done.

R: OK. May I ask the last Question? How can PBL be made better?

P: OK.... No. 1. The facilitators need to pay attention to clinical learning which I believe is neglected. The facilitators need to visit us or check on us when in the clinical services like the college tutors who come to see their students. In the clinical services we are not given attention because our lectures do not do follow up. The staff in the wards tells us that they are not teachers but care providers and our lectures are to do student accompaniment. Much attention is given to the college students especially in maternity section as they stay longer in the clinical services and we come only thrice a week. But the funny part in other wards university finalist are appreciated and left to be in-charge of the units during month ends when professional nurses want to go to town.

No 2. The facilitators need to be trained and work-shopped on PBL so that they can use it in the same way. They are approaching this very differently.

R: how different do they approach PBL?

P: Some facilitators identify topics for us and request us to go and prepare class presentations. We get different topics to come and present in the class. Some give us notes for example the collect materials from the health department and give that to us to read whilst others would say we should act as information seekers and this becomes very unfair. Some facilitators make photocopies for us whilst others say we should get the information and resources ourselves.

R: Can you explain why you say it is unfair?

P: Others give us material and others do not. It is unfair for other facilitators not to give us notes. We like those who give us notes because this helps us especially when we are so overworked.

R: Is that all?

P: Ohh... Maybe if this PBL is introduced to us at first year level it will bear good fruits. It is a good strategy it just need improvement here and there. If this is introduce at first year level we will get used to it and by the time we reach third year and fourth year level we will excel as we know actually

what is expected from us. Probably team building exercises like what was done with the first PBL group in 2002 will be helpful in addressing ineffective groups.

Another thing, maybe the facilitators need to talk with the library staff to increase the reading material for the nursing programme because we get frustrated when we are expected to consult more books and there are not there in the library. Lastly, preceptors may be hired to assist in clinical learning like what happened in 2006 when we had three part-time lectures that helped us a lot on skills that facilitators were not able to handle. Lastly, please get preceptors like in 2006 when those ladies helped us a lot in midwifery.

And please understand me, I am not against PBL I am just saying if certain things like I suggested are corrected this will benefit students a lot. Silence for sometime.

R: Yes I hear you. Is there other experience that you want to share?

P: No. I am done.

R: Thank you very much. Please, allow me to come back to you for additional information when the need arise.

P: OK. No problem.

INTERVIEW WITH PARTICIPANT HR

R= RESEARCHER.

P= PARTICIPANT

RESEARCHER: Good Morning Mr. HR and thank you for coming and agreeing to participate in this study.

PARTICIPANT: Good morning and thank you for having me. (the participant seemed relaxed and willing to give information)

R: I am following a study programme with University of South Africa (UNISA) and as part of the requirement I have to conduct a study for my mini dissertation. The title of the study is The experiences of nursing student in relation to Problem based learning and I am aiming at exploring and describing the students experiences on PBL.

P: OK . I understand because you did mention the other day.

R: The main question that I am going to ask is “what are your experiences of Problem based learning in this institution?” or you may just explain your experiences of PBL in this university

P: (started by sighing twice) You mean the negative aspects?

R: Ooho! Tell how you as a student experienced PBL.

P: Mam, can I use Tswana or mix the languages so that I can be able to express myself well.?

R: No problem. You may go ahead and explain in a way that you are comfortable as long as you can share your experiences.

P: PBL was challenging to most of us, especially that we were not used to it. The fact that we were to search for information ourselves was not easy. Eh..... EeH . Going to the library was also problematic in the sense that books were not there... The books were very few and students took the available books and kept them for longer periods and kept on renewing them amongst their group members and other groups could not get the books.

R: Ehee.. UHmm.

P: .. And because we were expected to work as groups it was difficult to get books and share the information before we go to classes and this used to create a lot of problems for us with the facilitators.

R: Ehe... Can you explain further what you mean?

P: OK. Firstly the nursing books are very few in the library and those on short loan , you cannot take out of the library and this make information seeking a challenge to most of us. Again, when

you go the computer lab it becomes worse because it is always full and INF students monopolize the computers.

R: Can you just unpack what you are saying or explain further?

P: Mam , The undergraduate computer labs are always full, especially that the nursing students go to the lab after lunch for two days only when through with classes and the other days we are to be in the clinical services without fail. In the clinical services we are overworked because of the shortage in the wards. We are actually overworked and we don't have time to come to library or computer centre.

R: Ok. Please go on I am listening.

P: We are expected to discuss the work as groups and we have problems in the groups. (The participant became agitated) The group members do not cooperate. They absent themselves from group discussions and do not do the assigned tasks and you find one person doing the work and submit the work as if it is a group work. Facilitators pick this up during discussions in the class and at times we are send back to go and redo the work as a group and this can be a drawback for a person who has done the work. Eh... Eh.... this facilitators would notice this because the students would not be participating as in class as agreed during the beginning of the semester and they will sent us to the library and compute lab to address the learning issues.

R: What are your experiences when sent back to work as a group?

P: This can be frustrating, especially when one has spent so much time trying to do the work alone and some others have not done the work. I expect the facilitator to send out only those who did not do the work or those who are not participating in the class and not the whole group. at times it is difficult because we normally meet after hours or over the weekends, ...and because most of the group members are staying off campus they are not coming because of security reasons especially those who are staying at Motlhabeng they are scared of the Bo- Ngwanaka Gangsters. Even law students were surprised to see us working so hard and spending so much time discussing and searching for information ourselves.

If you go to the 24-hour library, you would find only nursing students discussing whilst our colleagues from other departments are having it easy... The Nursing Department is the only department that uses this strategy

R: How do you handle this within the group? Can you share with me the experiences within the group?

P: Within the group we set the ground rules and norms but in most cases these are violated by many group members who absent themselves and who don't do their work. Some are very bully and

autocratic and talk to us like we are small children. The females talk to us as they please without respect and at times you may even assault them to knock sense into them. When these ladies talk to us ... it is as if we are small children. Some of the females would talk to us as they pleased and not show respect. ... At times you would lose it and say, "Klap haar" ("slap her"). (The participant was clenching the teeth and fists). I was angry when they excluded me without informing me. They only told me when we were given our portfolios back from the facilitator ... There was nothing I could do because they decided to exclude me For group work that needs typing, you do it alone and pay alone and this is also not fair and the facilitators can solve this by doing lecturing where we failed to do the work..... after all it is the work and they are paid for lecturing. It is their work.... they are just abusing us. you know , there was a time where my colleague and myself we in 24 hour library discussing until the wee hours of the morning doing Mrs. X's work and thought that she was sleeping comfortably in her bed and we are doing her work we felt so abused and annoyed. This is worse because in 24 hour library you will find only nursing student whilst students from other departments are having fun. We are unable even to students' activities such as meetings and social events. Even when students are on strike we should make a point that we are either at the clinical services or somewhere discussing or searching for information

R: What actually annoyed you?

