How to achieve quality in practice-oriented education in an e-learning context

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Abstract

Dalarna University (HDa) has approximately 400 registered students in the nursing programme and a total of more than 18000 students. The geographic location has accelerated the development and improvement of web-based education and next generation learning (NGL). More than 60 % of the students study online, and the university strategy is driven by three important goals: improved interaction between teachers and students, a superior and user-friendly technical environment in which pedagogical ideas are the focus and the stimulation of students to be more focused and responsible for their learning activities and outcomes. The nursing programme presents a range of learning activities, such as theoretical activities, technical skills, interactions and close relations between teachers, students and patients. Since 2009, we have practised “blended learning”, which refers to learning activities that occur both on campus and through e-learning, depending on the learning goals of courses. In this paper, we share our experiences from years of e-learning education, which has created new possibilities for students to be tutored and educated using innovative technical methods. Our challenge is to assure quality and improve the efficiency and effectiveness of e-learning in a curriculum with a large clinical practice portion. The next phase of our e-learning development will involve a benchmarking process that will enable evaluations of the quality of our nursing programme according to the NGL context.

Keywords: nursing education, e-learning, benchmarking
Introduction

Traditional nursing programmes have been devoted to campus education with only small elements of e-learning education (Pfefferle, Van den Stock et al. 2010). This system must change because today’s higher education requires new methods to meet challenges in the education sector and in society (Högskoleverket 1999; Ossiannilsson and Creelman 2012). The population of students enrolled in higher education is growing, and there is greater diversity in the student population in terms of ethnicity, age, social class, study purposes and living circumstances (Högskoleverket 1999). Student mobility has increased, and students require more personalised and flexible methods of learning. In addition, many universities are decentralised and must collaborate with larger universities (Ossiannilsson and Creelman 2012). The changing labour market places new demands in terms of employment skills. Today, society and the labour market demand people who can communicate and manage information, and these needs also apply to the healthcare sector (Socialstyrelsen, 2010). These changes have led to the recent introduction of e-learning to nursing programmes in Sweden. The nursing schools have defined e-learning education in various ways, from merely the use of email and videoconferences in a traditional “face-to-face” educational system to “blended learning”, which combines the two approaches (i.e., campus learning or e-learning, depending on the learning goals of a course).

Dalarna University has long maintained a profile as an institution for “next generation learning” (NGL) (Högskolan Dalarna, 2012), with an investment in e-learning technologies and pedagogy to educate the next generation of students. For individual institutions at the university, the venture has thus far primarily concerned the deployment of new technologies, such as learning platform systems and other technology support. This step has been crucial for development. However, the next step for the nursing programme (with 400 registered nurses) is to fully integrate the idea behind e-learning (enhancing diversity and quality in learning) into the various programmes and courses. The goal is to meet the learning needs of students and boost personalisation with increased participation and responsibility for the learning outcomes of students. However, certain challenges are connected to the introduction of e-learning, such as juridical, pedagogical and competences as well as both technical and educational skills. Another challenge is that the nursing programme requires a large portion of clinical work and professional-oriented experience; thus, efforts to implement e-learning must consider these factors. These objectives indicate that we must systematically evaluate the quality of our e-learning education according to the content of courses, pedagogical skills and the manner in which students develop professional identities.

In this paper, we share our experiences from years of e-learning education, which has created new possibilities for students to be tutored and educated using innovative technical methods. In addition, we identify future challenges and strategies for maintaining and safeguarding the quality of this education.

Background and context

The nursing programme at Dalarna University has been utilising online distance learning (in which student and teachers are separated by distance, time or space and supported by information technology) for approximately 10 years, with support from the university and its NGL centre. Initially, the programme began with smaller study groups in the county/province, and it was possible to register on the programme as either a regular “face-to-face” campus or an e-learning student and to alternate options between semesters. We have observed positive and negative experiences in both
“solutions”. The students who registered as e-learning students were interested in campus-based activities, and vice versa. In addition, teachers tend to prefer one system over the other, and the unease that certain teachers feel with regard to the distance programme can complicate and prevent development activities. We also experienced administration problems with two alternatives, for example, when the students had longer leaves of absence (e.g., sick leaves, pregnancy, military missions), which resulted in a mismatch concerning re-registration. The students who returned to studying in the “wrong” type of programme were required to either wait an additional semester or transfer to the other type of programme. In addition, some students in the campus-based programme wished to have access to the same instructional materials as the distance students, such as recorded lectures, e-learning meetings and seminars. In contrast, some campus-based students never became familiar with the digital equipment (e.g., webcam, web portal) that would have been valuable to them.

