Résumé

Analyse critique de la formation infirmière en ligne : à la recherche d'un équilibre entre optimisme et prudence

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Le paysage de la formation infirmière s'est transformé sous l'impulsion d'une demande croissante de la part des étudiants à l'égard de cours en ligne, auquel s'ajoutent les directives vigoureuses des établissements concernant la prestation de cours par l'apprentissage distribué. Les auteures présentent un projet de recherche qualitative ancrée dans la philosophie herméneutique, dans le cadre duquel 30 étudiantes de premier cycle et des cycles supérieurs ont discuté de la dynamique des relations entre pairs et de son influence sur l'apprentissage en ligne. Parmi les conclusions, citons : les questions relatives au temps ; les exigences de la participation en ligne ; les expériences conflictuelles ; l'acquisition de compétences dans un environnement virtuel. Les auteures examinent des questions théoriques relatives aux études telles que l'instrumentalité et la tensionalité, faisant ressortir des perspectives optimistes quant à l'apprentissage en ligne, mais aussi des éléments qui incitent à la prudence. Les étudiants qui suivent des cours en ligne pourraient bénéficier d'une orientation en face à face ; on doit aussi privilégier le développement de communautés intellectuelles et sociales, un effectif de classe réduit et des occasions pour les apprenants d'entrer en relation les uns avec les autres.

Mots clés : formation infirmière, cours en ligne, apprentissage distribué, relations entre pairs, herméneutique

A Critical Analysis of Online Nursing Education: Balancing Optimistic and Cautionary Perspectives

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The landscape of nursing education has been transformed by increasing student demand for online programs coupled with strong institutional directives to deliver nursing courses through distributed learning. The authors present a qualitative research design informed by philosophical hermeneutics in which 30 undergraduate and graduate nursing students discuss their experiences of the influence of peer dynamics on online learning. The findings include issues related to time, demands of online participation, experiences of conflict, and the development of skills in the online environment. Theoretical matters of curriculum such as instrumentality and tensionality are examined, generating both optimistic and cautionary possibilities for online learning. Online nursing students could benefit from a period of face-to-face orientation with a focus on building intellectual and social communities, limited class size, and opportunities to connect learners.

Keywords: distance education, informatics, nursing education, technology

Over the past 5 years the landscape of nursing education has been transformed by increased student demand for online programs coupled with strong institutional directives to deliver nursing courses through distributed learning (Holtslander, Racine, Furniss, Burles, & Turner, 2012; Wickersham & McElhany, 2010). Multiple factors contribute to this institutional push towards the use of information communication technology (ICT) to deliver nursing and health-care education. Some scholars argue that distributed learning models and online learning are necessary for universities to maintain their competitive edge in the face of the exponential growth of distance education in recent years (Matheos & Archer, 2004; Schulte, 2010).

For some educators, technology is *the* way to educate students in the 21st century. Jacques Attali has suggested that "the impact of information technology (IT) will be even more radical than the harnessing of steam and electricity in the 19th century" (cited in Duderstadt, 2000, p. 236). The desire to satisfy a technologically savvy generation of students, the

need to provide learner-centred education, collaborative learning, and simulation experiences that may palliate for the decreased number of "real" clinical placements (Comer, 2005; Hillenburg et al., 2006; Nguyen, Zierler, & Nguyen, 2011; Parsh, 2010) are among the forces driving the implementation of e-learning in nursing (Salyers, Carter, Barrett, & Williams, 2010; Smith, Passmore, & Faught, 2009). Furthermore, the need to make higher education accessible to those residing outside of major urban centres is often cited in support of the development of e-learning programs in nursing (Gunga & Ricketts, 2008; Tempelhof, Garman, Langman, & Adams, 2009) and other health disciplines (Hillenburg et al., 2006; Tempelhof et al., 2009).

As early as 1989 Graves and Cocoran defined nursing informatics as a "combination of computer science, information science, and nursing science designed to assist in the management and processing of nursing data, information, and knowledge to support the practice of nursing and the delivery of nursing care" (Graves and Corcoran, 1989, p. 227). Here, we address informatics as programs and courses in nursing delivered through e-learning or ICT. The discussion draws on a qualitative study in which we interviewed graduates of two online nursing programs to gain an understanding of their experiences during their online education. Building on this study, we use the theoretical work of Hans Georg Gadamer (1998) and the eminent Canadian curriculum scholar Ted Aoki (Pinar & Irwin, 2005), as well as that of the nursing scholars Bevis and Watson (1989) and Patricia Benner (Benner, Sutphen, Leonard, & Day, 2010), to raise questions about both the utility and the challenges of technology as it aligns with nursing curriculum. After exploring some assumptions about technology and nursing education, we present a forecast for the future, generating both an optimistic view and a more cautionary assessment. The article ends with recommendations for nursing education and further research.