P: The fact that she is a lecture but expect us to do the work by ourselves and I was the one who usually do the work alone and she still send me out with the rest of the group despite the efforts I took. Hers was to punish those who do not participate.

The students from other faculties and departments view our programme as unnecessarily demanding because we are the only department that is always running around to look for the information.

The nursing students are the only group in the whole university who do not have time to socialize with other students on campus because they are always looking for information in the library or working in the health care services.

R: Ok.. I get it. What are you other experiences regarding PBL?

P: Well there are positive aspects of PBL. Eh....eh..... PBL is a good strategy if the sense that when you have done the work you don't forget that and when tests are due you don't have to go back to the books very intensive ... it is just brushing on what you have done. Issues that you have discussed remain in you mind for a longer time. Again, mam, PBL helps us to discuss issues and

develop the communication skills. I could not speak in front of people, but PBL allowed me to practice talking and arguing with the colleagues and the facilitator in the class. It also allowed us to think deeply and not to read superficially on issues especially that you would be asked to explain the issues according to your own words and understanding. Presentation skills are also acquired, particularly during seminars which I like most because we are able to show off our skills to the students from other departments and faculties within the university and the college.

this method of learning also help us to understand different personalities amongst the learners as I indicated that other students are very bully and aggressive and this prepares us to work with different types of people in the ward and clinics.

R: Uhm.... UHm.... I get that.. How can PBL be made better in this institution?

P: Ok. The best way I think is to introduce PBL at first year level and this will help us to get to terms with PBL from the beginning. What is of most importance is to have a longer orientation of PBL and not one- day orientation which is not sufficient to understand PBL.

R: Any other suggestion on improving PBL?

P: Oh Yes. The facilitators need to be trained and work-shoped on PBL as they do it differently. Some provide us with note which is good and other refuse to do that and refer us to the library and internet to look for information ourselves. Some go the extent of getting us documents from the Department of Health and even make us photocopies of documents and this is good as we do not struggle. Some others just give us topics to go and prepare individually and come and present in class and that is it. (The participant became silent for sometime)

R: Ok. Any other suggestion?

P: The facilitators to address the clinical learning and follow us up in the services. We never see our facilitators in the services as compared to the college staff who visit their students. This also resulted in the professional staff preferring the college students over us. This is also caused by the fact that the college students are always in the services as compared to us. I was told to go back to my lecturers to be taught the necessary skills in midwifery before I come to the wards, and I believe if our facilitators were coming to check on us in the clinical services, they would understand better what we are going through.

R: What do you mean? Can you explain that further or unpack your statement?

P: Ok ... OK.. The college students go the services for the whole month and we go only three day per week and that is not sufficient and they are able to establish a strong relationships with the professional nurses and we only come those few days and we meet new staff members every time we go because those who we met the previous week may have gone for off. You know..... at times

we are referred to as theoretical nurses even by the doctors and some of the staff members especially in theatre.

R: Why do you think you are called theoretical nurses?

P: I think it is because during discussions we contribute a lot but we are not good in skills and procedures. The college students are very good as they have a lot of time practicing because they go to the services continuously for more than a month whilst we only go thrice per week and at times we don't go because the facilitators keep us at the campus to cover their outstanding content.

R: Uhm....Uhm Is That all? Are there any other experiences that you need to share?

P: Mam, please get me very clear.... I am not saying PBL is bad. It is a good strategy as it help us to think broadly and consult different books and resources unlike the lecture method where we receive information and notes from the facilitator. It just need proper orientation of students and introduction at a very early stage in the university and lecturers to focus also on clinical learning which I strongly believe that it is neglected by most if not all the facilitators. Lastly, the groups' cooperation needs to be evaluated regularly because there are a lot of problems in the groups and some even end up in serious hatred because students who don't do their work feel those who did the work are selfish if you don't share with them information especially those out of you tutorial group

R: Ok I understand and appreciate your input. Do you have anymore to add?

P: No. I think I am done.

R: Thank you very much for you contribution and please allow me to come back when I need member checking of information.

The Nursing Students' Experiences of PBL at North West University

Participant Ken

Researcher (R): Good morning. As indicated earlier, I am pursuing Masters in nursing education. As part of my studies, I have to undertake a research on PBL.

Participant (P): Good morning mam.

R: Thank you very much for agreeing to participate in my study. The topic of the study is The Nursing students' experiences of PBL at North West University. The aim is to explore and describe the students' perceptions and how to make it better.

P: Ok and thanks for inviting me. PBL is challenging and demanding because as a student you have to look information yourself. The facilitators do not give you information. They just give you a scenario and problems and you have to search for information.

R: Uhm Uhm.

P: It is not easy as this takes a lot of time. We are expected to do this during our own times. We are expected to come to classes two days per week and the other three days go to health care services for working. In the wards we are as working force because of shortage of staff. We don't get a chance to learn and discuss issues.

R: uhm Uhm.

P: we end up coming to discuss the given work over the weekends or just a day before the next class. If we come to class having read superficially, the facilitators sends us back to go and read broadly, and this will mean missing class for that week. Although this is unpleasant, it allows you to go and read more intense with understanding.

R: What are other experiences?

P: Group work is a big problem, especially when we use are not allocated in the same clinics or wards. It becomes very difficult after hours. Some students are not staying on campus. They stay in the far lying villages of Mafikeng and it becomes difficult to meet after work or after four o'clock. Some group members when assigned work within the group, do not do it or they just copy information from the book without understanding it and when asked to explain to the group they can't

R: Then when and how do you do the group work?

P: This is problem. At times in a group of ten, you end up working alone or as a pair. if one has done the work. He or she presents the work as if it is a group work. but... sometimes the facilitator can pick that up when probing and that is when she sends you back to works as group and this is time consuming.

R: Uhm Uhm.

P: Some group members are not cooperative. They don't come to group discussions as agreed. They give various excuses, especially the two males in our group. Even if we set group rules, it does not work.

R: May you please explain further?

P: To give an example, the portfolio project that was supposed to be done as a group was done by one person. (The participant become emotional and changed the voice tone with tears welling in the eyes) I had to write the work myself and paying for the typing as some other members kept on saying they were busy. When you don't include them as participants for assessment purposes or marks, they pass nasty remarks and intimidate you.

R: What types of remarks do they utter? Is it possible to share that?

