

# **LEARNING EXPERIENCES OF STUDENT NURSES ON A HEALTHCARE TRAIN IN THE FREE STATE PROVINCE OF SOUTH AFRICA**

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## **Abstract**

Professional nurses in South Africa render autonomous primary healthcare. Therefore it is crucial that student nurses should be competent in the cognitive, psychomotor and affective domains upon completion of their studies. Experiential learning should provide opportunities to integrate theory and practice and to meet the professional and critical outcomes as stated in the curriculum.

A qualitative research design was used to describe the opinions of the final-year student nurses regarding their experiential learning on the Transnet-Phelophepa Healthcare Train. Data were gathered through multiple nominal groups. Group members were purposely selected.

Participants' responses were thematically analysed and categorised into learning opportunities (with learning, integration and skills development as themes); cultural congruence (with cultural exposure as the only theme); and professionalism, which included three themes, namely autonomy, ethics and appreciation. Learning opportunities on the Transnet-Phelophepa Healthcare Train exist for the development of the cognitive, psychomotor and affective domains of students. Most critical cross-field outcomes are addressed and support the mastery of specific professional outcomes.

The following key elements for effective experiential learning were identified: learning opportunities are needed where theory can be integrated into practice and skills can be developed, student nurses' active participation in appropriate learning opportunities and the clinical placement must be congruent with students' expected learning outcomes.

**KEYWORDS:** learning domains, primary healthcare, public health learning opportunities, student nurses' experiential learning, theory-practice integration

## INTRODUCTION AND BACKGROUND INFORMATION

Since 2008, in South Africa, novice nurse practitioners commence their professional careers with one year of compulsory community service in public healthcare facilities (Warby, 2007). Nurse educators need to ensure that students are able to operate as independent practitioners when they do their community service. In order to be competent nurse practitioners, students should develop their cognitive-, psychomotor- and affective domains for effective learning to provide high quality care (Billings & Halstead, 2009:161). Nursing education, according to Bruce, Klopper and Mellish (2011:14), has a single aim namely the production of competent nurse practitioners. The roles of the teacher include being a facilitator, learner, guide, coach and mentor acting in partnership with students (Billings & Halstead, 2009:191). Students must be guided along the path of knowledge to the stage where they can assume responsibility for their nursing actions. Bruce et al. (2011:14) stated that student nurses have to know how to care but they should also need the desired attitudes, values and moral integrity, and they must be able to think critically and creatively to make decisions and judgements. This raises the question as to whether student nurses' training enables them to function as competent, autonomous nursing practitioners, specifically in the primary healthcare (PHC) work environment.

Primary healthcare (PHC) in South Africa (SA) is mainly rendered autonomously by registered nurses (Ricks, Strümpher & Van Rooyen, 2010:3). Service rendering entails the clinical assessment of a healthcare user and diagnosing and treating the condition according to set guidelines, tools or national protocols. Clinical judgment is a critical competency for PHC nursing practitioners. Therefore, it is important to expose student nurses to learning opportunities where they can learn to integrate theory and practice to develop their clinical judgment competencies during their training. They need to be prepared for the challenges that they will face in the PHC work environment, immediately after their graduation. Thus student nurses require appropriate clinical exposures and learning opportunities to master competency in the psychomotor, cognitive and affective domains.

The B Soc Sc (Nursing) degree at the University of the Free State (UFS) is a four-year integrated programme which, with the cooperation of a number of service departments and health care institutions, enables the student to register as a nurse (general, psychiatric and community health) and midwife with the South African Nursing Council (SANC) upon completion of this programme (UFS, 2011:1). The School of Nursing at the UFS is involved in the placement of final-year Bachelor's degree student nurses on a healthcare train to afford them exposure to a range of PHC learning opportunities. This train,

which is known as the Transnet-Phelophepa Healthcare Train, was established by the South African Railways in 1994. The existing railway infrastructure enables the train to reach remote rural communities with limited access to healthcare services. Services rendered on the train include optometry, primary health nursing, dental care, pharmacy and psychology. Students from various training institutions across South Africa help to render PHC services to rural communities. The primary focus is on health promotion, the prevention of disease and the treatment of minor ailments. The services include visits to the rural schools and teaching community leaders to disseminate information that will promote health and prevent illness. Full-time professional healthcare providers oversee the functioning of the train as well as the rendering of healthcare services, and facilitate students' learning experiences in the clinical environment, thereby contributing to theory-practice integration. These learning experiences enable students to become competent in making sound clinical judgments (Tanner, 2006:204; Elcock, Curtis & Sharples, 2007:4).