Clarification of Concepts

Before entering the core of the discussion, we should define some concepts arising from or re-labelled during the digital revolution. Ally (2004) points out that different terms have been used with reference to e-learning, noting that "e-learning, Internet learning, distributed learning, virtual learning, computer-assisted learning (CAL), Web-based learning and distance learning have been used somewhat interchangeably to refer to the use of Internet technology and of a computer to deliver education" (p. 4). In this article *e-learning* is interpreted as "the use of the Internet to access learning materials; to interact with the content, instructor, and other learners" (Ally, 2004, p. 5).

While some scholars have differentiated between the terms "distance education" and "distributed learning," others use them interchangeably. Matheos and Archer (2004), for example, note that distributed learning includes all of what had been traditionally referred to as distance education, most particularly asynchronous modes of delivery, but with the inclusion of on-campus formal learning activities. Similarly, Bates (2000) suggests that distributed learning combines many of the most advanced forms of distance learning technologies with aspects of traditional face-to-face education. Other scholars highlight the fact that distributed learning represents an instructional mode in which teachers, students, and content can be located in different places, allowing for teaching and learning to occur independently of time and setting (Saltzberg & Polyson, 1995). Teachers become facilitators of learning and students are required to become active participants in the learning process. The Web and computers become the medium through which learners and educators interact (Ally, 2004; Gunga & Ricketts, 2008).

One further concept used in this article, *digital revolution,* refers to the use of many ICT tools: podcasts, personal digital assistants (PDAs), smartphones (mobile learning, or m-learning), social networks (e.g., Facebook, Twitter), and CAL. These tools support e-learning whether delivered through distributed or onsite (face-to-face) models.

Assumptions of the Authors

There is no doubt that the digital revolution has impacted nursing education and will continue to do so. Though far from rejecting the opportunities offered by the digital revolution and distributed learning models, we challenge the assumption that educators and academic units should uncritically embrace technology as a dominant pedagogical approach to advance nursing education. We question this overarching assumption, that technology affords advancement or improvement, by examining the fit between nursing curriculum and technology. This article reveals, in a discussion of a research study, that, instead of unequivocally supporting or rejecting e-learning, educators must hold in tension the competing demands of curriculum and its mode of delivery. What follows is a presentation of the study, conducted by two of the authors, that informs this discussion.

The Study

Purpose

The research question — *How do peer dynamics influence student learning in an online environment?* — was addressed through a qualitative research design informed by philosophical hermeneutics (Gadamer, 1998). The

intention of a hermeneutic approach to inquiry is to generate new understandings, in this case about students' experiences of e-learning. The purpose of this work, as an interpretative inquiry, is neither to be conclusive nor to provide closure to a topic. Rather, the approach generates accounts that are interpreted alongside what is already known, using an iterative process. The interpretation can be used to challenge the assumptions that influence practice — in this case, teaching and learning online. As we discuss the approach and implementation of the research, we will address the sample (the participants), ethics review, and data generation and analysis. We will then present the findings and offer a discussion of the findings.

Participants

Participants were drawn from among graduates of two online programs at a school of nursing. Those eligible had graduated within the previous 2 years from the post-diploma bachelor of nursing program or within the previous 5 years from the master of nursing program. They were contacted by e-mail and invited to speak with the research assistant, who then arranged for the interview. A total of 30 graduates from the two programs took part in interviews either via telephone or face-to-face. The interviews, which varied from 30 to 90 minutes in duration, were audiorecorded, transcribed, and interpreted by the research team. Written informed consent to be interviewed and recorded was obtained from the nurses prior to their participation in the study.

Ethics Review

Approval was obtained from the University Ethical Review of Human Subjects Committee prior to the study. Ethical concerns that were addressed include written informed consent by participants in interviews and focus groups, confidentiality of the data (audiorecordings and transcriptions were locked in a filing cabinet), and the use of pseudonyms to conceal participants' identities. Considerable attention was given to the possibility of conflation of the dual role of teacher and researcher. To circumvent this possibility and to further ensure anonymity, we arranged for the interviews to be conducted only by team members who were not teaching in the graduate program. For similar reasons, the focus group facilitator was hired external to the research team and the graduate program. Interviewers presented participants with the idea of ongoing consent, whereby their continued consent would be sought throughout the process.