P: They say one is selfish and want to pass alone. At times they marginalize you by not talking to you and you end up feeling bad and include their names even when they did not participate. At times when you report this to the facilitators, they encourage you to solve the problem within the group. This does not help and you continue doing the work for them. But..... this does not help them. For example if the facilitator can bring the group work in a test, most of these who did not participate don't pass and view that as favouritism.

R: Are there any experiences that you may wish to share with me?

P: At times we feel insecure because we know a lot of theory and little of practica as compared to college students. Practically, the college students are good because they spend a lot of time in the services for the whole month or two. Professional nurses in the services don't have time for us because we come on certain days of the week and they focus on the college students who appear to be part of the staff.

P : Are there any experiences that you may wish to share with me

P: PBL is good in the sense that you reed learning issues by yourself and you don't forget them. Even when you are preparing for a test you don't struggle like when lecture method is used. But ... getting information from the library or internet is problematic. There are few books in the library and the computer labs are always full. The time slot for computer use is not enough. We come to

classes from 08h00 to 12h30 for two days and have 33h30 to 16h30 for self study and library use and the other days we have to go for clinical learning in the health services.

R: How can PBL made better in this university?

P: Ok. By introducing this from first year so that everybody becomes acquainted with this strategy. This is a good strategy because it improves our reading and communication skills. One is able to talk in-front of others when presenting. It also helps you to think critically and read broadly. Because the facilitator will always ask the following questions:

1. What do you mean?
2. Can you please say in your own understanding?
3. How does this differ from other concepts or issues?
4. Please, unpack your statement.

... and you have to do that. When studying or discussing issues, you always have to take these questions into account. The facilitators also when you ask questions in class as students, they don't provide answers. The answer you get is" I don't know. Let us all go and find out" and ultimately you will get the answer yourselves" At times you are told that there is no right or wrong answer which I find to be confusing to the students as we expect facilitators to tell if you are wrong or right

R: What are other suggestions to improve the PBL?

P: Work-shopping and training of other facilitators on PBL as all facilitators do not apply it the same way.

R: What do you mean? Can you explain that?

P: Other facilitators give us topics to go and read so that we come and present in the class, while others give us scenarios and allow us to hypothesise and identify the learning issues and come to discuss them in class, reject the hypotheses or accept them. Some others even give us notes in class.

The other important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures.

R: I don't understand. Can you clarify that?

P: Always at the end of the semester we are assessed by means of triple jump for clinical procedures which are not real life situation. As students we wish the facilitators could come to the hospitals and clinics and check on how we are doing especially with the procedures.

R: Ok. This is appreciated. It will be given attention. Are there any other experiences you would like to share with us?

P: No... I think that is all.

R: if that is the case, then thank you very much for participating. If there is anything, I will come back to you especially if I have to repeat the interviews. Good luck in your career and enjoy the rest of the day.

P Thanks mam.

The Nursing Students' Experiences of PBL at North West University

PARTICIPANT MAV

KEY:

PART: PARTICIPANT

RES: RESEARCHER.

Res: Good morning, thank you for agreeing to participate in my research. This is a requirement for my master of nursing science and the intention is to get your experience as North West University students towards PBL and in that I have one question to ask what are your experiences regarding problem based learning.

PART: Mm; my experience, maitemogelo am eke go developa ma students because hare tla re le ma students, ba bangwe ga bana di communication skills gape gab a kgone go expressa so ha rele mo PBL e re gore wa forsega gore om bue. So if o sena di communication skills o le shy o felela o buile mo e leng gore o fellela o le empowered ka information. PBL ga ke e compera le lecturing ke bona gore e na le di advantages ka gore mo lecture method, lectura wa lectura, o tsaya information jaaka ntse o sa battle le go itse information but mo PBL, ke wena o tlang ka information, o tshwanetse o tsamae o battle information fa mongwe a go botsa ka something, oaitse gore what it is, when, how and everything ka sone

Res: What were the experiences when searching for information?

Part: Ha o searcha information ka pbl, e batla nako en tsi, because o tshwanetse o battle information mo dibukeng tse di different. E tsaa nako go tshwna fa re filwe di learning issue mo classing o fitlhela dile dintsi, mo gongwe o bo ofitlhela buka e na le topic e one (1) mme o tshwanetse o battle tse dingwe, so topic ngwe le ngwe e batla buka ya yone but ene though e tsaya nako e go dira e critical thinker. e go thusa go manager le di situations.

Res: Ok, ha o ntse o batlana le information jaana what are your experiences in addition to what you have said?

Res: Ga ke ntse ke batlana le information jaana ke lemogile gore as a nurse i can be a researcher, so ...

Res: What were your experiences when you were looking for information at the library for argument sake?

Part: Go tla dependa ka topic eo filweng for example o tla fitlhela ele gore topic engwe e accessible ,e ngwe ena le little information,mo eleng gore ke bona gore pbl e batla information , oconsulte dibuka tse dintsi. Sometimes o kopana le mathata.

Res : Fa o kopana le mathata ke mathata a mofuta mang?

Part :Mathata a ke kopanang le one ke mathata a dibuka o fitlhela ele gore ke dirisitse tse ke nang le tsone fa ke tsena ko classing information ya shorta/lacka go bo go bonala gore gar a batla information e enough.

Res: Ko library a information e teng?

Part :Ko library gone information e teng ,ke gore fela re tla bo re batla information re tabogile mo eleng gore fa o e tlhoka ko library o tshwanetse o e battle ko internet ene ga se gantsi o ka e tlhoka ko interneting.

Res : Ko interneting gone le kgona go tsena?

Part : Ga re kgone go tsena easy ka gore rea bo re attendile fa re tswa o fitlhela di computers dile occupied ,ke fela fa o ka fitlhela motho a tswa mo computing mme fela ga go motlhofo .

Res : Ke kopa o ntlhalosetse gore go diragala eng gore le seka la tsena ko di computareng?

Part : Jaaka ke sets eke tlhalosetse mum gore retla bore attendile so ha otswa mo classing ,ba bangwe ba ba sa attenang di class bay a computing o bo o fitlhela gore computer lab e tletse bat sere di computer tse tsotlhe, e ne go na le batho ba eleng gore ha ba tsene mo di computareng gab a battle go tswa or luckily o tla ka di weekends but problem e fag re gab eke.

Res :wena o nna kae?

Part : nna ke nna ko ga tholo.

Res : ok, ga onne mo campus

Part :ee.

Res : what are your experiences as a person yo o dulang ko ntle?

Part : concerning pbl, ke lemogile gore ke tshwanetse ke e phe nako entsi , ka gore during the week computer lab e tletsi ma students so furugu ha ke tsoga ka weekend tlhaloganyo e fresh ke ka ya library ke battle dibuka ke iketlile gore ke tle ken ne le information ee enough,

Res : if you were to suggest improvements mo PBL what would you say?

