

## **Learning together: Using Simulation to Foster the Integration of Theory and Practice**

### Author

Conrick, Moya, Dunne, Anne, Skinner, Jan

### Published

1995

### Journal Title

The Australian Electronic Journal of Nursing Education

### Version

Version of Record (VoR)

### Rights statement

© The Author(s) 1995 The attached file is reproduced here in accordance with the copyright policy of the publisher. For information about this journal please refer to the journal's website or contact the author(s).

### Downloaded from

<http://hdl.handle.net/10072/177987>

### Link to published version

<http://pandora.nla.gov.au/nph-wb/19971223130000/http://www.csu.edu.au/faculty/health/nurshealth/aejne/vol1-1/ajan4.htm>

### Griffith Research Online

<https://research-repository.griffith.edu.au>

## **Learning together: Using Simulation to foster the integration of theory and practice.**

**Moya Conrick**

School of Nursing, Griffith University, Brisbane Campus 4111

**Anne Dunne**

School of Nursing

Griffith University

Brisbane Campus 4111

**Jan Skinner**

School of Nursing

Griffith University

Brisbane Campus 4111

### **ABSTRACT**

Simulation is recognised as one of the more effective methods of managing clinical teaching. It can be presented in many ways - role-plays, games and computer programs; it encourages the student to become an active participant, to think more deeply and to become part of the educational environment.

In the first year at Griffith University, a curriculum which uses a Problem Based Learning philosophy, it was decided to use a simulated ward to foster the integration of theory and practice before students went to the institutions for clinical practice. It was hoped to capture the advantages of simulation for example the controlled manipulation of the patient care situation with fairly predictable results and the creation of a safe environment allowing the patient to escape the consequences of poor decisions made by a learner or an ill-informed care giver.

The simulation was to involve all students in all facets of the day to day activities of a busy ward and to expose them to a diverse array of roles within that setting. This paper discusses the organisational factors in such an undertaking and educational outcomes achieved. It will also give an insight into the student reactions to and reflections on the week.

## **Learning together: Using Simulation to foster the integration of theory and practice.**

### **Introduction**

Simulation can be best described as a representation or model of an event, an object or some phenomenon. In clinical nursing terms, it refers to the verbal or pictorial description of a real-life patient care situation but, in reality it is generally

an incomplete model that contains only the essential elements of what is being simulated. Nevertheless, simulation is recognised as one of the more effective methods of managing clinical teaching. It can be presented in many ways - role-plays, games and computer programs; it encourages the student to become an active participant, to think more deeply and to become part of the educational environment.

At Griffith University's Brisbane campus the founding curriculum is based on a reiterative problem based learning model, which will hopefully produce beginning practitioners who will interface with their profession and be equipped with the skills essential in nursing. The uniqueness of a Problem Based curriculum is the student-centred approach to learning as opposed to teacher directed learning within a discipline-based curriculum. Problem Based Learning(P.B.L.) has many of the criteria for quality learning espoused by Ramsden (1992) and Laurillard (1993) while research by Albanese and Mitchell (1993) has shown that students rate their experience in PBL higher in terms of meaningfulness, flexibility, emotional climate nurturance and interaction. Simulation sits well within such a curriculum base as it allows the students to experience relative autonomy, to become empowered and self directed within a safe environment.

In nursing, clinical simulations have developed around patient management problems and have been described by many writers for example Dincher and Stridger(1976); Holzemer, Schleutermann, Farrand and Miller(1981); Holzemer, Reskin and Slichter(1986). Although most reports in the literature are subjective and anecdotal, they catalogue a variety of advantages for using simulations in teaching clinical nursing. Hanna (1991 p 29) has also observed that "a serendipitous advantage of using simulations to teach clinical nursing is that simulations tend to simultaneously teach in two or more domains, such as psychomotor and cognitive or cognitive and affective".

Dooling (1986 ) expands the advantages of simulation saying that it includes the following;

- 1) it focuses the learner's attention on the problem, eliminating the distractions that occur in real life;
- 2) it permits controlled manipulation of the patient care situation, with predictable results;
- 3) it allows the patient to escape the consequences of poor decisions made by a learner or an ill-informed care giver;
- 4) it ensures standardisation of a situation (particularly valuable for evaluative studies); and

5) it can be used to measure affective as well as cognitive learning (Dooling 1986 pp 219).