Data Generation

In keeping with the hermeneutic approach, data were generated through conversations to be interpreted by the research team. Conversations took

place in one-to-one unstructured interviews, in a focus group, and in researchers' reflections recorded in journals. Here, we use the word "conversation" to signify the co-construction of interactions in this generative process.

Interviews. During the interviews, the participants were invited to explore their experience of the influence of peer dynamics on online learning. The purpose of questioning in hermeneutic inquiry is to stimulate reflection and deeper exploration of the experience (McIntyre, 2003). It was anticipated that the interviewee would move beyond a description of the experience, to reflect on its meaning. In this way, space would be opened up during the interview for new understandings and interpretations of how peer dynamics influence student learning in an online environment. In the hermeneutic approach, each interview is unstructured, inasmuch as the interviewer remains open to whatever the participant might like to say about the topic under discussion. In our case, however, the interviews began with an explanation of our wish to understand how student learning is influenced by peer dynamics. For example, the interviewer might state, "The researchers are interested in the experience of online learning from the perspective of graduates of a program offered solely online. In particular, we are interested in hearing about how peer dynamics influenced your online learning experience."

Focus group. Eight people participated in a focus group, which was similarly audiorecorded, transcribed, and interpreted. The focus group participants had an opportunity to consider their thoughts in the context of the responses of others. This process is viewed as an extension of data collection rather than as a validation of the interview data (Patton, 2002).

Journals. The interviewers made field notes following each encounter with participants, and researchers used a reflexive journal to document observations and thoughts that arose during the research process (Kvale, 1996). The journaling continued throughout the interpretative process when all the researchers met as a group to review, discuss, write about, and interpret the texts of the research conversations.

Data Analysis

There is widespread acceptance of the idea that in hermeneutic research the analysis process begins with the first interview and continues through subsequent interviews, the team discussions, and the writing. Each instance is considered for what it contributes to our understanding of the experience as a whole. As ideas are shared, new understandings are generated and new possibilities open up for — in this particular case — how we understand the way in which the peer dynamic influences online learning, how we understand what students have to say on the topic, and how we understand ourselves as educators.

Hermeneutic inquiry is iterative; the metaphor of the hermeneutic circle is often used to describe the tracing and retracing of movement from part to whole: from what is being said in the interview, including the presuppositions of the researchers (the parts) to the multiple and new understandings being generated (the whole) (Gadamer, 1998). This movement also occurs during the interviews, with participants being encouraged to reflect on the thoughts, feelings, and responses that arise. In keeping with the interpretive process, the interview transcripts were revisited alongside the focus group transcripts.

Findings

The iterative process of hermeneutic data analysis results in interpretations that speak to the research conversations but are not intended, in an ontic sense, to represent them (Heidegger, 1953). Thus, in this study the interpretive findings generated understandings of the influence of peer dynamics on student learning without describing the experience. We will now discuss the topics that emerged and re-emerged throughout the interpretive process of engaging in the interviews, focus group, and researchers' journal notes.

It's About Time

Time was the topic that surfaced most often during the interviews. Many participants expressed an initial belief that online learning would provide them with more flexible access to education, in terms of time. The words of one participant describe the sentiments of many:

> *I was able to work around my full-time job and my child-raising and my other responsibilities, so that was a big part of the decision [to enrol in the online program].*

Participants explained that they had initially mistakenly conflated the convenience of access to online courses with a more manageable work-load. They found that developing the resilient peer relationships needed to support student learning required more commitment and more continuous effort in an online environment than it might in a face-to-face environment. Further, many participants assumed that their online studies could be added, without complication, to a full schedule of work, parenting, and personal commitments. Participants were challenged by the reality that students had different amounts of time available for course work, which influenced one's learning as part of a peer group. For example, participants reported that some of their classmates were not employed and could attend to their course work full-time whereas others might be working full-time and fitting the course work in where they

could. Some students had major family responsibilities whereas for others their studies were a clear priority. Although for the most part these situational differences were well understood by the students, when group assignments were due or when people did not come online when they were expected to, it became challenging for participants to maintain the good will needed and often conflicts arose. Additionally, participants spoke about different response times among classmates, which was problematic for many.