In 2009, we decided to allow only e-learning registrations, which have led to a new system. This change has facilitated our efforts and achievements concerning the development of the programme and the e-learning approach. The goal is to use all types of techniques and learning activities in every course, depending on the learning goals of single tasks and the type of course, to fulfil the specific needs of both teachers and students.

Our focus has been rather unique among nursing programmes in Sweden. Until recently, education in nursing (nationally and internationally) has been designed in a traditional manner; that is, students attend classes and acquire information, and their knowledge is assessed by examinations. This education has tended to focus on producing material and lessons rather than on the students and the differences among their capabilities, learning skills and life situations. We believe that e-learning provides a means of achieving high-quality education and creating an environment that enables knowledge acquisition. The e-learning method both disseminates information and assists students in becoming empowered individuals (Forman, Nyatanga et al. 2002; Adams 2003).

Nursing education presents a range of learning activities, such as theoretical activities and clinical skills practice. To meet the demands that are required for safe and effective care, nurses must be able to integrate theoretical knowledge with clinical practice (Polit and Beck 2008). This integration should include the ability to use research in response to changing clinical environments and the changing needs of patients (Forsman, Rudman et al. 2010). In addition, student practice must include reflections concerning ethical issues and human relationships. This requirement increases the need for real-time student-student, student-teacher and student-patient interactions to meet the programme/course goals and allow the students to develop professional identities as nurses. Dalarna University has a special ward at the hospital for teaching and practising clinical skills.

Because nursing education results in the licensing of professionals, many laws and regulations must be considered (Socialstyrelsen, 2005), which, in addition to the large clinical portion of this type of education, may have traditionally prevented many nursing schools from fully implementing e-learning. We believe that the use of modern learning approaches prepares students for the healthcare system by developing, for example, their information technology (IT) skills.
**NGL at Dalarna University**

The geographic location of Dalarna University has accelerated the development and improvement of e-learning education. Approximately 65% of the students at the university are studying in an e-learning environment, and the university strategy is driven by three important principles:

- improved interaction between teachers and students
- a superior and user-friendly technical environment in which pedagogical ideas are the focus
- the stimulation of students to become more focused and responsible for their learning activities and outcomes

The university has been successful in adopting new technologies and strategies for e-learning because the university has been required to find new and innovative ways of reaching students and collaborating with colleagues at other universities. Because of the width of Dalarna County (approximately 500 km from end to end), many of our students must travel long distances to acquire their education. By seeking new learning methods, such as e-learning and distance learning, Dalarna University discovered a great opportunity to attract students from the county and the entire country as well as from all over the world. The e-learning efforts have contributed to the recognition of the university as a well-known e-learning university on both the national and international levels and have facilitated regional development by offering courses and programmes to students despite distances.

The NGL centre has systematically worked to implement and develop new techniques and e-learning pedagogy. The vision of NGL is that learning is based on collaboration and should be created from the perspectives of individual students, regardless of their learning styles, life situations and reasons for studying. The research section of the NGL programme consists of numerous activities that are focused on e-learning and technology-mediated knowledge processes (Högskolan Dalarna, 2012).

**Healthcare and the need for e-learning**

Rapid changes in the healthcare system require new and extensive competencies for nurses. Nurses must be competent in handling technologies to improve patient outcomes (Rigby, Wilson et al. 2012). Healthcare is a highly technical sector in both the treatment and monitoring of patient health statuses (Rigby, Wilson et al. 2012). For example, today, it is necessary to be able to access information in evidence-based databases and to use innovative communication technology, such as asynchronous discussion boards and professional blogs, to maintain clinical knowledge (Rigby, Wilson et al. 2012).