The aim of the learning experiences on the train is to support student nurses in developing the necessary skills to become competent, autonomous nurse practitioners, and to assist them to use their knowledge and skills to enhance communities' wellbeing. Clinical placements should provide students with opportunities to experience nursing in the real world enabling students to integrate theory and practice (Burns & Paterson, 2005:3-9; Distler, 2007:54). Experiential learning on the train supports the development of the cognitive, psychomotor and affective domains. The combination of all three domains contributes to the development of a competent nurse who will be able to render high quality care (Meyer, Naudé, Shangase & Van Niekerk, 2009:114-122). In addition to the nursing-specific domains, mastery of some critical cross-field outcomes should be entrenched in the learning experience.

Critical cross-field outcomes (Killen, 2010:395) refer to broad, generic cross-curricular outcomes that are useful for, and result from, all teaching and learning. Billings and Halstead (2009:144) described outcomes as those characteristics students should display at a designated time. Competencies are the behaviours required to develop those characteristics and are written to specify the levels of expected achievement to be demonstrated by the learner. Well-structured experiential learning fosters the mastery of critical cross-field outcomes and develops sound analytical skills, self-confidence and autonomy (Killen 2010:398). These outcomes lay the foundation for developing all other field-specific outcomes and ensure that learners gain the skills, knowledge and values that will enable them to contribute to their own success as well as to the success of their family, community and the nation as a whole, thus promoting life-long learning (Bruce et al., 2011:195).

The quality of the clinical learning experiences has a significant impact on the student's ability to integrate theory and practice and to develop appropriate practical and

professional skills, required by a professional (registered) nurse (Elcock et al., 2007:4). Clinical environments, where students learn experientially, should be assessed regularly to determine their strengths and weaknesses and whether they continue to provide the necessary learning opportunities that will enable students to meet the course outcomes (Billing, & Halstead, 2009:145). By being placed on the train for experiential learning purposes, these final-year students are given opportunities to apply the knowledge gained from their four years' training. Nursing modules in the school of nursing are evaluated every semester or annually. Since the experiential learning on the Transnet-Phelophepa Healthcare Train has not previously been evaluated, it was deemed necessary to investigate the final-year student nurses' perceptions of their experiential learning in this clinical setting. This article reports on data collected during August 2007.

## **RESEARCH DESIGN**

A qualitative, explorative and descriptive research design was used. The main distinguishing factors of qualitative research include the quest for understanding and in-depth inquiry. In this study it entailed the investigation of the final-year student nurses' opinions regarding their experiential learning (either positive or negative) on the train (Henning, 2004:41; Streubert Speziale & Carpenter, 2007:111; Creswell, 2009:177,183). An exploratory design was appropriate because no studies had previously been done regarding these students' experiential learning experiences on the healthcare train (Burns & Grove, 2009:360).

### **Population and sampling**

The population comprised all 26 final-year student nurses registered for the undergraduate nursing programme. A purposive sampling technique was used and 14 student nurses, who signed informed consent forms, participated in two groups, using nominal group techniques to gather information. Inclusion criteria were that they should be final-year undergraduate student nurses who had been enrolled in the programme since their first year and who had worked 80 hours on the train.

### **Data collection**

One open-ended question was used to gather information. An explorative interview was held with students of the previous year who met the inclusion criteria to ensure that the question was correctly formulated. The question was refined in response to the explorative interview. The participants in this study were requested to respond to the following open-ended question:

Please write down the positive and negative learning experiences that you had on the Transnet-Phelophepa Healthcare Train.

This being a qualitative study, the researchers adhered to the acknowledged data analysis methodology of reduction, analysing specific statements and categories and searching for all possible meanings (Burns & Grove, 2009:514; Creswell, 2009:186).

### **Ethical principles**

Ethical principles guided the study (Creswell, 2009:178). Approval was obtained from the Ethics Committee of the Faculty of Health Sciences at the University of the Free State. Permission to conduct the study was also obtained from the relevant institutions. The participants were informed about the study and asked to sign a document indicating that they participated voluntarily and that they had been informed about the nature of the research.

Trustworthiness was enhanced by adhering to the principles of credibility, dependability, confirmability and transferability (Botma, Greef, Mulaudzi & Wright, 2010:234,292). Validation of data occurred within each group. Credibility was enhanced by the explorative interview (Burns & Grove, 2005:331). Triangulation of data from both groups increased the confirmability of the results. An independent co-coder corroborated the trustworthiness of the results. A literature check was conducted as a basis for comparing, contrasting and contextualising the findings of the qualitative data (Creswell, 2009:190-192).