Participants reported a vast array of online behaviours by classmates, with some finding the time to come online every day and to respond promptly and others not responding even to direct requests for contact. The discussions about time included many positive comments about the development of participants' time-management skills over the duration of their online studies. Closely connected to the idea of time was the expressed ambiguity about the seemingly unending opportunities/expectations for online participation.

Demands of Online Participation

When comparing online and face-to-face classroom experiences, participants noted that in the latter the class schedule provided a structure to pace student participation. Although participants cited the flexibility of course access as a strength of asynchronous online studies, they also expressed a wish for boundaries or containment to participation. The absence of structure was particularly problematic in courses in which the whole of the course material was available to students at the beginning of the course. In this situation, when students were expected to engage in peer discussion yet could work at their own pace, meaningful engagement was challenged:

> I recall a couple of experiences where I was at a very different place [in the course material] than where the other students were at, and then dialogue online became actually quite meaningless, because it was just not in the right place at the right time.

This issue was expressed as a lack of continuity in peer engagement: "discontinuity . . . lack of a peer cohort . . . feeling isolated . . . left to my own devices." For this person, there was a "troubling lack of structure." It became very clear from the accounts that over-participation (moving ahead regardless of where the group was at) was as problematic as under-participation (where students would not come online in a timely manner, thus undermining the work of their classmates).

Participants expressed different ideas about the ideal amount of online interaction with their peers. They had different needs for contact with peers at various times in their courses and programs. Some spoke of the

online learning environment as isolating and lonely, wishing for more connection with classmates, while at the same time acknowledging that they had neither the desire nor the space in their lives for new social relationships. Participants expressed a simultaneous wish to better know their classmates personally and a sense of being overwhelmed by too many e-mail contacts with classmates. One participant expressed this situation as a "desire for connection . . . the space for community to develop . . . time for conversations to happen in the moment."

Experiences of Conflict

Frequently brought up in the interviews were instances of conflict between students, which influenced the peer dynamic and subsequent opportunities for learning. Many instances of conflict arose in response to different expectations of participation, while other — often more serious — conflicts resulted from differences in beliefs and values. A commonly identified source of conflict was the course requirement that students take part in online group work, particularly graded projects or assignments. While in a face-to-face classroom situation arrangements can easily be made to work in groups, these students faced what in their view were the underestimated difficulties of connecting electronically with peers across time zones and vast geographies. Participants said that the limitations of electronic media made it difficult for students to get to know one other, which sometimes led to misunderstandings. For example, one participant spoke of feeling very frustrated with a classmate because of her online communication style, which changed dramatically when the participant had the opportunity to meet this classmate in person.

Despite the difficulties caused by these conflicts during their course work, participants felt they had learned from them and in some cases could transfer the lessons learned to similar challenges in their professional practice. One woman commented that her online learning experience made her realize that she "could have an impact on my own learning environment." Initially she blamed faculty for "not directing or containing the conversations" in which conflict was brewing, but with time she saw herself as "an agent in changing some of the class dynamics" and eventually described herself as a mentor to other online learners.

Developing Skills in the Online Environment

Participants reported that some of the most challenging difficulties of peer communication were resolved as they developed skills relevant to online learning. Specifically, increased skills and confidence in online writing and group facilitation led to positive experiences within and across courses. Participants spoke of how their use of digital technology

to communicate with classmates improved to the point where they realized they had the ability to assist others with the technology, not only in the online learning environment but also in the workplace. What had begun as a major obstacle was now looked upon as developing skills that were becoming increasingly important in their lives.

A similar instance of skill development was online writing. Several distinct issues emerged in the discussions about online writing. Many participants spoke of feeling intimidated and vulnerable posting their ideas in writing due to uncertainty about who would have access to the posting, its apparent permanence, and how it would be interpreted by others. The visual display of their thoughts or ideas was experienced quite differently from an oral discussion in a face-to-face classroom setting. For some this vulnerability receded as the course progressed but for others it did not. As the course work advanced, participants experienced a shift; they felt privileged to be able to see the writing of others and came to appreciate how their own scholarship was influenced by how others expressed their perspectives on the same topic. Online postings presented opportunities to see classmates' writing, which had not been a feature of the participants' face-to-face classroom learning. They were able to see how their peers developed their ideas and repeatedly stated how impressed they were by this.

