

Students' experiences of the Case-Based Teaching and Learning Approach at a school of nursing in the Western Cape, South Africa

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Abstract

With the increase in nursing students' enrolments in the first year of the Bachelor of Nursing programme at the University of the Western Cape (UWC) from 150 in 2003 to 300 in 2005, case-based education (CBE) was introduced as one of the innovative teaching strategies and methods more relevant for teaching and learning in large student classes. The CBE was identified and selected as an overarching teaching strategy as it was believed that it would ensure that students were adequately prepared for nursing practice. After more than six years of CBE being implemented at the School of Nursing (SoN) at UWC, its inherent value to teaching and learning had not been established. Answers to whether nursing students, as users, value the CBE approach and whether or not CBE meets the purpose for which it was adopted were sought. This study describes the views of nursing students with regard to implementation of the case-based teaching and learning methodology in large classes to establish whether or not CBE is viewed as beneficial. Qualitative document analysis and a case study design were used. Inclusion criteria were nursing module evaluations and learning portfolios of students registered in first and second year of the Bachelor of Nursing programme at the SoN. The sample consisted of purposefully selected students' documents. Data were analysed using Tesch's thematic analysis method. The students had mixed views about their learning experiences, and it was noted that with time they started appreciating CBE.

Keywords: Bachelor of Nursing, case-based education, reflections, teaching and learning.

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Introduction

Transformation in the South African higher education sector not only challenged institutions to review a number of policies and practices to ensure their alignment with the National Plan for Higher Education (Department of Education, 2001) but led to different forms of programme offerings. In response to the Department of Higher Education and Training's strategy to standardise and unify higher education and training in South Africa (Department of Education, 1997), three universities in the Western Cape collaborated while the nursing colleges had already merged to become one structure known as the Western Cape College of Nursing. The University of the Western Cape (UWC), where the study was conducted, is one of the three collaborating universities, and

was tasked with the responsibility of enrolling students for the Bachelor of Nursing programme, thus becoming the hosting institution in the collaboration (Cape Higher Education Consortium: CHEC, 2006, in Daniels & Khanyile, 2013a).

The increase in undergraduate nursing student enrolments at the School of Nursing (SoN) from 150 in 2003 to 300 in 2005 and beyond led to administrative and teaching challenges. Consequently, more creative teaching and learning approaches relevant to effective student learning in large classes became necessary. Such approaches would ensure that students were actively learning and that the school would produce high quality graduates. Case-based education (CBE) methodology was selected as an overarching innovative teaching and learning approach and has been used at the SoN since 2004.

A study conducted by Daniels and Khanyile (2013b) to evaluate the effectiveness of the regional collaboration on the Common Teaching Platform for undergraduate nursing in the Western Cape in 2010 highlighted that students were not only affected by the process of collaboration of the three universities, but raised numerous concerns regarding the programme itself. Most of the issues pertained to students' dissatisfaction with the curriculum, among others, the teaching and learning methods used (Daniels & Khanyile, 2013b). Notwithstanding the potential that the case-based teaching and learning methodology has for interactive, student-centred teaching and learning, after more than six years of its implementation at the SoN the views of the users of CBE had not been specifically researched to establish whether or not it meets the purpose for which it was adopted. This study therefore seeks to establish what the students' views are regarding the use of the CBE approach, and to establish the benefits and/or challenges in terms of the intention to improve student learning at the SoN.

Methodology

A qualitative approach and case study design using the document review method were adopted to establish the views of nursing students with regard to implementation of the case-based teaching and learning methodology and the benefits and/or challenges they might have experienced (Creswell, 2007; Creswell, Hanson, Plano & Morales, 2007; Patton, 1990; Yin, 2009). Learning documents of students in both year levels one and two of the Bachelor of Nursing programme in 2011 at the SoN were selected for the study. Review of students' portfolios with reflections and students' evaluations of the modules were retrieved from year level coordinators for use in the study. For the study, a total number of 564 students' documents were accessible, and through purposive sampling technique, saturation was reached after 92 documents were reviewed, of which 73 were module evaluations and 19 portfolios. The students' reports

and reflections on the aspects related to CBE covered in the portfolio and course evaluations were analysed. Using Tesch's (1992) thematic analysis method, an inductive approach was applied to establish the value students place on the case-based teaching and learning method. Six themes emerged, relating to students' feelings, concerns, benefits, as well as expectations with regard to CBE.