## **RESULTS AND DISCUSSION**

Three categories emerged from the participants' responses: learning opportunities (with learning, integration and skills development as themes); cultural congruence (with cultural exposure as the only theme); and professionalism, which included three themes, namely autonomy, ethics and appreciation.

Learning in practice is fundamental to all professional practice programmes (Burns & Paterson, 2005:3). A learning opportunity, in the context of nursing care, can be described as the moment during nursing care when something occurs to make immediate intervention desirable which can be used to impart knowledge to those involved in the particular caring incident (Bruce, Klopper & Mellish, 2011:106, 122, 253; Meyer & Van Niekerk, 2008:169).

## **Category 1: Learning opportunities**

The first category that emerged, learning opportunities, stressed the important aim of clinical education, which is, according to Bruce et al., (2011:106,253), integration of theory into practice. The outcome will be competent nurses providing skilful nursing care based on theory. The three associated themes of this category were theory, skills development and integration.

### **Theory**

A work based-learning environment provides opportunities for student nurses to apply their theoretical knowledge in practical situations (Burns & Paterson, 2005:3-9; Meyer, Naude, Shangase & Van Niekerk, 2009:100). The train was an excellent example as indicated by the following students' responses:

*"A lot of opportunities to learn and experience practice ..."*

*"Was able to incorporate pharmacology and nursing."*

*"... opportunities to screen and diagnose."*

Meyer and Van Niekerk (2008) elaborate by stating that any interaction with a patient, where a decision regarding nursing care must be made, is an extremely useful learning opportunity. Experiential learning requires that learning should take place in a real-life situation, with students as active participants and not just observers (Uys & Gwele, 2005:79-80). The students were exposed to many experiential learning opportunities, as the following response indicates:

*"Experience gained through a lot of exposure ..."*

Experiential learning experiences are important for role learning through the application of theoretical knowledge to clinical practice because students require repetition in a variety of situations. This form of learning heightens the sense of personal and social responsibility, thereby enhancing self-esteem and moral growth (Uys & Gwele, 2005:79-80). Participants' responses reflected the sentiments of Uys and Gwele (2005), regarding the importance of clinical learning opportunities:

*"I came to believe in my own judgement regarding diagnosis."*

*"Realised the importance of taking a complete history ..."*

## ***Skills development***

Learning activities that involve the development of the cognitive, psychomotor and affective domains provide a framework that shapes students' learning to provide quality healthcare. Learning opportunities can be designed to meet several objectives: those with a broad focus, such as the Transnet-Phelophepa Healthcare Train, are particularly helpful (Billings & Halstead, 2009:162). The following responses indicate that students mastered the cognitive domain:

*"For the first time I was able to integrate three years' knowledge and practice in one opportunity."*

*"Acquired consultation abilities."*

Psychomotor skills development is indicated by the following comment:

*"Opportunities to screen and diagnose."*

Responses reflecting development in the affective domain are:

*"Patients said that they enjoyed the way they were treated."*

*"Patients seem to think that the train was superior to other services."*

*"Saw things from another perspective."*

It can therefore be concluded that the train provided a constructive learning opportunity for developing skills in all three domains. However, learning opportunities should also promote the realisation of the critical cross-field outcomes (Bruce et al., 2011:195).

**Table 1:** Critical cross-field and developmental outcomes and related learning experiences

<b>Critical outcomes Students need to be able to:</b>	<b>Learning experiences Participants' responses:</b>
identify and solve problems and make decisions using critical and creative thinking	"Acquired consultation abilities such as prescriptions and giving health education"
work effectively with others as a member of a team, group, organisation and community	"For the first time, we as classmates worked together."
organise and manage themselves and their activities responsibly and effectively	"Able to work independently"
collect, analyse, organise and critically evaluate information	"Opportunities to screen and diagnose"

communicate effectively using visual, symbolic and/or language skills	"Inaccurate translation by interpreters"
use science and technology effectively and critically, showing responsibility towards the environment and the health of others	"Opportunity to screen and diagnose, for example diabetes and hypertension in patients who did not know, take responsibility"
demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation	"Students refer patients to hospitals and clinics for various problems."
<b>Developmental outcomes. Students need to be able to:</b>	<b>Learning experiences Participants' responses:</b>
reflect on and explore a variety of strategies to learn more effectively	"A lot of opportunities to learn and experience practice"
participate as a responsible citizen in the life of local, national and global communities	"I felt bad when I could not help some people."
be culturally and aesthetically sensitive across a range of social contexts	"To see things from another perspective. Because you are in the community and need to see things from their situation"
explore educational and career opportunities	The students said they liked working on the train and explored Primary Healthcare as a career, while interacting with students from other institutions and disciplines.

