The Experience of Scenario-based-learning in Undergraduate Nurse Education in Edinburg

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Abstract Aim: To examine the applicability of Scenario - based - learning (SBL) in undergraduate nurse education in Edinburg UK. Method: In this paper the value of an SBL approach to teaching is evaluated in 1st year undergraduate nursing students. Both teaching staff and students used a validated evaluation proforma simultaneously to appraise the teaching programme.

This evaluation was continuous throughout a full academic year. Results: Initial consensus of both staff and students was favourable towards SBL. SBL was deemed a very positive approach to teaching for neophyte undergraduate nursing students. Evaluation led to minor modifications in terms of timing of specific scenarios within the curriculum. Conclusion: Scenario based learning has been a valuable teaching tool within the school, from the perspective of both staff and students.

1. Introduction

Problem based learning (PBL) is an increasingly popular method of education, commonly used at undergraduate level. It has been around since the 1960's but has only become widely used in medicine and related professions teaching since the mid 1990's (Fry, Ketteridge, Marshall, 1999).

PBL is a very general term that is used to describe an approach to learning in which students working in small groups facilitated by tutors identify their own learning objectives from synthesised situations. It is a combination of educational method and philosophy, which encourages nurse educators to rethink and change their educational role away form one in which they predominantly convey facts. PBL moves away from a traditional pedagogical teaching approach towards a more andragogical method of teaching and learning (Wilkie & Burns 2003). PBL aims to enable students to acquire and structure knowledge in an efficient, accessible and integrated way.

Students who come to learn in university setting are in a state of cognitive transition. They have moved from a classroom environment, where teachers coaxed them through their learning toward successful examinations, toward the development of andragogous learning skills. Adults learn well in small groups that are united by a common goal such as the successful working out of a case based scenario (Alexander, McDaniel, Baldwin, Money, 2002, Whitfield, Manger, Zwicker, Lehman, 2002).

The modern health service is a constantly changing environment characterised by rapidly evolving advances and the constant pursuit of knowledge. In this environment it is essential that novice nurses are equipped with the skills to employ critical thinking and adaptability when carrying out clinical skills (Afaro-LeFevre 1998, Facione,. Facione Giancarlo, 1998). The traditional pedagogical approach to nurse education has been criticised for stifling the development of these essential critical thinking skills in the preparation of novice nurses (Celia, Gordon, 2001). PBL is regarded by many as a positive step toward addressing this deficit in the development of novice nurses.

"Active engagement, imaginative inquiry and the finding of a suitable level are all much more likely to occur if teaching methods that necessitate student activity, student problem-solving and question asking, and co-operative learning are employed".

It is clear that such methods are not apparent through traditional forms of teaching where the student plays a more passive role. In Nursing Studies at the host university PBL was adapted to Scenario

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Based Learning (SBL) which retains many of the elements seen in PBL. The focus is very much on active student involvement and engagement with the topic under investigation. SBL was believed to be a more appropriate title for scenario based cases in order that patients are not perceived by the students as 'problems'. The elements of this approach, as deployed in Nursing Studies, are outlined below and the similarities to PBL can be clearly recognised.

- Learning and teaching coming from an exposure to a scenario
- Small interactive groups of students exploring the scenario in a structured manner and subsequently sharing the knowledge and understanding
- A none didactic facilitator

The outline of the programme for SBL as an undergraduate teaching method is laid out below. In the first instance 1st year undergraduate students of a four-year Bachelor of Nursing (Hons) programme were presented with four scenarios as listed in Box 1 during their first term of study.

Box 1 Scenarios in Nursing 1

• Immunisation of the child
• Adolescence and diabetes
• Adult with an alcohol problem
• Older person following a stroke

It was the aim to evaluate the use of SBL teaching techniques in undergraduate nursing students.