Part : form PBL

Res : mmmm...

Part : Ke ka suggesta gore library e battle dibuka tse di enough because o fitlhela dibuka dile 5 so ba badi tshotseng badi baya mo go bone o bo o fitlhela ba bangwe bas a fitlhelile information.

Res :Se se ngwe gape?

Part: key one fela e ke e bonang gore re bone information.

Res : What can you say about facilitation?

Part: My experiences regarding facilitation ke gore facilitation e important ka gore sale ke etsa pbl mo mothong o o itseng sentle go e ruta jaaka mum oo rutang management re fiwa e short senario and in that we cover all the topics tsere tshwanetseng re di dire that semester. So fa le sa dire tse dingwe le kgona go bona gore ga la di covara.

Res : E le gore o raya gore go na le phaapang mo facilitationing?

Part : Facilitation ya pbl?

Res :mmm.

Part : Ee mum, go ya nna go na le tse nka sekeng ka di bua ka gore go na le di lectures tse eleng gore ga di effective mo PBL ka gore sometimes o tla ele gore ga re sa tlhole re focusetse mo go se re se etsang, re yako the next thing ,o fitlhela re fiwa ditopic to come and discuss instead of problem to identify and hypothesise .

Res: Is It possible to share your experiences in the differing facilitation?

Part: Go tla kentafalela go dira jalo.

The Participant was avoiding eye contact and a little bit shivery.

Res: In that case, thank you very much for the information provided. Please, note that the information obtained is used solely for the study and recommendations on how to make PBL better.

Part: Ke a leboga.

Interview of participant IR.

Researcher (R)

Participant (P)

R : Good afternoon and thanks for agreeing to participate in this study.

P: Good afternoon mam.

R: I am conducting a research study to obtain the nursing students experiences on Problem based learning at North West University as part of my Masters programme.

R: The intention is to get your opinions regarding PBL. I have one main question, that is What are your experiences on PBL?

P: OK . Thank you mam. My experiences about PBL....is thatPBL gives you the courage to go and look for information herself and after getting the information.... . And looking for information, you don't just take the information; you want to know what that really means. For example, when you go to the library you want information about certain subject, you want to know exactly what that subject is and you want to know how it worked. So, PBL makes you think critically. You don't just take the information and read it to the facilitator.. You think critically, you want to know everything about that subject.

R: Ok. What are the other experiences.

P: Ok. The other experiences are..... is... that it is time consuming because you have to go ,sit there , look for information everywhere you can. it is time consuming and challenging because you are without your group mates. if you don't understand you have to look for whatever you don't understand.

R: So, when you look for information, how do you do that?

P: We... we work as a group. as a group we agree that everyone is going to look information. We agree that we are going to meet on a certain day and bring all the information everyone have and we go through all the information and check if it corresponds. If it corresponds, we all agree on what that issue means. we want to know all the books that have been used.

R: Uhm..... Uhm....

P: We want to take different authors and mix the information and see if it takes us to one thing that we are looking for.

R: Ok. You mentioned time challenges. Can you explain what you mean?

P: The challenges are that you go there, get the books and get the information. as we know that the information... eh.. eh... you can't just take it and present it. The challenges are that you have to unpack the information and understand what it means.

R: Is that a challenge?

P: Yes it is a challenge mam, in that you have to make efforts to unpack that information.

R: What are the experiences when working as the groups?

P: Our experiences are that eh.. Eh.. Some are troubling us. they do not work. But we have the ground rules that if one don't come to the group we excludes her. But at the end.... as you know we students we kind of make favors we include her. But otherwise the group helps as one may come with other information meaning that when others bring information we check which one i.e. relevant and use it.

R: When you say the group troubles you, what do you mean?

P: They will always have excuses, some do not come to the groups,, but some we push to come to the group. At times when people are not cooperating, you will do the group work alone just to save the situation in the class, but this would be obvious because we are questioned as a group to clarify issues or to elaborate on them. The group members would fail to answer or just keep quiet and the concerned facilitator would send us out to go and work as a group.

R : How do you deal with those who troubles you?

P: We ... eh..eh... threaten them by saying we will exclude them and you will not get the marks and they end up coming.

R: Besides the troublesome group members, what are the other experiences within the groups?

P : Other experiences is that..... Each time we come, we come with different ideas and we don't look at the subject the same way. Others will want to be broad and others will just come with a narrow definition, then when we are a group we come with different ideas which I think is a good idea.

R: Ok. What are you experiences when you were in the group?

P: Ok I got the information, but here and there I did not understand some of the information. But when I come to the group, one has an idea of what the information is all about.

R: What were your other experiences ?

P: Because we don't stay for longer periods in the wards like college students who stay the whole unbroken month, the sisters in the units don't call us for deliveries and instead give those maternity cases to the college students ... and this is frustrating

P: Going to the library?..... eh ...eh... we have our own books and when we go to the library, we wanted to read more information. When going to the library you find that some of the books are taken by other students. The problem is that sometimes you don't get books and you end up using the prescribed book you have. Regarding use of the internet, the computers lab is always full and you wait for others to finish. You end up not getting the chance and you end up going away. You go because you cannot get access to the computer to check on the internet.

R: If I were to ask about facilitation, what are your experiences?

P: Because we come with different information, the facilitator is to check if we are on the right tract. I think this is good. When we are out of tract, the facilitator takes us back and does not provide us with answers, but showing us the right way of doing things.

R: How can PBL be improved?

P: I think PBL should be introduced at first year level as it is a good strategy and the facilitators to apply the PBL in the same manner. this is because other lecturers divide the work among the students and make us to come and present in the class while others give us a problem that occurred in the hospital or clinic and allow us to form hypotheses and learning issues and let us share the work among ourselves and come and discuss that in class and accept or reject the hypothesis

R: What do you mean when you say it is good?

P: (The participant took a deep breath) It is good because you gain from other, and one is able to discuss and understand other people. One is able to talk in front of others and argue with other on the subjects to be discussed. It also encourages you to read more deeply and broadly. I am saying PBL make you think broadly and critically because in the class the facilitator will ask to explain the issue in your own words or according to you own understanding. You cannot do that if you have read superficially or consulted few books. This strategy is good it only requires books in the library and more computers in the library.

R: Ok and thank you very much. If I have to repeat these interviews I will always bank on your participation.

P: Thank you.

The Nursing Students' Experiences of PBL at North West University

Participant VIPs interview.

R: Good morning VIP ... and thank you for agreeing to being interviewed for this study project.

P: Good morning mam and thanks for inviting me.