Ethical clearance was obtained for the larger study that used document review among other techniques. These documents were part of the student learning materials, reflections and course evaluations. Students are protected from harm by not mentioning their names or any other identifier that could link them to the data in the presentation of the findings.

The collection of data from two different types of documents provides assurance in credibility and confirmability of the data. With the portfolio, students reflected on CBE in general with little guidance given, while the course evaluation provided more structure for the students to follow. The combination of the two sources strengthens the truth of the data.

Results

The findings from the document review reflect students' reports of mixed feelings about CBE. They perceive CBE as unwelcoming, and did not understand the role of the facilitator in CBE. Students also noted benefits of CBE, and that was not apparent at first.

CBE as a threatening approach

The students' reflections revealed that they were afraid of contributing in class, and this was explained either by how they viewed their own personality or worry about how the other students would react to their contributions, especially if they were not correct. In one document a student noted: "*I struggled to get my input in class discussions because I am not a talkative person ...*", while another wrote "*... actually, I was scared of what other students will say if I say the wrong things*". Speaking in front of other people as required for presentations in class seemed to be frightening, as evidenced by the following extracts: "*...Standing in front of people [the class] and presenting is not easy ...*"; "*I expected the learning department to provide us with the learning material and to have lectures. I feel the presentation method was not the best*".

The facilitator's role

Regarding the facilitators' role there is an expectation that emanates from traditional views of a teacher as a high authority figure within a teacher-centred perspective of teaching and learning. As one student states: "*We needed*

lecturers to tell us more, as we are not sure of what we researched sometimes". However, students reported that with time, they realised and later appreciated that the facilitator stimulated them to think and find things out for themselves: "My lecturer had this way of leaving questions in the air for us to think and figure out ... which was kind of frustrating and challenging at first, but at the end it worked out well when we got to understand the case-based teaching-learning method."

Students' reports on the way the facilitator explained things for everyone to understand gives the impression that it made students want to come to class. Case-based learning involves interactive student-centred exploration of realistic and specific situations. The findings of this study showed that the facilitators were not passive, and hence their input was appreciated by the students: "My facilitator's input was preserved for special moments like when we struggled on certain topic/issue". Students further mentioned that the class facilitator and clinical supervisors were helpful and gave sufficient clarity on content-related work. Students also acknowledged that class facilitators helped them by giving input after they had presented. The facilitator's input was seen as broadening their thinking and presented them with a different perspective on thinking out the issue at hand. Affirmations such as this also highlight the students' positive experiences with the facilitator: "The lecturer helped and guided us on how to look at a problem in a more professional way".

Students' concerns about learning activities

Although students reported that they liked the content from the module, which they considered as very interesting, most verbalized issues that they perceived as preventing them from experiencing meaningful learning. These issues included: (i) too much [unbearable] workload, (ii) insufficient time as a paralysing factor to effective learning, and (iii) lack of sufficient coverage of learning content from peer presentations. Students referred to the workload from individual, group and class learning activities as being unbearable. They said that despite the evaluations being challenging, they learned new things from them: "It was too much work ...", "the amount [too much] of work and little time". Other students expressed the following feelings: "At times I could not cope with heavy load", "The course was good and interesting but was not enough time to do it as I wanted because we had a lot of things to do", "I did not like the amount of work we had to do in the amount of time we had to do it".

Concerns about group work

Students mentioned that having to prepare for group presentations used as part of CBE almost every week was not a good experience. They felt that there was not enough time for them to do this, and that they had too much work. Students

reported that sometimes the workload seemed impossible to keep up with group presentations. The other concern related to feeling that they were being taught by other students; they felt that the facilitator should teach them. Obviously this is how students interpreted class activities, including individual or group presentations. Class presentations were not viewed as learning and developmental activities. There was a perceived shortfall in the classroom activities, which they viewed as affecting meaningful learning. This was of concern to some, as their desire for deep learning was not met: *“I do not think student prepared slides effectively enough. Some points were left out and at times too much unnecessary information was given because we as students can't effectively prepare an informative presentation with our limited time and knowledge.”* This was affirmed by another student: *“I don't think the information given about epilepsy was sufficient”*.

