

Advantages and Limitations of E-Learning in Master's Level Healthcare Education: A Reflective Discussion Paper

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Abstract

The current paper is a reflective discussion report that describes the advantages and limitations of online teaching and learning at master's level healthcare education from the teachers' point of view. The aim is to open dialogue between nursing educators and healthcare providers on how exclusively online education can ensure the development of healthcare professionals who master the requirements of today's working life and contribute to innovations in healthcare.

This paper addresses specifically how to strengthen master students' interprofessional communication skills and improve their multicultural competence by developing a well-designed assignment in e-Learning environment. Perceptions and views are based on seven years of experience on online education in cooperation with two educators from different countries.

Keywords: e-Learning; Online learning; Online teaching; Master's level education; Master's degree; Healthcare professional; Interprofessional skills; Multicultural competence

Introduction

Higher education institutions should ensure the development of professionals who master the requirements of today's working world, contribute innovations and remain in the labour market, especially in the healthcare sector, which is suffering from a shortage of skilled workers [1]. In addition, healthcare systems urgently need new innovations to increase productivity and improve competitiveness in a global economy. Master's students of healthcare are at the forefront of the rapidly changing healthcare system, filling numerous roles in organizations where they are expected to provide high-quality and cost-effective care. They are entering an ever more complex world of practice. After graduation, they contribute to quality improvement in the care for their patients and patients' family members. They have to translate state of the art knowledge and research evidence into practice. In order to become leaders in the field and the spearheads of development masters' students themselves have to become more proactive [2-6]. Despite these demands, traditional pedagogy has created methods in which healthcare professionals in various master's programs operate in isolation from each other [7]. Although online education in healthcare context has been studied a lot [8,9], transition from face-to-face teaching to e-Learning needs a paradigm shift. Particularly the educators of adult students will need to adjust their way of thinking to reap the benefits of modern e-Learning methods. Hence, the future of e-Learning depends at least partly on how well-designed and interactive online courses are developed by teachers. Educators are challenged to continually evaluate the changing learning needs of healthcare professionals who are studying for their master's degree.

It is well known that most of the master's students in the field of healthcare are working while studying. Therefore, e-Learning provides opportunities for adult students who have job commitments, family, or other situations that limit travel to the university campus. In fact, there has been an increase of online courses in healthcare education over the past decade [10,11]. In particular, online education aimed at healthcare professionals who are concentrating on both work and studying have been developed, but not much discussion on teachers' experiences has been recently raised.

We have conducted e-Learning courses for master's students in healthcare fields once a year since 2010. Altogether, 158 master's students have enrolled in an exclusively online, obligatory Professional Ethics course. Half of the students were nurses studying for their Advanced Practice Nursing master's degree. The other half represented professions such as midwifery, physiotherapy, dental care, and skin therapy; they were students from the Master Integrated Care Design program. Student-participants have come from The Netherlands and Finland, studying at universities of applied sciences. The Finnish University of Applied Sciences has provided a learning management system, the digital platform that serves as the "virtual classroom" to facilitate online course activity. The aim of this discussion paper is to stimulate debate and critical thinking among nursing educators and healthcare providers on how exclusively online education with the designed assignments can ensure the development of professionals who master the requirements of today's working life and contribute to innovations in healthcare. This paper is part of a curriculum evaluation process where we specifically focus on the advantages and limitations of e-Learning at the master's level with an interprofessional and international group of adult learners. The views presented here are based on seven years' experience in cooperation with two teachers from different countries.

Interprofessional Communication Skills

The focus in healthcare has shifted towards a more patient-centeredness approach, using interprofessional collaboration to achieve optimal patient outcomes [7]. Therefore, professionals in different settings of healthcare are increasingly working together in multidisciplinary community-teams. Despite this, different professions have different professional standards, and there is often conflict about what constitutes good care [12]. As Engel and Prentice [13] note, even when every member of a multidisciplinary team might agree with the central notion of patient centeredness, which calls back to an ethical narrative that is created by both the professional and the patient, competition arises because each individual on the interprofessional team brings different viewpoints that influence the co-creation of this narrative. According to Banks [14] interprofessional cooperation calls for an approach that takes into account the complexity, contradictions, multiple accountabilities and particularities of specific situations. Particularly master's students, who are being educated to become developers of innovations and leaders in their professions, must learn to see many different professional perspectives and to understand why there are different views on what might be good for a patient. A master's level education requires that students learn to recognize and respect different perspectives of their fellow-colleagues for better understanding of the practice in which they operate.

