Using technology supported learning to enhance students' learning of how to care for patients in adverse situations

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Background and rationale

The aim of the project is to utilise technology supported learning to enhance students' learning in order to enable them to confidently care for certain groups of patients that they will come into contact with both on their practical placements and throughout their career. A selection of video clips have been produced simulating real life situations that the students can access via the Wolverhampton On Line Learning Framework.(WOLF). The video clips demonstrate both appropriate and inappropriate ways to communicate with patients in various situations. There is also a combination of both audio tape and written text accompanying the clips to further enhance the students' knowledge on the topics with appropriate references for further reading. At the end of the programme there is information on how the content integrates with the students portfolio and practice placement outcomes.

A workbook has also been produced explaining to the students how to log onto the appropriate site and access the video clips. It is hoped that they will revisit the clips in their study time to allow them to continually review the content and deepen their learning and understanding of how to cope when faced with these situations on their placements. It is also hoped that their confidence will develop in these areas.

In terms of quality and relevance, information technology can be used to support and deliver new forms of teaching and learning, which can contribute to developing more flexible education to suit a wide range of student ability in pre registration nursing programmes [Peach 1999].

A key issue in the School of Health is that nursing is practical by its nature. Technology Supported Learning [TSL] allows students the opportunity to view online role play situations that simulate real life situations such as communicating with a child, an aggressive patient, a person with learning disabilities and breaking bad news to both patients and their relatives.

The clips are to be used with pre-registration nursing students in year one, term one of their three year programme to enhance and complement the content of the module Communication and Customer Care. The outcome will be to prepare students to deal

with these situations prior to their practical placements. Studies have shown that technology in these instances has helped students adopt deeper approaches and learn because they feel less inhibited than if they had to participate in role play in front of a large class [Olaniran, Savage and Sorenson 1996, Freeman and Capper 1997].

The present delivery of the module could be considered to be teacher centred learning. The structure of the content is unlikely to suit all levels of pre knowledge and different learning styles of all individual students and the problem becomes greater with large classes [Laurillard 1993].

Problems associated with large groups from diverse backgrounds are particularly relevant in the School of Health. Many will not have English as their first language. Technology Supported Learning has been found to benefit these types of students as well as those who cannot always attend face to face lectures and those who are visual, rather than auditory learners.

Students have also expressed concern about their perceived preparation for practical placements. Educators have debated whether practical experiences should be taught only in the real work situation or whether it should simulate the real situation so that students can test their learning without fear of endangering the patients, or their own, well being [Neary 1997].

From a professional relevance perspective, nursing students need to learn how to make clinical judgements of the patients' needs. Simulation is one method that facilitates competency and goes beyond skills training. Students cannot care for patients by simply having knowledge and skills; they must learn to apply those skills. Simulations may help these learning needs to be met. [Neary 1997].

As well as enhancing the student learning on this module the scenarios would also help students if they do not get the chance to experience similar situations in practice - they could explore situations via the simulations, thus promoting flexibility in approaches in meeting learning outcomes. Indeed learning theory suggests that such contextualisation would aid meaningful learning and allow participants to draw on their experiences [Knowles 1990, Kolb 1984].

The video clips are intentionally short – lasting between 2 to 3 minutes. This introduces the student to a 'flavour' of realistic situations and how to cope. MacKenzie and Staley [2000] state that when students see the relevance and can make the connections between theory and 'the real world', the level of interest improves dramatically.

The Innovation

The idea developed from a passing thought that it might be a good idea, following a WOLF training day attended at New Cross Hospital site, Wolverhampton, in December 2000, where it was stated that short video clips could be run on the programme.

From one small idea the project team finally grew to 56 members who all contributed invaluably. Within the given constraints of time and money for the project the first task was to decide on which topics to produce video clips. It was thought best to ask the students themselves and, repeatedly bereavement and aggression came top of the list. The team also hoped to produce clips relevant to all four branches of nursing. To completely realise this some clips need to be produced for the Mental Health branch – perhaps another project for the future.

The idea of showing both appropriate and inappropriate strategies was to give the student some comparison and, by making the inappropriate clips obviously absurd, it is hoped that the students will remember that when on placement and wish to follow the more appropriate strategy. It should be stated that all of the inappropriate clips, unfortunately, are based on true- life situations that people involved in the project could remember from practice.

One of the first tasks was to find willing 'actors' and write scripts. None of the clips could have been produced without the co-operation and good will of a vast amount of colleagues. A total of 18 three minute clips have been produced which included many colleagues from the School of Health, members of staff at the local hospice, a Learning Disability Advocacy group and the project leader's son. The remainder of the production team included a video producer and editor, a freelance sound engineer, two professional make up artists from The Royal Shakespeare Company and 6 students from the media department.

Advice was sought from the copyright department within the University and appropriate paperwork produced to cover the making of the videos.

The audio-tape information on the programme was recorded by a qualified hypnotherapist and transferred onto the computer by the courseware technician. All of the video clips were transferred to the WOLF programme by the courseware technician.

The Outcomes

The end product resulted in the production of 18 high quality video clips to use within the module.

This is the first multimedia WOLF topic that the Courseware Development Unit has been engaged in. While no problems were experienced when the first set of high quality clips were put onto the WOLF server and run in a 'Windows Media Player' from the WOLF interface, it was agreed that trials should be run at the different Centres. This was to ensure that the different bandwidths available could cope with streaming video, particularly if a number of students were logged on a one time.

A further issue was the viewing of streaming video, through WOLF, using dial up modems, i.e, studying at home or off site.

Problems were immediately encountered and it became apparent that the high quality files could only be viewed at limited Centres. Viewing using a dial up modem was also impossible.

To ensure that the clips could be viewable at all locations the clips were re-compressed by the IT services in both 100k and 56k sizes. The resulting lack of quality was accepted.

Despite this, the clips still cannot be accessed on students PC's and the matter is being investigated by the IT services.

The incorporation of sound onto the WOLF server did not present any problems.

Benefits

The production of the video clips now offers the lecturer an alternative mode of delivery of this session content and allows the students to observe simulated real life scenarios. The benefit being that the students may feel more confident in coping with these situations when they encounter them on their clinical placements.

Evaluation

The video clips were shown to the April 2002 intake of students across all hospital sites of the School of Health.

A total of 282 students viewed the clips on three hospital sites. 237 students named the video clips as one of the three most satisfactory things about the module. Comments included:

"The video clips were a good method of teaching"

"The video clips were excellent."

"I don't feel so worried now about breaking bad news thanks to the videos"

There were also a number of comments indicating that the students liked being able to access the information on WOLF and the ability to revisit session content.

Future developments

As with any innovation there is always room for improvement. Now it is known that the videos are running successfully on the WOLF programme and the student evaluations show they feel they are of benefit to them, self- assessment tasks are to be developed and edited into the appropriate place amongst the clips.

Additional text and audio clips could also be developed to broaden the information contained on the programme associated with the different topics covered.

There is another innovation project 2002-2003 producing clips to aid the students in some of the practical skills of nursing.

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