Different students had differing views about group work, with some students not liking it because not everyone [students] participated in class discussions. Hence they felt that group work didn't work and they disliked it. One student wrote: *“...some students are really lazy and just want to sponge off the rest. I hated presentations, and did not really learn much from some students, because it was not always clear”*. ~~Students reported uncertainties which although not direct factors for learning are environmental factors for conducive learning: “Presentations were uncertain”~~.

Benefits of CBE

Despite the feeling of insufficient coverage of learning content by peer presentations related to lack of learning owing to the shallowness of information presented, students did not deny the usefulness of case-based learning. It was noted that while students indicated their experience to have no advantage for their learning, they did acknowledge having benefitted from the case-based learning method through facilitators' and peers' contributions. This means that there were aspects that students regarded as disadvantageous and others they viewed as advantageous. The common view of students in this category is that they acknowledged gaining from the facilitator and peers to a certain extent. Students expressed that they were stimulated to think and find out things for themselves, especially when the facilitator left them with 'questions to ponder on' which was “kind of frustrating and challenging initially”.

Gaining from peers and group work

Although the students had some concerns about the student-centred learning approach, which they initially viewed as making them work a lot, eventually they did appreciate that it was helpful in their learning. Students indicated that they learned to reflect on their learning process, which led to reasoning and

problem-solving skills, an aspect that has been noted by Powell and Glendinning (2002). Students reported that they shared ideas and gained from each other. Although students reported concerns about group work and group presentation, they also acknowledged difficulties relating to their interaction, and acknowledged that if one truly listened it was of advantage: *"I enjoyed that class discussion as I feel that I learned most through the presentation and preparing the presentation"*; *"Presentations! It allowed all of us to build confidence, public speaking, because I find it difficult to speak to an audience, but presenting a case study helped a lot"*; *"... you learn a lot with different class presentations and especially the different diseases we work in hospital with"*; *"It brought unity and gave us the opportunity to know one another better and also taught us to respect one another"*.

On the other hand, some students preferred clinical learning to classroom activities, and this was understood as a benefit, as the case-based method prepares the students for the realities of life in their clinical learning, making it easier for students to adapt in clinical settings. In this study it was noted that group work facilitated transference of learning from CBE simulations to real-life interventions: *"I like the practical part of it because you get a clear idea about what was learned in class"*; *"I liked the group work; it made me improve my study efforts and interaction with others"*.

Interacting within a diverse group and from different places allowed students to be exposed to different opinions. Students learnt how to consider each other's opinions, appreciating the opportunity for group discussions and presentations in class, arguing and agreeing with the other students: *"It opened my mind ... how to handle them or tell the patient"*, *"Sharing different perspectives about different medical problems"*.

Although not all students reported that they had enjoyed the class learning activities, most did report that class activities were helpful when their peers had actively participated and made valuable comments which rendered the subject matter much easier to understand. This concurs with the report of Jamkar, Burdick, Morahan and Yemul (2007), which suggests that case-based learning can undoubtedly encourage useful discussion among highly motivated students who already understand the factual background.

Furthermore, students reported having gained from group work that was part of CBE in various ways, including but not limited to sharing, gaining from the group and learning interpersonal skills like how to consider other people's opinions and work with them as a team. Working in hardworking group(s) is perceived as a catalyst for motivation, inspiration and a positive attitude. The following excerpts present what one first-year nursing student said: *"They [students/peers] astound me with their ideas and made me truly listen"*, *"I love*

the group work because luckily I had hardworking group members throughout the year”, “It taught me how to back my group up when one of them got stuck; I took this lesson with me to my clinical placements”. In spite of numerous challenges with regard to use of learning innovations in higher education institutions, there are also numerous benefits (Ochsendorf, Boehncke, Sommerland & Kaufman, 2006).

In general most students had positive feedback regarding group work. They stated that group discussions were very helpful and that they learned and gained a lot from their classmates. First-year students attested that working within groups promoted understanding of the learning material and people and peers: *“Working within a group enabled me to understand different ways of thinking and interacting with different types of people [peers] and races. This helped me to cope with the types [patients and staff] of people in the hospital”, “I learned how to work together with, and consider other people’s opinions, feelings and ideas”*.