R: currently, I am a registered student at UNISA pursuing Degree in Nursing Education. As part of my studies, I have to conduct a research on the students' experiences of PBL at NWU. The aim of the study is to explore and describe the students' experiences and how to improve PBL at NWU. Please, note that the information used in this study will be used for this study purposes only and no names will be revealed.

P: Ok. I understand.

R: the main question that I am going to ask you is ... What are your experiences on PBL at NWU?

P: you mean my experiences On PBL?

R: yes....

P: well.... To me PBL was good and empowered me as a student. At the beginning, it was not easy to look for information on your own. This is because I was used and expected to be given lectures.

R: may you please explain what you mean.

P: PBL is good in the sense that you take responsibility of own learning as an individual or as a group. In the class, you are given a scenario and asked to identify the problem or hypotheses and learning issues and you are expected to find information about those learning issues then come and discuss them in class. This is good because you seek information by yourself. You have to read more books and check on the internet. You also learn from group mates.

R: Uhm.....: Uhm.....: Uhm.....

P: at times seeking information can be frustrating in the library and computer labs which are always full.

Mam, you know only nursing students are always at 24hour library services for discussions. The students from other Faculties and Departments see us being abused.

R: why do they see you as abused?

P: It is because we don't have time of our own from first year level. We are always meeting to discuss learning issues from four different modules every week. We go to the services three days per week and to classes two days per week. Every time we leave the classes we have learning issues to discuss as groups or as individuals. This is really time consuming.

R: Uhm.....: Uhm. What are the other experiences that you may share with me?

P: PBL is not used the same by the facilitators. They approach it differently and the orientation given to students is not enough.

R: can you please explain what you mean?

P: Other facilitators give us topics from the study guide or course outline to go and read on and come and present in class. Some give us scenarios and ask us to identify the problems and learning issues. They want us to formulate the hypothesis and take those as learning issues to read broadly and come and discuss those in class. That is why I am saying that they approach PBL differently. Again, others give us notes and photocopied material in class while others would say we should go and look for information on our own from the library and internet.

R: Uhm.....: Uhm ...Is that all? Any other experiences?

P: One other frustrating issue is when you ask the facilitators some questions regarding the learning issues and you are told that she does not know and you were told by the senior students that she is knowledgeable and powerful on the subject, but she does not share that with us in class but always ask that we should go and read about the issue. in other word she always send you back to go and read .

R: Uhm.....: Uhm ...Is that all? Any other experiences?

P: Yes... yes.... we have a lot of challenges in the groups. Team work is a problem in most groups that I belonged to. I wish the facilitators could allow us to choose our own group members. At the beginning there was a form of cooperation but, as time goes on we had difficulties in meeting as agreed. You find that in a group of 8 members, only two or three members meet and do the work whilst others don't come. At times only those

staying on campus come for group work. When phoning other members they tell you that they have family problems especially the ladies.

R: What types of family problems do they have?

P: some will tell you about the funerals, looking after the sick children and partners, especially those who are staying at their homes. we tried to punish them by not including them the group work that have to be marked, but they would plead with us and end up pitying them and write their names as participants in the project.

R: Uhm.....: Uhm.

P: The professional nurses refuse to sign our contract hour list at the end of our stay in the services and say we are not regular in the services like the college students who appear on their off duty time ... and this can be frustrating. We wished that our facilitators could just come once and see what is happening to us.

The other problem is the clinical allocation especially when a group is not allocated in the same area. This creates problems for discussing and debating issues as a group you find that only those who participated in group discussion contributing in class and when the facilitator probes in class. When all members re not contributing or answering questions from the facilitator, we are send back to work as a group or to read broadly and consult different sources. At times we share the topics as group members and other do not do their bit. For those who did not do their part, the entire group suffers. I wish the facilitator should only punish those who did not do their work.

R: What are other experiences in the group?

P: When the group members did their work, it can be very good in the sense that we get different views and approaches to the learning issues and concepts. You learn a lot from others. We also learn to understand different personalities. For example there are those by nature are domineering and others are submissive. This helps us to be able to work with different people and approach differently.

R: Uhm I see.

P: One other challenge is that facilitators focus mainly on theoretical knowledge and less attention is given to clinical knowledge. At the hospital we are called theory nurses. At times the facilitators themselves verbalize that in the academic life there is not much time

to go to the clinical facilities and this is made worse by a shortage of staff in the department **or** faculty.

Always at the end of the semester we are assessed by means of triple jump for clinical procedures, which are not real-life situation. As students, we wish the facilitators could come to the hospitals and clinics and check on how we are doing, especially with the procedures.

R: May you elaborate on that.

P: We spent most of the time learning about theoretical issues and practical skills are only done through Triple Jump test. Again, the facilitators should also focus on clinical learning and come to evaluate us at the services instead of the triple jump tests that are imitations of the real situation.

R: May you please explain your experiences regarding triple jumps.

P: At times in triple jump assessment, you are asked to explain the procedure orally or demonstrate on dolls, and examiners give marks. It becomes a problem when you have to do that on real patients. A typical example is that of pelvic assessment or examination of a new born baby. As students we need marks and we cannot complain..

R: How can PBL be improved at NWU?

R: The group members should allocated in the same units so that they can be able to discuss the learning issues and work on given project when they are in the wards.

The department of nursing must have own computer lab which is not overcrowded.

Mam I am not saying PBL is Bad It is a good because law students who attended our nursing student seminars were impressed the way we handle learning issues

Please, you must not stop it. PBL is a good strategy. I don't think from this experience I will appreciate being given a lecturer. We even told the BN students (post Registration Nursing student) when they were complaining about this method when used by other facilitators, even when tests and examination are due you don't have to struggle, you just polish what you learned yourself.

R: Uhm.... any other experience that you need to share.

P: Ja... I think PBL is good, but need to be started at first year level to allow us to be familiar with it. I mean getting it at 3rd year is of disadvantage especially that at first year and second year the cases has a lot of information and you can work successfully alone or

as a pair as compared to PBL. Having started with it at first year we would be expert of it at fourth year. Another important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures

R: Ehhe.. uhm.. Any other experience that you need to share.....?

P: No .. I think I am done .

R: Thank you very much, and please if I have problems with recorded data, allow me to come back to you.

P: Ok and thank you.

R: I think the interview is over and thank you. Enjoy the rest of the day.

ANNEXURE 6: TRANSCRIPTS AND CODING OF DATA

INTERVIEW WITH KP.