The rationale for interprofessional education is simple: learning together enhances future working together [15]. It occurs when students of different healthcare professions engage in learning with, from and about each other to improve collaboration and the delivery of care. Working together does not always require face-to-face settings, and

e-Learning can foster positive interaction among different professions and improve positive attitudes towards patients and other professionals. As Lindh and colleagues [8] have shown supportive attitude toward family involvement in healthcare can be learned by using online teaching methods. One of the challenges of our online courses was fostering the communication between the Finnish and Dutch master students. From our point of view the crucial point is that teachers who are designing assignments for online courses need to know which types of assignments can truly enhance interprofessional collaboration in an e-Learning environment between students who have not met each other and come from different learning cultures and different countries with various expectations and experiences.

We developed an assignment where students have to describe and discuss their own ethical work-dilemmas within groups of 4-7 participants. Each group included Finnish and Dutch students. Students were given the following description of ethical dilemma: "Ethical problems and dilemmas arise when there is a conflict between principles or values in healthcare. They can arise in all situations: in the lives of patients, among healthcare staff, or between staff and students. Families and relatives have a very important role in patient care so conflicts can also occur between them, staff and students". The aim of this online group discussion was to strengthen students' skills in identifying and reflecting on ethical dilemmas experienced in everyday work as well as to guide them in critical analysis of ethical issues. In addition, the aim was to develop students' interprofessional communication skills to improve their ability to work with colleagues and allied health professionals. The discussion was carried out in the structured, closed and secure online forum provided by the Finnish partner. The Dutch students logged into the online system to study the same content and assignments as the Finnish students. In table 1 detailed instructions for assignment are described. Moreover, students were advised to read through eight questions described in the online environment that supported deeper reflection and critical thinking about the chosen dilemma. In the end of the discussion students were asked to describe the most important new perspective they got from the discussion. The questions and examples of new perspectives given by the students are listed in table 2.

These instructions and questions (Table 1 and 2) were intended to promote critical thinking, to stimulate the development of new ideas, and to open multiple perspectives on problematic situations at work. As teachers, we also encouraged students to incorporate results of another assignment from the online course into the group discussion. In that assignment, students chose a publication on an ethical question in their own profession and wrote a review about it.

Students were asked to incorporate relevant thoughts and new insights from this previous assignment into the group discussion. Based on our experience integrating these two assignments was a good opportunity to share knowledge between professionals. Another reason to give detailed and exact guidelines for the assignment was based on the study results of Bourdeaux and Schoenack in 2016 [16]. They found out that the adult students' expectations of online instructions fell into clarity, respect, and intentional design from teachers. They highlighted that higher education teachers and institutions need to focus more on online teachers' skills and ability to design an effective online class and to have students interact more with one another during the course [16].

Communication with strangers about ethical dilemmas online may be challenging because there is always a risk of misunderstandings between people with different backgrounds. To prevent this and to learn from the above-mentioned assignments, students were given guidelines on how to conduct a meaningful dialogue in e-Learning environment. They were asked to follow the principals described below:

- Be polite: We have students with different backgrounds. Something that is easy for you may be challenging for someone else. Let's build an encouraging community.
- Be specific: Choose a descriptive title, and provide a relevant amount of information about the subject.
- Provide reasons: When responding to another student's or teacher's question or comment, we encourage you to provide a clear answer to the question as well as the reason(s) that support your response. When you respond to another person's post it is helpful to focus on the content of the post, try to understand why the person reasons in a particular way, clearly articulate with which part you agree or disagree and why. Never attack the person.
- Write clearly: We know that English is a second language for you but correct grammar and spelling will help others to understand your views and responds.