Several participants gave examples of how their writing ability continued to serve them in their professional practice and expressed appreciation for the opportunity to develop this skill. For some, the ability to express themselves in writing and the technological proficiency they developed during the course opened up new opportunities in the workplace, allowing them to take a leadership position and speak out on practice issues:

> When I started doing my academic courses, writing papers and getting really positive feedback, that kind of spurred me on to think deeper and write more . . . It was through the writing that I started to find my voice. My confidence was increasing as a result of the feedback I was getting on my writing, and then that actually changed my practice — I think it changed my whole way of being . . . I found myself, pretty soon, in a situation where I was offering support and help [to my peers] and it made me think differently about myself.

Situating the Findings Within Theoretical Perspectives

These findings demonstrate that students engage in online courses with a priori assumptions about e-learning, such as the expectation that their experience in face-to-face courses will readily transfer to the online

format. Throughout the study, participants made comparisons between the two very different learning and teaching formats. In many cases the unreasonableness of their expectations of peer relationships resulted from the complexities of online learning and the limitations on what can be accomplished in this format. We are struck by how the participants' decision to take online courses, as well as what they experienced as challenges to learning, can be readily connected to matters of instrumentality.

The Thread of Instrumentality

One can think of instrumental reasoning as detachment from the particulars of the subjectivity of the people involved, in this case students and teachers, and from the situation in which learning takes place. Aoki (Pinar & Irwin, 2005), drawing on the work of Gadamer (1998), suggests that there are several ways that instrumental reasoning can influence how we understand a situation. For example, the idea that the means justifies the ends can be seen when students, teachers, or administrators make decisions about e-learning for other than pedagogical reasons. In instrumentalism, curriculum is viewed as information to be consumed or applied, rather than as the exchange of knowledge by people in particular situations — as a linear focus on cause and effect, rather than as the complexity of lives in which learning and professional practice are situated.

Computer technology, particularly e-learning programs (including the unpredictability of computers and Internet connections), and the associated requisite skills to engage with technology, create an endless combination of circumstances for each student that either hinder or promote engagement with learning. While it is easy to see that those instrumental concerns related to e-learning technology are not the focus of nursing education, it is not so easy to dismiss the imperious presence of instrumentality in the participants' conversations.

Furthermore, an argument can be made that it is instrumental reasoning that underpins the advantages of e-learning for academic institutions as well. Online classes and e-learning can be seen as instrumental solutions to the institutional challenge of managing increased enrolment with fewer resources. Not only does e-learning manage classes without classrooms, but class sizes can be increased without competition for space. The implications for education are considerable, however, as class size influences the establishment of learning communities (McDowell, Trunzo, & Vincent, 2005). We will now embark on a discussion of the tensions with instrumentality, including the purpose of the university and the nursing curriculum.

Tensionality in Online Nursing Education

The reader may be familiar with the notion of tensions as residing between two competing interests or ideas, where the aim is to have one

position become dominant, resolving or releasing the tension. In this case, however, the discussion draws on the work of Aoki, for whom tensionality is a place of "indwelling" between two horizons where the quality of the lived life of the educator relies on holding, rather than overcoming, the tensionality. Aoki understands this "indwelling in tensionality" as part of being a teacher, and he reminds us that "to be alive is to live in tension; it is in fact the tensionality that allows good thoughts and actions to arise when properly tensioned chords are struck" (Pinar & Irwin, 2005, p. 162). While in this example Aoki is referring to the tensionality between curriculum as plan and curriculum as lived, we suggest that this is also salient for the tension between the demands of instrumentalism of technology and engagement with the nursing curriculum through e-learning. Furthering Aoki's particular discussion of the *teacher* as living the tension between curriculum as plan and curriculum as lived, we draw on both Aoki's notion and that of Bevis and Watson (1989), who see curriculum as "the interactions and transactions that occur between and among students and teachers with the intent that learning occur" (p. 5). The nursing curriculum, which encompasses the relationships between teacher, learner, and content, is expanded and, some might say, strained by the additional instrumental demands and relational restrictions imposed by online e-learning. This is not to suggest that the delivery of all nursing education via e-learning is steeped in instrumentalism. However, we commonly see, in situations where the curriculum content is predetermined and delivered online, or where the courses are viewed as "commodities to be dispensed by teachers and . . . consumed by students" (Pinar & Irwin, 2005, p. 118), that instrumental action is at play.

Aoki critiques the instrumental implementation of curriculum with the claim that "instrumental action is not the way the world is . . . the instrumental view of implementation minimizes or neglects the interpretive activities" (Pinar & Irwin, 2005, p. 115), the subjectivity of the teacher and students as they engage with curriculum. We add that instrumental action is antithetical to the relational aspects of nursing practice, wherein general knowledge is related to the particularity of people in context, considering the subjectivity of both the patient and the nurse.