DATA	CODING
INTERVIEW WITH KP.	
R: Good afternoon Mr. KP and how are you today?	
P: I am fine and Thanks.	
R: Mr. KP, thanks for allowing me to interview you regarding PBL. I am following a study programme with UNISA and required to have a study. The title of my study is "the students' experiences of PBL at North West University.	
P: Oh... yes this was mentioned. And I am happy to participate as I also wanted to give my feelings about PBL.	
R: The main purpose of tie study is to explore and describe the experiences of the students regarding PBL so that improvements can be made and guidelines for effective implementation may be recommended. The main question that I am going to ask you is "what are your experiences regarding PBL in this institution?	
P: Oh ... Mam. PBL has its own good and bad sides. I am going to start with good aspects and maybe later talk about the bad side or the challenges of PBL.	4.3.3 4.3.3
R: yes... go on and explain your experiences.	
R: PBL is a good strategy as it forces us to think critically about learning issues. In PBL we learn almost everything by ourselves. We are to look for information ourselves as we were told that we are information seekers. We have to go to the library and computer labs after classes and search for information. This can be frustrating because of inadequate books in the library and computer labs that are always occupied by IT students. As nursing students we have only two days to be on campus to search for information of sour facilitators each with different discipline for example general, psychiatry, community nursing and midwifery. The other three days we are to go to the clinical services where we are used as working force	4.3.3.1.1 4.3.1.2.1 4.3.1.2 4.3.1.2.2 4.3.4.2

<p>because of the shortage in the wards. If we failed to get and discuss the information in the two days on campus, then we have to meet over the weekends and the computer labs are closed.</p> <p>In the services, we used as working force because of shortage and after work it becomes difficult to continue with discussions as we are tired and the work is just too much with learning issues from four different facilitators. This is a real challenge.</p>	<p>4.3.1.4.1</p> <p>4.3.1</p>
<p>R: Uhm ... Uhm... I hear you. Can you unpack this challenge?</p> <p>P: Ja... For example some of the study group members are allocated in different clinics and stay out of campus and meeting after hours becomes a problem, thus we don't have enough time to discuss learning issues and you end up doing it alone and when you present in the class without participation of other group members the facilitators do not like it. This other particular facilitator will even send you out as a group to go and discuss the issue and this is time consuming and unfair on the part of you who have done the work.</p>	<p>4.3.1.4</p> <p>4.3.2.1.2</p> <p>4.3.1.4</p>
<p>R: Ok I see ... and please continue...</p> <p>P: over the weekends when we agreed to meet some members do not come and always give family excuses and some come unprepared and this is a problem. Groups at times don't work. It is even better if those staying on campus could be grouped together and even allocated together so that they may continue discussion learning issues when they are in the wards and do group project together with ease.</p>	<p>4.3.2.3.2</p> <p>4.3.2.1</p>
<p>But, when the group has done its work, it is good because we learn from others. You gain additional information especially if different sources have been used. During facilitation questions such as "what do you mean, can you explain that in your own word? And can you please unpack your statement? ... Encourage us to read more broadly and deeper. This kind of promotes critical thinking.</p>	<p>4.3.3</p> <p>4.3.3.1.1</p>
<p>Again discussions and presentations in class improve our communication skills and argumentation skills. At this pointing time I am able to communicate effectively with other health team members and able to do presentation confidently during morning lectures in the wards. Recently as</p>	<p>4.3.3.3</p> <p>4.3.3.3</p> <p>4.3.3.3.2</p>

community service workers we were asked to do a presentation in the ward and we did that so well we surprised some of the professional staff.	
R: Ok... Any other experience that you need to share with us?	
P: Ja.... The challenges of PBL. Eh...Eh... Initially, we felt abused, as you will only find the nursing students in the library searching and discussing the learning issues while students from other departments just attend their lectures or are given notes to study.	4.3.1.1.2.
The nursing students are the only group in the whole university who do not have time to socialize with other students on campus because they are always looking for information in the library or working in the health care services. (The student moved in his chair and shook his head frequently to indicate his disapproval of the work overload from the facilitators.)	4.3.1.1.2 4.3.1.1.2. 4.3.1.4
R: uhm... Uhm... I am listening. Go on . I am Listening.	
P: Ja... Group cohesion is a problem in the class and outside the class. Some students are selfish and want to learn from others.	4.3.2.1
R: What do you mean?	
P: At times some students have the information, but do not contribute in class . They keep quiet until the facilitators get annoyed. one particular facilitator if there is no effective participation from the students would send us out of class to go to read and discuss the issues and this can be time consuming and unfair for those who did the work. Students need to be motivated to do their job.	4.3.2.1
R: what do you mean?	
P: Maybe the group interactions need to be checked regularly and suggestions be given by the facilitator on how to improve group work.	4.3.2.1.2
R: any other experience to share?	
P: I think I am done.	
R: OK. May I ask the last Question? How can PBL be made better?	
P: OK.... No. 1. The facilitators need to pay attention to clinical learning which I believe is neglected. The facilitators need to visit us or check on us when in the clinical services like the college tutors who come to see their students. In the clinical services we are not given attention because our lectures do not do follow up. The staff in the wards tells us that they are not teachers but care providers and our lectures are to do student	4.3.4.2 4.3.4.2.1

<p>accompaniment. Much attention is given to the college students especially in maternity section as they stay longer in the clinical services and we come only thrice a week. But the funny part in other wards university finalist are appreciated and left to be in-charge of the units during month ends when professional nurses want to go to town.</p>	4.3.4.2.3
<p>No 2. The facilitators need to be trained and work-shopped on PBL so that they can use it in the same way. They are approaching this very differently.</p> <p>R: how different do they approach PBL?</p> <p>P: Some facilitators identify topics for us and request us to go and prepare class presentations. We get different topics to come and present in the class. Some give us notes for example the collect materials from the health department and give that to us to read whilst others would say we should act as information seekers and this becomes very unfair. Some facilitators make photocopies for us whilst others say we should get the information and resources ourselves.</p> <p>R: Can you explain why you say it is unfair?</p> <p>P: Others give us material and others do not. It is unfair for other facilitators not to give us notes. We like those who give us notes because this helps us especially when we are so overworked.</p>	4.3.4.1
<p>R: Is that all?</p> <p>P: Ohh... Maybe if this PBL is introduced to us at first year level it will bear good fruits. It is a good strategy it just need improvement here and there. If this is introduce at first year level we will get used to it and by the time we reach third year and fourth year level we will excel as we know actually what is expected from us. Probably team building exercises like what was done with the first PBL group in 2002 will be helpful in addressing ineffective groups.</p>	4.3.4.1.1
<p>Another thing, maybe the facilitators need to talk with the library staff to increase the reading material for the nursing programme because we get frustrated when w are expected to consult more books and there are not there in the library. Lastly, preceptors may be hired to assist in clinical learning like what happened in 2006 when we had three part-time lectures that helped us a lot on skills that facilitators were not able to handle. Lastly,</p>	4.3.3 4.3.4.1 4.3.4.1.2
	4.3.1.2 4.3.1.2.2 4.3.4.2