Obviously, communication is more than just exchanging information. Successful online learning relies also in power relation in language use. According to Loke, Colquhoun and Lee [17] nurses who are participating in online discussion with allied healthcare professionals need to be aware of the power-relations embedded in their language use. Loke et al. [17] discovered that in online discussion nurses' views would more likely to be accepted passively rather than to be contested or challenged by allied health colleagues. Therefore, dialogical reflection based on a more interactive style of learning in the approach to interprofessional learning was unlikely to occur [17]. In

Table 1: Instructions and guidelines for discussion assignment.

Instruction for Discussion on Ethical Dilemmas	Guidelines for Conducting Group Discussion Online
Step 1: To start the discussion, describe an ethical dilemma based on your own professional experiences. You can choose the one that you have already written in your presentation (assignment 1) or describe another dilemma. The dilemma could be small or big, and it is often a practical one by its nature.	Give only necessary information about the case, do not reveal any personal information about the persons involved or any details of the workplace.
Step 2: After every group member has described her/his dilemma, the whole group decides which dilemma to choose for further discussion. Make the decision quickly so you have time to reflect and discuss the chosen dilemma in the following weeks. Start to discuss, and exchange your views on the chosen dilemma.	Please remember to read the discussion guidelines before and during the ongoing discussion.
Step 3: Take enough time to be able to respond to each other and to think about what you hear and see from your colleagues. During the last week, each group-member must describe the most important new perspective she/he got from the discussion. Write it down on the platform to share it within the group.	Read through the eight questions which are obligatory to reflect while you are discussing the dilemma within your group. You should also refer to relevant literature when posting your comments. You can also refer links from documentaries, films and other media.

Table 2: Questions to support reflective discussion and examples of students' comments in the end of discussion.

Questions to Support Discussion	Comments on New Perspectives Expressed by the Students
1. Why is this a moral dilemma? What is the conflict?	
2. Whose interests are at stake in the dilemma-situation?	
3. Which values and ethical principles are important concerning the dilemma under discussion? Why?	"This assignment made me even more convinced that we always should see things in different perspectives before we form our opinions."
4. Did everyone involved see the situation or case as an ethical or moral dilemma, or did they think that it is, for example, solely a clinical problem? What is your opinion? Is it an ethical dilemma or something else?	"This conversation was an important lesson for me to understand of how complex and multi-level ethics dilemma can be!"
5. Were there professionals who have placed themselves in a position of authority and whose moral beliefs are black and white, more or less? Did they use this position to enforce their moral standards on other healthcare professionals? Who opened the discussion about the case? How did the other people response?	"Ethical discussion is an important part of our work and I noticed that it has been too long since I have really thought these ethical issues with profound insight."
6. Were there any healthcare professionals involved in the case who did not question the behaviour or the methods used by other members? These persons are called group players, and for them, the sense of belonging in the group is far more important than anything else. Are you a group player?	"My new perspective is not just separate information about ethics but it is the way of thinking nursing from ethical point of view, and how to improve myself to guide and care patients in their decision-making process."
7. Some professionals are convinced that they are right, and they do not consider feelings of their patients, patients' relatives or their colleagues. Do you agree? Does this apply to your dilemma?	"This debate has shown how challenging situations nurses encounter at work."
8. It is obvious that healthcare professionals sometimes disagree on their values and beliefs towards patients, patients' relatives, students, and other healthcare professionals or situations. The reasoning can vary from one situation to another. Is this the reason why the dilemma occurred in the first place? Were there different opinions among colleagues?	"By discussing a case I learned the value of seeing the case as an ethical dilemma." "I found myself giving more and more attention to my own ethical actions when I meet my patients. I have also taken different ethical points of view into account in conversations with my workmates. This has certainly been an interesting discussion."

the future, we need to focus more on this aspect of interprofessional learning.