We adopted a scenario-based approach to learning, which was to introduce students to their study of Nursing in an interesting and motivating way. Overviews of four real life situations were devised to reflect specific problems at various stages of the life cycle. There was a separate learning package attached to each scenario and this took the form of hard-copy handouts that were given out at the start of each two week period. Scenario-based learning adopted four forms of learning and teaching, the elements of these as presented below are adapted from Boud and Feletti's 1991 review of PBL.

- student-led learning
- resource sessions
- practicals
- small group discussions (i.e. tutorials)

2.　Method

2.1　Objectives

A scenario based learning approach created conditions to facilitate:

- an introduction to group learning
- encourage student-centred and self-directed learning
- an introduction to research and enquiry in nursing
- an introduction to evidence based learning
- an introduction to the type of people who need and receive nursing care/input
- an overview of the variety of roles that nurses undertake

2.2　Assessment in scenario-based learning

Scenario based learning utilises learning packages which are taken directly from clinical situations (See Box 1), as basic units of study. These scenarios focus directly on nursing issues, on nursing interventions, and this knowledge was amplified by supporting knowledge from other disciplines (medicine, Allied health professions (AHP's)). This integration of knowledge is very valuable in making all learning relevant to clinical situations, and allows nursing students make clear connections between knowledge from nursing, biological science, social science and the humanities. Integration of this knowledge was assessed by means of project work. Students were assessed on a small group project based one of the scenarios. These small group projects were designed to give students an insight into the research process, by addressing a question of their own choosing relevant to the scenario. This project was also intended to foster group learning and to help students develop their presentation skills.

Contribution to the group project was a requirement for students to progress through Nursing 1 and was given 10% weighting of the

overall year mark. The assessments were student-led, with tutors providing assistance.

2.3　Conducting the Small Group Project

Students were encouraged to meet in small groups outside lecture / tutorial times to prepare a written report and to finalise their presentation. Each group member was required to do some literature searching, contribute to the preparation of the report and to the presentation. It was within the remit of the groups to agree upon an equitable distribution of the work and responsibility and to decide how often they meet. It was suggested that each group should appoint someone to chair their meetings and that minutes are taken to ensure that each member takes a share of the workload.

Each group was required to produce a group report of one to two sides of A4 paper outlining the conduct of their project and their finding. This report was photocopied and circulated to all class members to disseminate the knowledge. The groups were also required to produce a poster, which could be used as an aid to help their presentation to the whole group. Each small group was expected to present to the whole group for 10-15 minutes.

The students had to submit a group report to summarise the project and contained the following;

- The title of the project
- The rationale for choosing the topic (related to scenario in question)
- A summary of their literature search
- A summary of their findings
- A conclusion
- An appendix listing the names of the students in the group and detailing the contribution of each to the project, report and poster (1 side A4 maximum)

The Group report was assessed for content and presentation by the course organisers and the students themselves. Peer assessment was used as a learning tool for the students in order for them to develop and acquire some of the essential skills required for evaluation in nursing (Fry et al, 1999). Emphasis was placed on critiquing the work as opposed to criticising each other's work.

Formal feedback was given to student groups about both their written and oral presentations by academic staff. The final mark for these presentations was also given at this time by means of a group grade.

2.4　Evaluation in Scenario-based-learning

During the academic year formal evaluation was made of the SBL approach to learning. This evaluation was undertaken by both staff and students and involved the completion of the departmental evaluation sheet. This evaluation included questions on the following topics:

- Overall satisfaction with SBL
- Intellectual challenge of SBL
- Relevance/interest of SBL
- The best features of SBL
- Suggested changes to SBL approach

3.　Results

Students and staff were asked to evaluate their experience of SBL at the end of the first term. This evaluation was completed on the standard Nursing Studies University course evaluation form. Standard questions about course organisation and level or difficulty of the course delivery are assessed on a five point Likert scale ranging from 1-5. Although very important data, in this particular instance the authors were more interested in the qualitative comments offered by staff and students alike. It was on the basis of these comments that revisions were made to the course delivery The feedback received was very positive and both groups appeared to enjoy the new teaching style. It was seen as "An interesting way of learning", "I liked the scenario based sessions". The learning was also identified as linking well with the placement experience "the scenarios gave me an insight into many different areas of nursing and it was nice to be able to act out some of the issues through the scenario."