They reported that working in a group helped them not to be afraid to talk. This indicates that the negative feelings, perceptions and fears changed over time, providing room for positive experiences of CBE and the learning process. One student qualifies this statement by saying that: *“When I noticed that nobody is perfect and we are all here to learn ... That is when I noticed ... not to judge or laugh at others”, “One of the advantages of group presentations was that people [students/peers] come up with different points of view that make you [individual student] understand things easier than the way one would understand it as an individual.”*

Other students wrote about what they gained from group work, highlighting the following: *“... boosted self-esteem and enabled us to talk in front of others”, “enables one with skills to discuss a problem”*. Other students noted as follows: *“It was easy for me to ask questions and learn during group discussions, although I am shy and do not feel comfortable speaking in front of many people”, “I had a chance to learn from other students by hearing different views and opinions”*.

They acknowledge that everybody had an input during group discussions, that every member was treated with respect, and that they bonded with and learned a lot from each other. There was consensus among the first-year nursing students that group work and class presentations influenced their interactions with patients in the clinical setting. This is demonstrated by the following excerpt: *~~“I love the group work because luckily I had hardworking group members throughout the year”, “It [group work] taught me to back my group up when one of them got stuck and I took this lesson with me in my clinical placements”, “I~~*

learned how to work together and consider other people's opinions, feelings and ideas”.

Student expectations on how their learning can be improved

This theme is founded on a number of student uncertainties, including being uncertain about different facilitators for class sessions, and about the learning process. Students were concerned about not being informed about when they were presenting in class. Analysing a case and ascertaining what the problem is requires a similar learning strategy as in problem-based learning (PBL), where students are expected to identify and manage the problem.

According to White (2001) learning is “student-centred”; learning refers to freedom of the student to study those topics that are of interest to them, as well as determining how they want to study them. Nursing students at the SoN were not awarded such an opportunity, and this might be the source of their uncertainties with regard to learning in the classroom. It was also not evident whether or not students in the current study were able to develop a deeper awareness and ownership of learning. Although the students reported that class and group discussions promoted understanding, their expression of understanding was never in strong enough words to imply that deep learning occurred.

Discussion

CBE is an innovative education strategy for teaching and learning. It can be defined as a process that utilises cases in which students analyse, identify problems (health issues) presented in a case and provide the best possible solutions for the identified problems (health issues). There is a general understanding that CBE is closely related to PBL. PBL is defined as learning resulting from intellectual processes in understanding and solving problems.

There are different ways in which CBE method is used. Jamkar et al. (2007) present how CBE has been used as a blended approach with PBL in India. During the first and second year at SoN, CBE is not used exclusively but it takes a larger part in the teaching and learning approach, as opposed to in year three of the nursing programme where CBE is blended with PBL. This is in keeping with Jamkar et al. (2007), who acknowledge a need for adaptation through integration of real clinical cases which serve as triggers for student learning.

The use of a CBE-PBL blended approach is appraised to be an approach that stimulates learning, forces students to use their existing knowledge base, facilitates greater understanding, and improves retention and recall of information. Jamkar et al. (2007) state that the benefits as experienced in India

included promotion of teamwork, fostering long-term memory, and providing the framework for sustained life-long learning and self-directedness. It is noted that modifications are catered for in the learning protocol and students' feedback considered for quality assurance and management.

In another scenario presenting how a medical school moved from the traditional teaching approach to an interactive large-group case-based teaching approach (Ochsendorf et al., 2006), the authors argue that the traditional approach presented problems that warranted an immediate change. However, small group approaches could not be used as an alternative because of insufficient human and material resources. Consequently they adopted CBE as an approach that would be feasible. Certain criteria had to be met, including: (i) acceptability of the approach by students, (ii) improved learning outcomes, (iii) that it could be manageable with the available personnel, and (iv) that it would comply with learning outcomes. This scenario relates squarely to that of the SoN under study. Ochsendorf et al. (2006) reported that the case-based approach proved effective and yielded better outcomes on student satisfaction and learning, which concurs with the views of the nursing students at SoN.