<p>please get preceptors like in 2006 when those ladies helped us a lot in midwifery.</p> <p>And please understand me, I am not against PBL. I am just saying if certain things like I suggested are corrected this will benefit students a lot.(Silence for sometime.)</p> <p>R: Yes I hear you. Is there other experience that you want to share?</p> <p>P: No. I am done.</p> <p>R: Thank you very much. Please, allow me to come back to you for additional information when the need arise.</p> <p>P: OK. No problem.</p>	<p>4.3.4.2.2</p> <p>4.3.3</p>
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DATA ANALYSIS AND CODING

INTERVIEW OF PARTICIPANT BI.	
Researcher (R)	
Participant (P)	
R: Good afternoon and thanks for agreeing to participate in this study.	
P: Good afternoon mam.	
R: I am conducting a research study to obtain the nursing students experiences on Problem based learning at North West University as part of my Masters programme.	
P: (Took a deep breath and sighed) Ok.	
R: I am going to request you to tell me your experiences of PBL as a student at this university	
P: PBL was challenging because you had to search for information and come up with findings, and the advantage of that as compared to lecture method is that you read broadly and widely. So at the end of you find that you come with a lot of information on a lot of concepts	4.3.1
R: Ok. Can you tell more how you experienced this PBL?	
P: The way I experienced it? Eh Eh. You mean the benefits?	
R: I mean the experiences or how you went through that.	
P: In the beginning when I started PBL, it was not easy for me to adjust because I was not used to it and my findings were that during the strategy.... eh Eh I found it to be time consuming .	4.3.1.4
R: Uhm ... uhm	
P: In the sense that I have to go to the library , look for certain information in the library for certain concepts and at the end you find I am not able to cover all the things I am supposed to for the next lesson .	4.3.1.2 4.3.1.4.
R: Uhm ... uhm... this searching of information how did you experience it ?	
P: Uhm. Searching of information? Sometimes it is good that you find the information that you want, but sometimes it can be frustrating .	4.3.1.1.1
R: What was frustrating? Can you tell about the experiences?	

<p>P: At times you don't find the sources in the library. Most books are not there and the computer labs are always full, especially that of the undergraduate students. The facilitation can also be frustrating.</p>	<p>4.3.1.2.1</p>
<p>R: Can you tell more about the facilitation. i.e. The experiences on facilitation of PBL.</p>	<p>4.3.1</p>
<p>P: The facilitation of PBL according to me is fair, it is ok, but with eh... eh..., because there are so many facilitators, there is a need of more and more work shopping on PBL approach, because the approached used is different within the facilitators. Some facilitators do their own things and do not follow the PBL approach.</p>	<p>4.3.4 4.3.4.1</p>
<p>R: How different were the approaches between the facilitators.</p>	
<p>P: I would say different, because before I went into the PBL and I was work shopped. I was given a workshop of how it is going to operate, but it is like the facilitators are not acquainted with the strategy and they don't use it the same way. I would say some of the facilitators turn it into discussion method than PBL. Ok. Looking into PBL, you are given a scenario and you have to come up with a hypothesis. In some other instances you are just given the concepts and you go and learn about those concepts and come and present that in class. At times conditions of various systems are shared amongst students for presentations in the next class.</p>	<p>4.3.4.1.1</p>
<p>R: Ok. What can you pinpoint as you say that was challenging. What was challenging?</p>	
<p>P: It was challenging because at first I was not acquainted with it, with the process, and going to the library looking for information for my self was something that I was not used to. Like I had to look for information in the library, and searching all this time was challenging because I was used to lecture method where you are given information.</p>	<p>4.3.1.1.1 4.3.1.2.1 4.3.1.1.1</p>
<p>R: You keep on saying you were challenged. How did you work to get the information?</p>	
<p>P: To get the information, you find that you or we go out as individuals to look for information then we come as a group to look at this information to come up</p>	<p>4.3.1.2.1</p>

with comprehensive information for a certain topic.	
R: Ok... What are your experiences when working as a group?	
P: My experiences when working as a group is that at the beginning when we started the process there was a bit of cohesion. We were working together, but as time goes on we had difficulties in working together , because some people did not attend the groups. Then if they don't attend the groups you find that some don't have the information we have. When we address the learning issues people don't have the information. So making people work as groups created difficulties if they don't attend .	4.3.2 4.3.2.2 4.3.2.1.2
R: What types of difficulties were there? Can you explain?	4.3.2.2.1
P: You find that learners excuse themselves unnecessary when we are supposed to meet as a group and give reasons like they are going to see the doctor, they have to go and fetch the kids and maybe they have certain appointment somewhere. When they come, they don't have that information that they were supposed to bring. At the end what frustrate more is that they don't have the information they were supposed to bring.	4.3.2.3.2
R: Ok. Can you tell the experiences in addressing those difficulties or problems?	4.3.2.1.2
P: Usually you find that we try to make ground rules or group rules to say that if you don't abide by the rules you will be excluded for mark allocation or we don't write your name in the assignment. But, because when discussing in class marks are not given but for information purposes it does not help. We try to talk to people and say let us try to talk to people and say let us try to abide by the rules and tell people to say let's look at the reasons why we are here, but people still don't adhere to that easily.	4.3.2.2.2
R: Ok, but if I may ask you, for those who attended, what were other experiences in the group.	
P: The experiences that I noted when in the groups are that concepts are discussed and if we don't understand we consult the appropriate persons or go back to find more information. The benefit of the group is understanding the concepts and understanding of each other .	4.3.3.1
R: If you were to suggest improvement, what would you say? How could we	4.3.3.2.1

make this PBL better?	
P: I think work shopping of facilitators , and work shopping of the learners before they start PBL. Reviewing and continuous assessment of how they (learners) are coping with the strategy.	4.3.4 4.3.4.1
R: Why the coping with the strategy?	
P: Because continuous assessment meaning that as they are dealing with this, or just check whether they are adjusting well , or their understanding of the process.	4.3.4.1.2
R: You mean the experiences of ... (The participant interrupted.)	
P: The learners just to make review of whether they are coping and adjusting to the PBL.	
R: Were the students not orientated?	
P: They were orientated, but they don't adjust well to the strategy of PBL.	
R: When you say they don't adjust well, can you tell what you mean?	
P: Ok. You find that some students they don't like totally cope with the approach . You find they don't even have any understanding. They can't apply because in PBL you must apply the information.	4.3.1
R: Ok. I want your own experiences. How did you experience PBL?	
P: To me when I started, it was not easy , but when as time went on, I started to understand what it is and saw its advantages. It was not much of a problem. The only problem that it needs more of my time .	4.3.1
Another challenge in PBL is clinical learning which is not given much attention by the lecturers or facilitators . We are sometimes referred to as theoretical nurses by doctors in the wards as we are not so good in the clinical skills. We hardly see our facilitators in the clinical areas.	4.3.1.4 4.3.4 4.3.4.2
Another important thing is to have preceptors who will assist in clinical learning and have assessments in the ward situations and avoid triple jumps as assessment of clinical procedures. Some professional nurses state that if we don't come with our learning objectives every time when we come to the services, they won't help us .	4.3.4.2.1 4.3.4.2.2
R: Ok. Any other experience that you need to share?	4.3.4.2.3
P: For the overload it means that I have to look at my time management . (kept quite for sometime) I think I am done .	4.3.1.4

R: For now, I think I should thank you, but if I may need more information or repeat the interview, I will always bank on you. Thank you.	
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INTERVIEW WITH IR.