In addition to power relation language, communication is also: understanding emotions and intentions behind the information. e-Learning is limited in that students cannot easily combine other sets of communicative skills such as nonverbal reactions, engaged listening or recognition of other students' emotions. For this reason, in the present online course, master degree students were advised to set up at least two real-time virtual meetings within the group during the discussion period. This task pulled them out of their comfort zones because it forced them to speak English about ethical concerns with foreigners via virtual meetings. For many students, it was the first time they did this. Yet these real-time-virtual meetings helped students to understand more deeply other participants' views about the topic discussed, and the group discussion assignment was considered useful by most of the students.

The teachers' role in the group discussion was to give appropriate literature recommendations, to suggest different perspectives for discussion and to guide participants according to the assignment instructions. In order not to bias students, we did not push the discussion in a particular direction and made only neutral comments. Although we have taught the course together several years now, we are still reformulating our instructor-role every time we start a new course. The benefits of having two teachers from different countries (one from Finland, the other from the Netherlands) with different professional backgrounds (one being a nurse educator and the other an ethicist) for students are that they receive various views and perspectives, even if these are sometimes opposite of each other.

Overall, Bressler and Persico [7] suggest that interprofessional education is one type of academic strategy that nursing educators can incorporate into educational curricula. On the other hand, it can also be applied to continuing education for teachers as we have realized in the present case. Therefore, our interprofessional communication skills

may have developed over the course of recent years of cooperation with each other and with the students.

Multicultural Competence

Knowledge in professional fields such as nursing and physiotherapy is not restricted to a specific country: exchange of ideas, theories and methods cross borders. Thus, international and multicultural competence has become an important issue in the competence-based curriculum of master's level healthcare education during recent years [18]. However, adult students who study while working have few opportunities to enhance their international competence in an authentic environment during their master's studies [19]. Online courses offer an opportunity to communicate with people from abroad, which in turn can cause stress to adult students. In this present online course, students participated from two different countries so they had to communicate in English which is not their mother tongue. Based on our experiences, master students' level of English vocabulary and ability to express themselves were not always at a sufficient level. The language barrier obviously was a limitation to effective communication with other health providers about complex topics. However, master's level students are trained to read and write in English. We have observed that some students take part voluntarily in an English course before the start of the Professional Ethics course, trying to improve their English skills in order to interact effectively with other students during the e-Learning course. The English courses are being provided by a number of adult education centers and open universities in both countries, Finland and the Netherlands. The above-mentioned organizations are usually subsidized by the government so the course fees are considerably low. Another option to practice English would be to include the English course as an optional study for the master degree program with no extra cost to the students. Some students use this option to prepare themselves for the online courses conducted in English.

The e-Learning method discussed here also offers a possibility to increase master students' abilities to work with people from different

cultures. These skills and knowledge can be applied in the orientation of new foreign employees or when mentoring foreign students in their training period. Many healthcare students use their exchange mobility period as practice. However, health professionals' competence in guiding multiculturally diverse students varies widely in European countries [20]. Nevertheless, international skills play a major role regarding the success of the learning experience. The guidance given by professionals in practice has a significant effect on the integration of foreign students into local working life and community. Professionals can assist students in their professional growth by supporting their skill development and strengthen their personal goals and commitments. This can lead to a willingness to stay and work in the country of study after graduation.

Online international courses may help professionals deliver quality care to foreign patients. In the near future, more internationally skilled workforce in healthcare is needed because, based on directives on Cross-Border Health Care [21], patients are entitled to receive treatment in another EU member state on the same basis that they would receive comparable treatment in their own country. This directive probably will increase the mobility of patients within European countries. Foreign professionals of healthcare working together, even just in an online course, may reduce prejudice and can promote a genuine appreciation of diversity. This is one of the reasons why multicultural competence in master's level education has been a key feature both in The Netherlands and in Finland.

Some Limitations

One limitation of the online course is that students and teachers do not meet each other face-to-face. Therefore, some pedagogical methods (e.g., interactive teaching and working with teachers as role-models) cannot be used and on the spot responses (e.g., when students have specific questions or when a problem arises within one of the groups) are impossible. This could be resolved by adding elements of blended learning and by organizing regular meetings with the local student-groups at their own universities.