Kim, Phillips, Pinsky, Brock, Phillips and Keary (2006) conducted a multi-disciplinary study on theoretical frameworks for developing teaching frameworks, and argue that the format of cases for learning is vitally important. They propose the need for a conceptual framework for developing teaching cases, which may provide guidance for use in case-based instruction. According to Kim et al. (2006) case-based teaching is an effective instructional method compared to the conventional lecture-based teaching, by promoting students' critical thinking and decision-making skills through making inferences based on limited information provided.

Although students in this study did acknowledge benefitting from case-based learning, it would be an unquestionable finding if they had made it clear how the teaching-learning strategy influenced their critical thinking, since this is one of the premises upon which CBE is built. Case-based teaching compels students to analyse complex problems presented and make decisions on uncertain, ambiguous and conflicting issues. The two continuums presented by Kim et al. (2006) are the power of the skilled facilitator who can unpack the content, and a well-constructed case type and the quality of inquiry which learners generate regardless of the facilitator's skills or expertise. In addressing the debates on these opposing stances, the authors argue that a conceptual framework on how to develop good cases may provide a good foundation to guide the construction of cases for a variety of learning settings.

Although students reported concerns and aspects they were unhappy with about CBE, they also acknowledged that CBE was helpful in their learning. It was

noted that certain students' expressions pointed to some difficulties which were experienced during their learning; however, the reassuring fact is that these were overcome with time as the process unfolded. This allowed the students to gain a better understanding of the teaching strategy that was being applied and the expectation of their active participation in creation of knowledge and understanding. This was noted in the study from the reports about the good learning experiences. The researchers assume that this may not necessarily mean that the experience was purely negative, but is probably an indication that the experience only relates to the process and not the outcome.

In this study a reference is made to a case where the lecturer used tact to leave the learning matter in suspense in order for the student to figure it out. It is therefore appropriate to regard cases to be of adequate quality for effective learning of students. The framework for case-based teaching provides five core attributes: relevance, realistic, engaging, challenging and instructional; these are linked to a number of strategies (Kim et al., 2006) which are not discussed in detail in this article. However, these strategies are noted for their vital role in developing good cases for learning purposes.

In general students had positive feedback regarding group work and group discussions were reported to be helpful. Students learned and gained a lot from classmates and facilitators. In the context of this study, the negative reports and concerns were understood as part of learning process and a stepping-stone to further learning. The students reported that working within groups promoted understanding of the learning material and meaningful learning. The benefit of CBE is supported by Thomas, O'Connor, Albert, Boutain, Patricia and Brandt (2001), who attest that knowledge must not only be organised and utilised in systematic ways, but also be applied to actual clinical situations. When knowledge is applied, mastery of clinical reasoning skills is promoted.

Recommendations

The way forward at the SoN at UWC will be to encourage facilitators to continue improving their facilitation skills in the CBE and using the student feedback to effect the necessary changes for the following year. It is recommended that the following be considered by nurse educators and practitioners:

- Facilitators as nurse educators are encouraged to continue improving their facilitation skills in CBE and using the students' feedback to effect necessary changes which can progressively improve each semester or year.
- Knowledge about students' concerns and negative experiences must be utilised by facilitators as these guide them on how they can assist future groups of students who will be registering for the programme and be introduced to CBE for the first time.

- Collaboration with nurse practitioners can provide an advantage, where they share with facilitators their experiences of ideal cases which are based on real-life scenarios or situations.
- Both nurse facilitators and nurse practitioners should strive to work together in promoting education and training of nursing students. These counterparts can jointly address issues of student clinical learning with regard to learning opportunities in both clinical placements and the simulated laboratory.

Conclusion

Despite the case-based process of teaching and learning being viewed as unfriendly and not welcoming, with time it gets better, as was evinced at the end of the students' first year of nursing. In the second year of study students acknowledged having learned and having developed personally and professionally. Students acknowledged having learned critical skills including professional behaviour, interpersonal skills and communication, problem-solving skills, respect for each other and teamwork. It is therefore evident that to a large extent nursing students do value CBE as a teaching and learning approach.

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Nursing students' experiences of Case-Based Teaching and Learning 95

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