



## **Interactive Nurse Education: the virtual experience**

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### **Initial prompt**

In order to meet the ever-increasing changes and demands of the UK Health Service, nurse educators have been challenged to provide a curriculum which ensures that students are fit for purpose upon qualification. In recent years both government policy and the professional regulatory body have advocated the need for a more flexible approach to nurse education (Department of Health, 1999; United Kingdom Central Council, 1999). Recognition has been made of the importance of using information technology and computer mediated learning in order to encourage nursing students to become critical thinkers who demonstrate clinical reasoning skills.

In response to these drivers, a virtual reality programme was developed as a learning and teaching resource within the second year of the adult undergraduate pre-registration nurse programme.

### **Change to practice**

The virtual reality programme is a computer generated three-

dimensional non-immersive representation of a community, given the fictitious name of Bellwood. It is used in conjunction with problem-based learning and acts as one of a number of triggers to guide the students' learning. The programme provides students with the opportunity to enter a wide variety of homes and public buildings such as health care centres. It is installed on personal computers within the university and navigated independently via a mouse. Once inside individual homes, students are able to consider social and environmental factors that may impact upon the health of fictitious families who live there. The aim of this programme is to provide students with the opportunity to discover, question, and explore emerging issues individually as well as within small peer groups.

The virtual community has been utilised as a learning and teaching strategy for three years within the School of Health and Social Care at the University of Teesside. Module evaluation and verbal feedback from students suggested that this was a successful tool that enhanced their learning and the findings from a

recent evaluative study supported this.

## Evaluation

The study was undertaken to identify students' perceptions of using virtual reality as a learning resource. A qualitative design was used and data were collected through focus group interviews with 18 student nurses.

Several positive themes emerged from the discussion which supported the fact that students engaged with this method of learning. They enjoyed a more active approach where they had to seek out information rather than traditional methods of education such as sitting in lectures and reading relevant material. Simpson (2003) acknowledges that virtual reality should complement traditional educational methods, and this is the way that Bellwood is currently being used within this university. Face-to-face contact is still required and this is particularly relevant within the profession of nursing. Bellwood is viewed as a fun and rather novel way of learning which is motivating to students. This is important as Koerner (2003) points out 'true learning is fun' and the wonder and discovery of using a variety of teaching methods can engage the learner in life-long learning.

Previous clinical experience for students had been within the hospital environment, therefore visualisation of the community enabled students to appreciate how health care can be provided within a person's own home. This 'realism' helped them

to apply theoretical concepts to potential clinical practice in order to prepare them for their community placement.

Students also recognised the importance of teamworking when using Bellwood, as they worked together to find and share information. This level of interactivity with the virtual community as well as with each other encouraged them to actively participate in the process of learning. This is a crucial part of nursing and its importance is highlighted within Government documents (Department of Health, 2001). Bellwood engaged the students in discussion and encouraged them to work collaboratively, which are certainly desirable professional attributes. They also recognised the value of this method of learning, which Franklin & Peat (2001) have identified as the socialisation of students, peer-assisted learning and the development of communication skills.

Interestingly, Bellwood engaged the students in self-reflection about their own health and lifestyle, which was an unexpected aspect of their learning. As an example, on visualising some of the food packages included as triggers to the individual's diet, they questioned their own lifestyle in relation to healthy eating.

It was evident that some students had developed their information technology (IT) skills during their interaction with Bellwood. Initially, navigation was a problem for some,

especially the finer movements with the mouse; however, with practice these difficulties were overcome. This provided a sense of mastery and accomplishment that they might not have otherwise experienced. The use of computer generated programmes may not suit all students' learning styles and lecturers need to be aware of this. However, there is increasing use of IT within the health care system, with an expectation that nurses are able to interact with this medium to effectively manage patient care. Nurse education obviously needs to reflect this and assist students to acquire these skills (Willmer, 2005; Department of Health, 1999).

## Future development

Recommendations for future development included expanding the use of Bellwood to other health care professionals. Students suggested that other members of the multi-disciplinary team such as the physiotherapist, occupational therapist and social worker would benefit from this method of learning, and this would support the current health and social care agenda for inter-professional learning and working (Department of Health, 2000; Department of Health, 2001). It was also suggested that the programme be introduced to other emergency services such as the police and fire brigade.

This type of technology has made education empowering for our students. As lecturers we realise that students do need a variety of

learning experiences in order to create motivation and enthusiasm to learn and Bellwood goes some way to achieving this. This programme will continue to be used with nursing students but plans are in progress to integrate Bellwood into inter-professional modules. Students will then develop their learning in association with other disciplines working within the field of health and social care.

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expanded to include other health  
care professional groups.