In addition, lifelong learning is currently viewed as essential to maintaining professional competency (Forman, Nyatanga et al. 2002; Rigby, Wilson et al. 2012). The majority of the workforce have families and work shifts. Thus, the demand for flexible, innovative access to continuing education has increased. Institutions must support learning for all students rather than merely supporting the learning of individuals who can be enrolled in a campus degree programme (Ossiannilsson and Creelman 2012). E-learning is viewed as an opportunity for students to enhance their learning and to develop the essential IT skills that are necessary for self-directed learning (Rigby, Wilson et al. 2012).
WHO (World Health Organisation) has emphasised that the use of a digital approach can enhance the likelihood of attaining adequate, equal and accessible health for all members of society (WHO 2012). WHO uses the term e-health to refer to IT solutions that can be used for treatment, research and education. The EU also uses the concept of e-health to refer to IT that is used for improvements in the health of both individuals and society (European Commission, 2012).

In sum, we possess significant experience in distance/e-learning education and have thus become strong and advanced in our use of this learning approach. The university has a progressive e-learning centre. However, after years of e-learning education, we now feel that it is appropriate to improve and fully integrate e-learning into the nursing programme. Through grants from the NGL centre, we will benchmark our e-learning progress according to the EADTU (European Association of Distance Teaching Universities) standards (Williams and Rotheram 2010). The aim is to develop the education programme to become a leading e-learning institution in Sweden. We consider benchmarking to involve more than simply comparing the nursing programme with the EADTU norms or standards. We will use benchmarking as a tool in a systematic method of identifying gaps in our learning performance and as a guide for making changes to ensure high-quality education. The results from the benchmarking can be used to strengthen our processes to achieve a quality nursing programme and to contribute to encouraging the staff to use a continuous learning approach. In addition, the administrators and the NGL centre can use these data to design technology support for both students and staff.

Challenges
Sceptical attitudes concerning the full adoption of an e-learning approach in a programme such as nursing remain. Some sceptics have claimed that e-learning will dilute the academic rigor. It can be a challenge to convince the staff to use a new system of education. Our experience practising e-learning is lengthy, and the use of email and platforms is self-evident for our staff; however, the path from that level to the design of education based on the e-learning concept continues to be lengthy. In many situations, the traditional “active teacher–passive students” model is still employed with the assistance of e-learning techniques. The challenge will be to replace this traditional model with inclusive and participation-based learning. In addition, we must involve the entire institution to consciously shift from teaching to learning and to focus on student perspectives. The clinical training centre must also shift to an e-learning approach in a more advanced manner, for example, by using published and self-directed demonstrations on the internet and video-recording clinical practice situations.

Strategies
We have begun our journey towards the provision of high-quality e-learning nursing education. However, we will continue to encounter certain challenges in the future. The major challenge is to assure quality and improve the efficiency and effectiveness of e-learning in a practice-oriented nursing curriculum. We must develop and learn how to use new pedagogical methods and ideas to support the students in practising their clinical skills. In addition, we must incorporate the e-learning approach into the entire nursing programme and allow the learning goals to guide the pedagogical methods and technical support. The university’s e-learning goals (i.e., improved interaction between teachers and students, a superior and user-friendly technical environment in which pedagogical ideas are in focus and the stimulation of students to become more focused and responsible for their learning activities and outcomes) must be fully integrated into the nursing programme.
The next phase of our e-learning development will consist of the benchmarking process, which will provide an evaluation of the quality of our nursing programme in the NGL context. We have performed an initial rapid scan to demonstrate our existing knowledge. High scores were obtained for the student platform of receiving information, communication with teachers and technical support, including overall strategies and administration. However, areas that we must develop include the integration of e-learning into our courses to permit dialogue among students and teachers, the provision of personalised education and the encouragement of responsibility and participation among students and staff in e-learning education.

To achieve our goals of providing high-quality e-learning education, we must articulate and develop the following:

- the vision of the institution in relation to e-learning
- the quality improvement cycle (e.g., by benchmarking)
- the rights of students to design their own university
- assessment methods that enable students to design their own education using, for example, e-learning portfolios
- innovative methods of using e-learning in clinical practice
- a context that promotes the consideration of student perspectives

**Conclusions**

This paper explores the new challenges that are associated with nursing education and the adoption of an e-learning educational programme. These challenges extend beyond technical implementations to encompass the design and development of an educational system that is focused on learning rather than passively teaching students. The goal is to create an e-learning educational programme that combines an electronic approach to delivering information with important principles, such as student activities, participation and personalised learning. In addition, we want to create a learning milieu that promotes independence, allows flexible work hours, enables students to create their “own university” and provides them with opportunities to practise their computer and digital skills.
References