TRANSCRIPT.	CODING
<p>Interview of participant IR.</p> <p>Researcher (R)</p> <p>Participant (P)</p> <p>R : Good afternoon and thanks for agreeing to participate in this study.</p> <p>P: Good afternoon mam.</p> <p>R: I am conducting a research study to obtain the nursing students experiences on Problem based learning at North West University as part of my Masters programme.</p> <p>R: The intention is to get your opinions regarding PBL. I have one main question that is What are your experiences on PBL?</p> <p>P: OK . Thank you mam. My experiences about PBL....is thatPBL gives you the courage to go and look for information herself and after getting the information.... . And looking for information, you don't just take the information; you want to know what that really means. For example, when you go to the library you want information about certain subject, you want to know exactly what that subject is and you want to know how it worked. So, PBL makes you think critically. You don't just take the information and read it to the facilitator.. You think critically, you want to know everything about that subject.</p> <p>R: Ok. What are the other experiences.</p> <p>P: Ok. The other experiences are..... is... that it is time consuming because you have to go ,sit there , look for information everywhere you can. it is time consuming and challenging because you are without your group mates. if you don't understand you have to look for whatever you don't understand.</p> <p>R: So, when you look for information, how do you do that?</p> <p>P: We... we work as a group. as a group we agree that everyone is going to look information. We agree that we are going to meet on a certain day and bring all the information everyone have and we go through all the information and check if it corresponds. If it corresponds, we all agree on what that issue means. we want to know all the books that have been used.</p> <p>R: Uhm..... Uhm....</p>	<p>4.3.3</p> <p>4.3.1.2.1</p> <p>4.3.1.4.</p> <p>4.3.1.4.</p> <p>4.3.3.2.2</p> <p>4.3.3.2</p>

P: We want to take different authors and mix the information and see if it takes us to one thing that we are looking for.	
R: Ok. You mentioned time challenges. Can you explain what you mean?	
P: The challenges are that you go there, get the books and get the information , as we know that the information... eh.. eh... you can't just take it and present it. The challenges are that you have to unpack the information and understand what it means.	4.3.1.2.1
R: Is that a challenge?	
P: Yes it is a challenge mam, in that you have to make efforts to unpack that information.	4.3.1.2.1
R: What are the experiences when working as the groups?	
P: Our experiences are that eh.. Eh.. Some are troubling us. they do not work . But we have the ground rules that if one don't come to the group we excludes her . But at the end.... as you know we students we kind of make favors we include her. But otherwise the group helps as one may come with other information meaning that when others bring information we check which one i.e. relevant and use it .	4.3.2 4.3.2.2 4.3.3.1 4.3.3.1.2
R: When you say the group troubles you, what do you mean?	
P: They will always have excuses, some do not come to the groups,, but some we push to come to the group. At times when people are not cooperating , you will do the group work alone just to save the situation in the class, but this would be obvious because we are questioned as a group to clarify issues or to elaborate on them. The group members would fail to answer or just keep quiet and the concerned facilitator would send us out to go and work as a group.	4.3.2.1 4.3.2.1
R : How do you deal with those who troubles you?	
P: We ... eh..eh... threaten them by saying we will exclude them and you will not get the marks and they end up coming.	
R: Besides the troublesome group members , what are the other experiences within the groups?	4.3.2.1.2
P : Other experiences is that..... Each time we come, we come with different ideas and we don't look at the subject the same way. Others will want to be broad and others will just come with a narrow definition , then when we are a group we come with different ideas which I think is a good idea .	4.3.2.1.2 4.3.3.1.2

R: Ok. What are your experiences when you were in the group?	
P: Ok I got the information, but here and there I did not understand some of the information. But when I come to the group, one has an idea of what the information is all about.	
R: What were your other experiences ?	
P: Because we don't stay for longer periods in the wards like college students who stay the whole unbroken month, the sisters in the units don't call us for deliveries and instead give those maternity cases to the college students ... and this is frustrating	
P: Going to the library? eh ...eh... we have our own books and when we go to the library, we wanted to read more information. When going to the library you find that some of the books are taken by other students. The problem is that sometimes you don't get books and you end up using the prescribed book you have. Regarding use of the internet, the computers lab is always full and you wait for others to finish. You end up not getting the chance and you end up going away. You go because you cannot get access to the computer to check on the internet.	4.3.1.2 4.3.1.2.2 4.3.1.3 4.3.1.3.1
R: If I were to ask about facilitation, what are your experiences?	
P: Because we come with different information, the facilitator is to check if we are on the right track. I think this is good. When we are out of track, the facilitator takes us back and does not provide us with answers, but showing us the right way of doing things.	4.3.4
R: How can PBL be improved?	4.3.4.1
P: I think PBL should be introduced at first year level as it is a good strategy and the facilitators to apply the PBL in the same manner . this is because other lecturers divide the work among the students and make us to come and present in the class while others give us a problem that occurred in the hospital or clinic and allow us to form hypotheses and learning issues and let us share the work among ourselves and come and discuss that in class and accept or reject the hypothesis	4.3.4.1.1 4.3.3.2
R: What do you mean when you say it is good?	4.3.3.1.2
P: (The participant took a deep breath) It is good because you gain from other , and one is able to discuss and understand other people. One is able to talk in front of others and argue with other on the subjects to be discussed. It also encourages you to read more deeply and broadly . I am saying PBL make you think broadly and	4.3.3.3 4.3.3.1.1

<p>critically because in the class the facilitator will ask to explain the issue in your own words or according to you own understanding. You cannot do that if you have read superficially or consulted few books. This strategy is good it only requires books in the library and more computers in the library.</p> <p>R: Ok and thank you very much. If I have to repeat these interviews I will always bank on your participation.</p> <p>P: Thank you.</p>	4.3.4
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