**Integration**

It is necessary for every individual to master critical cross-field outcomes to survive in the modern nursing environment (Meyer & Van Niekerk, 2008:17). The South African Qualifications Authority (SAQA) has prescribed critical outcomes for all learning programmes, which guide all learning areas. The aim of the integration of these different learning areas is to improve basic skills such as communication, critical thinking, problem solving and effective teamwork.

Participants' responses, indicating that the critical cross-field outcomes, as prescribed by SAQA, were achieved, are reflected in table 1. All responses, except one critical cross-field outcome (developing entrepreneurial opportunities), could be linked with the desired outcomes.

**Category 2: Cultural congruence**

The second category that emerged from the data was cultural congruence. Comments in table 1 indicate that the students understood cultural sensitivity, as reflected in the following statement:



*“Saw things from another perspective”.*

Transcultural nursing refers to the rendering of nursing care to the healthcare consumer whose cultural values, beliefs and ways of living differ from those of the nurse. The nurse has an ethical and moral responsibility to render quality healthcare while considering the values, beliefs and traditions of the healthcare consumer (Billing & Halstead, 2009:278). It is imperative for students to be culturally congruent to develop professionally. However, Kotzé (2008:29) stated that transcultural nursing care is thwarted by a lack of insight and inadequate knowledge of various cultures in a diverse society, as illustrated by the following response:

*“Inaccurate translation by interpreters”.*

### **Category 3: professionalism**

The last category, professionalism, with the associated themes of autonomy, ethics and appreciation, can be closely linked with the seven generic abilities of a registered professional nurse as described by Mantzoukas and Watkinson (cited in MacLellan, 2007:31). Participants mastered some generic abilities such as application of knowledge in practical situations, critical thinking, clinical reasoning and clinical judgment, as well as coaching and mentoring, as reflected by the following statements:

*“Able to work independently – felt professional.”*

*“I learned to work independently because we had our own cubicles.”*

Julie, Daniels and Adonis (2005:48) stated that the ability to work autonomously enhances nurses' employability in a healthcare setting. Generic abilities which the students did not achieve during their learning experiences on the train included competency in coping with changes in practice, conducting research and demonstrating leadership. However, these skills should be mastered during other experiential learning opportunities during the rest of their training.

Milisen, De Busser, Kayaert, Abraham and De Casterlé (2010:688) contended that a person's self-image and self-respect will influence his or her professional aptitude. The students' perceptions, that the registered nurses treated the students as their equals, enhanced the students' capacity for role learning. Exposure to these experiential learning opportunities was advantageous because the students were valued as colleagues. The feeling of being valued enhanced their confidence and improved their aptitudes for role learning through integrating theory and practice in various situations. One confirming response is:

*“Appreciated that registered nurses treated us as equals on all levels”*

## **CONCLUSIONS**

Student nurses, particularly those in their final year of study, bring a wide range of clinical and other experiences to the classroom. Teachers need to help their students to become life-long learners. Unless students learn to engage in lifelong learning, they might have been ineffectively trained for their nursing careers (Bruce et al., 2011:100-101).

The integration of nursing theory and practice is crucial for becoming independent, autonomous registered nurses. Learning opportunities for the development of the cognitive, psychomotor and affective domains of students exist on the Transnet-Phelophepa Healthcare Train. Most critical cross-field outcomes, that support the mastery of specific professional outcomes, were addressed during the course of the students' clinical assignment on the train. Students developed professionalism and aspired to deliver quality care to diverse communities. The Transnet-Phelophepa Healthcare Train is an appropriate teaching and learning environment for student nurses to increase their competencies and confidence enabling them to function as autonomous practitioners, because students can integrate theory and practice, develop cognitive, psychomotor and affective skills while participating actively in providing PHC services, congruent with students' expected learning outcomes.

## **RECOMMENDATIONS**

Regular evaluations should be done about student nurses' experiences during their clinical assignments to the Transnet-Phelophepa Healthcare train to identify and address potential challenges that students might encounter, and to enhance the positive outcomes of such learning experiences. Future studies should encompass the views of the Transnet-Phelophepa Healthcare train's managers and permanent staff members. The perceptions of patients who received PHC from student nurses should also be ascertained, so that potential shortcomings can be identified and addressed.

## **LIMITATIONS**

Only a small number of students participated in two groups, using nominal techniques to obtain data. The students' verbal accounts were accepted as being factual. More in-depth information might have been obtained from in-depth interviews and quantifiable data could have been obtained from questionnaires (completed by students) and/or from checklists completed by supervisors. Only students participated in the study. Staff members of the Transnet-Phelophepa Healthcare train and/or its managers did not participate in the study, nor did the patients who used the PHC services provided by the students.

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