Simulations in fact offer the opportunity for expository learning which the literature regards as having many advantages. However, there are disadvantages of simulation. This includes the enormous expansion of energy required to orchestrate a simulation activity from preparation to completion but, at this time there is little evidence supporting the relationship between clinical simulation performance and the clinical setting (Henry and Holzemer 1993). Dooling (1987) also sees the fact that nursing functions, (because of their abstract nature with few research-based outcomes), make it difficult to establish a reliable scoring system that allows quantification of specific decisions to specific outcomes.

With these factors in mind Clinical Practice Week was planned. It was decided to simulate a hospital ward in which the students' would be fully immersed, that is they would role play all members of the hospital's likely ward staff and the passing through. Initially the major hospitals were approached as to the feasibility of staging this week in unused wards within their hospitals. The idea was met with enthusiasm but for various reasons the venues were not forthcoming and the week was held in the campus laboratory.

### **Preparation**

Planning for the week was quite a task with some dedicated members of the team taking responsibility for various areas. The ward area on-campus has a capacity of twenty-two beds plus an "isolation room" to be utilised. This meant writing enough scenarios for this number of simulated patients, as well as additional scenarios for the "patient pool". This added a degree of unpredictability more closely mimicking reality. In an endeavour to "fit" students to particular roles a diverse pool of case notes were created. This, of course meant that the same number of charts were to be assembled, as well as admission notes, pathology forms and in some cases X-Rays. Sufficient observation and extra nursing progress forms also needed to be prepared.

Another mammoth task was rostering with rosters being organised for both staff and students. All students (156) were rostered as the patient and nurse (two to each patient) at least once during the week on either a morning or afternoon shift. Ancillary "staff" were also rostered. Most students also role-played wardspersons, domestic staff (cleaning and delivering cups of tea), visitors, or the Chaplain. An unexpected bonus was the appearance of a "real" electrician who had wandered in to fix the air conditioning and the University Chaplain who was on another mission within the school.

It had also been decided that a relevant resource session should precede each morning's simulation with experts from various fields being brought in to address

students' enquires as to the latest techniques and management practices. Some of the areas discussed in these sessions had previously proven either difficult to address or thought not to have been covered in sufficient depth during the tutorial sessions. The week was also placed after the student's first clinical placement, so that issues unresolved during clinical practice could be resolved in this safe, controlled environment. The students were able to practice those skills that had previously produced fear or uncertainty in the real life situation within an area of safety and security without fear of reprisal.

## **Staging**

The typical day began with a student briefing and each shift concluded with a debriefing session after which students were expected to document the day's events in their reflective journal. An interactive approach to the preclinical conference has advanced as a method of achieving learning transfer and developing the higher cognitive processes of application, analysis, synthesis and evaluation (DiRienzo 1983).

A post conference or debriefing session allows for interaction between students and facilitator and should be an honest open discourse allowing for students to express their fears, frustration, and particularly the clarification of puzzling events and learning issues. Debriefing affords both students and facilitators an opportunity to step back from the activity and reflect upon events in a critical way. Reflection lies at the core of experienced based learning and without it experiences remain just that while the full potential for learning by the participants may not be realised (Pearson and Smith 1985). Combining debriefing with journalling has proved a most effective way to enhance learning and research carried out by Arphorn (1990) concurs with this.

De-roling the students is also an important and very necessary task to end any simulation. Therefore to end the simulation and to de-role, we provided the two factors which were recognised by Thiagarajan and Stolovicvh (1978) as assisting with this process. The first being the completion of a time period (establishing a time limit for the activity ahead of time) and the second being completion of the task. Those students role playing nurses were asked to remove name badges while the "patients" were asked to dress in street clothes and to assist the nurse to make their bed to bring the simulation to closure. Even with these steps taken three students found it difficult to shed the role of nurse. In all cases this was exacerbated by frustration and self-doubt as they perceived themselves as unable to cope with a particular set of circumstances or they were discontent with the strategies they had used with their "patient". This seemed to be a morning occurrence and perhaps this was in some way due to a lack of patient closure as the patient did not de-role until the end of the afternoon shift.

During the staging of the week many problems quickly became obvious. Some students did not attend and there was no record of this. As a result of the tight rostering, with all students allocated to some role during the day, it was difficult to make quick role substitutions and subsequently the learning of roles became problematic. It was also not possible to roster the required staff for various reasons and the burden fell onto a few dedicated facilitators who quickly "burnt out" by the end of the week. From this experience there were other 'hiccups' which, identified now in hindsight, could be avoided in future planning.

