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Using the WWW to teach undergraduate nurses clinical communication

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Summary On-line learning is increasingly being used in nursing education. Nevertheless, there is still insufficient evidence to demonstrate: whether students respond positively when this form of learning is used to teach relatively practical or clinical subjects; whether it is effective; and whether it is fair to students with less access to, or familiarity with, computers and the internet. In 2003, an on-line Unit on clinical communication was developed for Australian undergraduate nurses in partnership between an Australian School of Nursing and the a Department of Clinical Psychology.

Students were overwhelmingly positive in their evaluation of the Unit although some regretted the lack of face-to-face contact with tutors and peers. The best aspects of the Unit included the content and structure being perceived as interesting, fun and informative, the relevance of the material for them as nurses, flexibility to work independently, promotion of critical thinking and gaining an understanding of client issues. Neither their evaluation nor their final grades were related to students' age or whether they preferred on-line or traditional learning. Students who had readily available computer access, however, had better final grades. Also, students' grades were correlated with how often they accessed the Unit.

Background

Web-based learning courses have proliferated in recent years (Willis and Stommel, 2002). While

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many studies (Cravener, 1999; Billings et al., 2001) have evaluated outcomes, very few rigorous and systematic studies have been undertaken (Billings, 2000; Web-based education Commission, 2000; Willis and Stommel, 2002; Buckley, 2003).

Approaches to Web-based learning vary. Some courses are delivered totally online in a distance-learning format while others include varying levels of face-to-face contact with lecturers and other students. As McKimm et al. (2003, p. 870) have found, most are a mixture of both Web-based resources, links, communication tools and self-assessment activities, together with varying amounts of face-to-face teaching and support.

Some authors describe Web-based courses as 'revolutionary' (Lockwood and Gooley, 2001), 'transformational' (G.Salmon, 2000) or the 'mode of the future' (Ryan et al., 2000), while others highlight some of their potential disadvantages — technological difficulties, the need for lecturer and student support, computer crashes, lost unsaved work and cost of instructional design (Schultz and Felter, 1996; Mills et al., 2001; Frith and Kee, 2003).

Issues surrounding Web-based learning can be grouped under the five main areas, viz, equitable and reliable computer access, computer literacy, asynchronous written communication, convenience and flexibility, and student satisfaction (Billings, 2000).

Equitable and reliable computer access

Lack of Internet access at home, work or on campus can be a barrier for students in Web-based courses (Thiele et al., 1999; Thurmond, 2003) as can the lack of adequate and reliable hardware and software (White et al., 2003). However, it is unclear if students who have ready access to computers at home and at work or on campus are at an advantage compared to students who are restricted to accessing computers on campus only.

Computer literacy

While studying online reportedly increases student confidence with computers, and exposes students to skills and opportunities that they would not have had in the classroom (Leasure et al., 2000, p. 149), some computer literacy is assumed to access course material on the Web, without which students are at a disadvantage (Leasure et al., 2000,p. 152) .

Asynchronous written communication

In many Web-based courses each student contributes to discussions at a time that is convenient to them (i.e. when they are online) and these contributions are linked in a 'threaded discussion' (Youngblood et al., 2001, p. 266) . Such 'asynchronous' communication differs greatly from face-to-face communication and perhaps one of the most significant differences is that all students have a voice and no student can dominate the conversation (Swan, 2001, p. 310) . But it is still not clear if this positive attribute of online learning obviates the need for face-to-face contact between students and teaching staff.

Convenience and flexibility

Web-based learning can be undertaken at a time and place suitable to the student, thus negating the need to travel to a specific place (Thurmond, 2003, p. 237). This makes it more appealing and more convenient to students who have work and family commitments, as well as to those who would otherwise have had to travel significant distances to attend face-to-face classes (Billings et al., 2001, p. 46). But do these assertions hold true where students have to attend campus for their other face-to-face studies while completing one Unit entirely on line?

Student satisfaction

While learning outcomes, especially student results, have been found to be similar between those students undertaking face-to-face courses and those in Web-based courses (Leasure et al., 2000; Woo and Kimmick, 2000; Yucha and Princen, 2000; Buckley, 2003; Bata-Jones and Avery, 2004), studies on student satisfaction have produced variable results. Buckley (2003) reported high satisfaction for the web-enhanced format of a nutrition course, as did Bata-Jones and Avery (2004) for students undertaking a Web-based pharmacology Unit, whereas Yucha and Princen (2000) reported negative feedback from students undertaking a web-based pathophysiology Unit. In the case of teaching purely clinical or patient-centred subjects, such as communication, there is little information available on student satisfaction.

Purpose of the evaluation

While a lack of Internet experience has been problematic for nursing students (Miller et al., 1997; Bond, 2003) it is important to examine whether a carefully designed, user-friendly online course, with appropriate technical support and backup, would lead to similar difficulties for students.