Another limitation is that not all students are equally skilled in using e-technology. Highly educated professionals should be knowledgeable users of health information technology (e.g., patient portals, mobile applications) to ensure high-quality, efficient care. However, many healthcare providers remain uncertain about what health information technology means for their patients and their practice [22]. Hancock [23] states that an online discussion platform is not so simple for adult students who are new to learning online. We agree with Hancock; students must learn to navigate in a new, online environment which includes finding the assignments and course material, and responding to running discussions based on given guidelines. Nevertheless, exclusively online courses might be suitable to improve adult students' digital skills. We have observed our master students during the courses and discovered that some of them had quite poor digital skills at the start: they have never used any video call programs and they have limited ability to find relevant, evidence-based information online. On the other hand, there were also students who possessed more digital knowledge than the teachers and claimed the online learning environment was too limited. They introduced new programmes (e.g., Padlet, Wordcloud) during the course to make their online studies more effective and fluent.

We, as online teachers, view social networks such as Padlet, Facebook and Cloud storages as part of the digital world adult students live in and use them as an extension of the online course. Students can use digital applications, programs and techniques as a platform to do collaborative learning assignments and share study materials. New tools used by the students can provide an informal space that function as a social campus surrounding the online course [24]. These digital tools can also keep master students' up with technology in the workplaces while enhancing their IT skills at the same time.

Overall, the e-Learning environments must become more open to incorporate digital applications and social media tools. We observed that adult students are increasingly expecting to be allowed to try alternative tools in the online courses. Furthermore, educators wish to create some relatively customized online platform to meet the needs of their students. Despite these demands, technology simply provides a means to transfer ideas and content, but learning is and will always be a very human activity. Because our educational system has to prepare master students for work of the future, we have to adjust to new possibilities continually.

Conclusion

For students, the benefit of an online course is that it is completed in a short period of time, while the content and learning methods are comprehensive and versatile. Although e-Learning offers flexibility in terms of access to learning and study time, one should pay attention to the quality and efficacy of online courses offered at master's level. We ensured quality in two ways. First, we discussed the content with colleagues, nurses, as well as ethicists, both from Finland and Holland. The most discussed subjects among colleague educators and ethicists were students' level of critical thinking and their understanding of how they make ethical decisions and choices, both as an individual professional and as part of an interdisciplinary team. We, for example, modified the reflective discussion questions (Table 2) several times to help students to discern whether a problem at work they described has an ethical or moral component. Second, all students evaluate the course; the results of these evaluations lead to readjustments in the content and assignments of the course every year. For instance, students were not satisfied with the number of participants in discussion groups so we decreased it to deepen their level of reflection discussion about ethics at work. In addition, we have encouraged students to add more online source materials (e.g., e-books, e-journals, websites, blogs, videos) to the online discussion forum to share them with their participant-colleagues. This request was based on students' feedback on study materials.

The development of the educational case presented here has increased the degree of transparency and compatibility between two higher education institutions. In addition, ongoing cooperation with teachers enabled them to deepen their knowledge and share perspectives of online adult pedagogy and gain experience of how e-Learning courses can be effectively realized regularly. It is obvious, that the roles of the nursing educators change in digital learning environment and the participatory culture of online teaching demands new skills that challenge the existing pedagogy [25]. We have come to the conclusion that teachers' active online participation and engagement with students are critical factors to the success of online courses. Through self-reflection, online teachers can identify values and beliefs as educators and apply these criteria to their online strategies. This case here could be elaborated further, possibly in cooperation with teachers from universities of applied sciences in other countries so that this type of online course can be modified and developed for an increasing number of master's students around Europe.

A master's level education should enable healthcare professionals to expand their knowledge base and expertise in healthcare so that their practice exceeds those of professionals with a bachelor's degree. Therefore, it is important that teachers are enabled to place significant effort on online pedagogical methods, online teacher training, and particularly on development of each assignment given during online courses.

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