The students reported finding the ward noisy with telephones ringing and people talking and moving about. Privacy for their particular patient was also an issue as cleaners and passers-by walked in behind screens unannounced. This brought to the fore the importance of using appropriate communication skills. On many occasions students identified a need to improve their assertiveness skills. There were many learning issues for the students which were both expected and serendipitous. While some of these were met with anger and others by frustration, many were seen as a challenge and confronted as such. de Torney and Thompson (1982) suggest that students gain awareness that there are many ways of dealing with a problem and that they achieve an insight into the behaviours of themselves and others during a simulated experience. This was also noted during the clinical week and commented upon by students in their reflections of the week.

Facilitators questioned students, assisted learning and on occasions acted as a resource person for the students. However, other resources in the form of both written and computer assisted learning packages were also available. Students were expected to take a "time out" when they found their knowledge deficient and make use of the resources available. They were expected to research the area to acquire the information needed to continue the safe treatment of their patient and many took this opportunity to expand their knowledge base through interactive discourse, research and reflection, which in turn contributed to the development of improved clinical practice.

## **Outcomes**

As far as this particular simulation was concerned the outcomes could not be quantified. Further research would need to be conducted to ascertain the quality and quantity of student learning. However during both the daily debriefing sessions and immediately following the completion of the nursing practice week, student response was quite positive which was reflected in the comment, "It should be compulsory". pers comm. The most frequent comments from students centered on the psychological and physical safety that they enjoyed in this simulated learning environment.

Anecdotal feedback received verbally and in reflective reports on the learning experiences from this week were mostly positive. Students identified specific

learning issues and more broad areas in need of further study to gain confidence in their future clinical practice. The negative feelings appeared to relate to the confrontational nature of the simulation. It was interesting to note that the students were not only able to identify problem areas but offer suggestions for improvement for future simulations of this type.

There was also evidence of the application of theory and practice which Ramsden(1993) would say is the foundation for deep learning and which Bain(1994) suggests establishes transformative learning.

## References

- Albanese, M. A. and Mitchell, S. (1993) Problem Based Learning: A review of the literature on its outcomes and implementation issues. *Academic Medicine*. 68, 1, 52 - 81.
- Arphorn, C. (1990) Improving learning from experience: Action research in nursing education in Thailand. Paper presented at the First World Congress on Action Research and Process Management.
- Bain, J. (1994) Understanding by learning or learning by understanding: How shall we teach? An inaugural lecture Griffith Institute of Higher Education Brisbane.
- de Tornay, R. and Thompson, M. (1982) *Strategies for Teaching Nursing* (3rd ed) New York. John Wiley & Sons.
- Dincher, J. and Stridger, S. (1976) Evaluation of a written simulation format for clinical nursing judgement; a pilot study. *Nursing Research*. Vol 25 pp 250-285.
- DiRienzo, J. (1983) Before client care - an interactive conference. *Journal of Nursing Education*. Vol 22(2). February. pp 84-86.
- Doling, S. (1987) Designing computer simulations *Computers in Nursing* November/December. pp 219 - 224.
- Dooling, S. (1986) Designing computer simulations for staff nurse education *Journal of Medical Systems* Vol 10 (2) pp 13-149.
- Dreher, M. and Caputi, L . (1992) The integration of theoretical constructs into the design of computer assisted instruction. *Computers in Nursing* September/ October. 219-224.
- Feletti, G. (1992) Inquiry based and problem based learning: how similar are these approaches to nursing and medical education? Unpublished paper.
- Hanna, D. (1991) Using simulations to teach clinical nursing. *Nurse Educator* Vol 16 (2) March/ April. pp 28 - 31.
- Henry, S. and Holzemer, W. (1993) The relationship between performance on computer-based clinical simulations and two written methods of evaluation: cognitive examination and self-evaluation of expertise. *Computers in Nursing* Vol 11(1) pp 29-34.
- Holzemer, W. Reskin, B. and Slichter, M .(1986) Criterion-related validity of a clinical simulation. *Journal of Nursing Education* Vol 25 pp 286-290.

- Holzemer, W. Schleutermann, J. Farrand, L . and Miller, A. (1981) A validation study: simulations as a measure of nurse practitioners' problem solving skills. *Nursing Research* Vol 30 pp 139-144.
- Laurillard, D. (1993) *Rethinking University Teaching*. London. Routledge.
- Ramsden, P.(1992) *Learning to Teach in Higher Education*. London. Routledge.
- Thiagarajan and Stolovicvh (1978) *Instructional Simulation Games*. New Jersey. Educational Technology Publications.

(Copyright Conrick, M. Dunne, A. Skinner, J.)