One criticism from students was that they believed there was still too much of traditional

teaching taking place, in some cases and that more student-led emphasis could be drawn This was addressed by making resource sessions less like formal lectures and more interactive. Student-led tutorials were introduced where the group had to answer scenario queries and take ownership for their learning by investigating an area of the particular scenario and discussing their findings in depth during the tutorial sessions. This was an area that teaching staff found most difficulty with in respect that they were there to facilitate the students' learning, keeping them on track but not overtly influencing the direction of learning that the group took.

It was felt, by both students and staff, that four scenarios in the first term was too much and more could be gained by moving the mental health scenario to the third term in preparation for the mental health placement.

4. Discussion

Nursing is taught traditionally by 'chalk and talk' methods and newer forms of teaching such as SBL may encounter resistance from established teaching staff. The majority of our original cohort of students exposed to SBL had no prior experience of higher education and were initially reluctant to take up ownership of the sessions. Conversely, teaching staff appeared initially reluctant to move from the traditional pedagogical approaches of teaching to student ownership of learning and this is reflected by the year-end comments by students.

There were several changes made to the initial SBL programme:

- Reduction of number of scenarios in 1st term from four to three (removal of adolescence with diabetes)
- Introduction of a mental health scenario in 3rd term in preparation of mental health clinical experience
- Introduction of student-led tutorials to answer case based queries.

These changes were made in direct response to feedback from students and staff. The SBL programme was taken up well by the students and staff alike and proved to be a positive experience from both teaching and learning perspectives. The small size of the Bachelor of Nursing programme may have provided an optimum environment for the methods to flourish. During the first year of the SBL exercise there were twenty-four students in the class.

The integrated clinical aspect of the course was of further value in bringing the SBL method of learning to life. Students were able to work through their scenarios both by accumulating theoretical knowledge in the resource sessions and also by following up this knowledge in their clinical placements by exposure to real cases.

It has proved to be a very useful method of teaching although there are still some concerns about the depth of knowledge attained by individual students. However it has definite advantages in promoting team work and problem solving skills, which are invaluable assets to nursing.

Evaluation of this programme over the two-year period has given invaluable insight into the pros and cons of SBL; however a longer evaluation is required in order to produce significant data. It is proposed to perform an evaluation of the progress of the SBL approach to teaching at the end of the five year cycle.

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情景學習在愛丁堡護理本科教育中的應用

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摘要　目的：瞭解情境教學法在愛丁堡護理本科教育中的適用性。方法：評估情境教學法在一年級護理本科生教育中的實際價值。教師與學生同時使用量表來評價教學方案。在整個學年過程中評價是持續進行的。結果：教師與學生對情境教學法的價值達成初步共識，認為其對新入校護生的學習有積極作用。評估結果顯示在課程當中一些特定情景的時間需要進行一些細微的調整。結論：情境教學法是有利於師生雙方的有效教學工具。

for the best way of its utilization in nursing education will become one of the crucial missions of nurse educators. Evaluation should be more systematic so as to reflect more precisely the effectiveness of simulation teaching. It can be done by validating the items of learning outcomes in the student feedback questionnaire and by obtaining students' qualitative comments through the use of focus group. It is believed that through trial and error, the nursing education in the mainland China will be further enhanced.

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模擬技術在兒科護理教學中的應用

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摘要　本文探索兒科護理教育中模擬技術應用的可行性。文章進一步說明瞭該技術的正面作用，模擬技術對護理教育帶來新的機遇的同時，也對護理教師提出了一些挑戰。從長遠來看，模擬技術必將成為護理教育改革的重要方向.如何在護理教育中充分利用模擬技術是一個重要的任務,有待於中國的護理教育者們不斷探索與實踐。