Generating Possibilities for Holding the Tension: The Optimistic Perspective

There is growing evidence that online delivery increases access to nursing education, most notably among nurses residing in remote and rural areas in Canada (Andrews et al., 2005; Andrusyszyn, Cragg, & Humbert, 2001; Penz et al., 2007; Tilleczek, Pong, & Caty, 2005). Consistent with findings reported in the literature, our participants identified accessibility of continuing and graduate education as a significant advantage of online learn-

ing. The value of access to nursing education should not be underrated, in light of the shortage of practising nurses, nurse leaders, and nurse educators (Benner et al., 2010, p. 3). Chueng and Aiken (2006) make a link between the shortage of nurses at all levels and the quality of health-care delivery. Furthermore, the reality of increasingly limited funding to support graduate education, coupled with the need for employment to sustain economic stability in families, means that for many nurses the only educational opportunities are online programs.

Additionally, one can be optimistic about the development of online skills, including scholarship, writing, facilitation, and technological skills, which are being increasingly valued as computer technology becomes a more integral part of professional nursing and health-care practice.

Portability is another advantage of digital technology. For example, m-learning relies on the use of mobile devices like smartphones, PDAs, tablets, and notebooks to increase the portability of learning (Bassendowski, 2009). Kristine Peters (as cited in Bassendowski, 2009) underscores the idea that these devices provide "just enough, just in time, just for me" (p. 1) to satisfy a generation of technologically savvy nursing students. Bassendowski asserts that "mobile services are being marketed as very efficient teaching and learning tools" and "mobile learning can enhance and support more traditional teaching and learning modes" (p. 1).

Balancing the Tension: A Cautionary Perspective

As much as the advantages and opportunities of the digital revolution cannot be overlooked, some authors take a cautionary approach to counterbalance the optimistic perspective. Uncritical acceptance of the digital revolution relies on some problematic assumptions — for example, the conflation of knowledge and information (Pinar & Irwin, 2005); an overemphasis on the mastery of technical skills at the expense of the cognitive, social, and emotional skills necessary for learning (Hillenburg et al., 2006); the development of intellectual capacities (Walker, 1997); and the development of a social consciousness that supports praxis and emancipatory knowledge (Kagan, Smith, Cowling, & Chinn, 2009). Although technical knowledge is mandatory for practice, a narrow emphasis on its mastery may lead to social and disciplinary conformism. An overemphasis on technical knowledge may hinder the advancement of nursing in feeding an already strong anti-intellectualist current. Anti-intellectualism has been described in scholarly work both in nursing and in education (Duff, 2005; Gunga & Ricketts, 2008; Holmes, 2002; Miers, 2002; Walker, 1997). More disturbing is the fact, pointed out by Myrick (2004), that "the original purpose of a university education was . . . to foster a desire for right conduct and good things which ultimately cannot be neatly

packaged and delivered" (p. 23). Contemporary, 21st-century practice requires nurses to address issues of equity, diversity, gender, social justice, class and race discrimination, and Othering that influence the delivery of nursing care (Davidson, Meleis, Daly, & Douglas, 2003). In addition, the impact of globalization and neoliberal economic policies on population health and the need for nurses to achieve the social mission of the nursing discipline may be overlooked if the goal of nursing education is limited to supplying the labour market. Students must be equipped with the skills and knowledge necessary for them to become socially conscious nurses and educated global citizens (Falk-Rafael, 2005; Kagan et al., 2009; Proctor et al., 2010; Racine, Proctor, & Jewell, 2012). The complexity of nursing practice calls for an examination of the assumptions underlying the cautionary argument as presented by some scholars in nursing and in education.

Recommendations

In this article we have presented a discussion of e-learning drawing on a hermeneutic study of students' online learning experiences and situated in the context of theoretical perspectives and the literature on online learning. Arising from this discussion are two possibilities for holding the tension of online learning in nursing education. As we have seen, hermeneutics does not lead to conclusions, nor does it lend itself to verifiable recommendations. The interpretive process is an ongoing one of bringing new understandings to bear on what is already known. We encourage the reader to embrace these recommendations as new understandings and to join in the interpretive endeavour.

Our findings make it clear that the expectations of both students and educators, developed in a face-to-face (onsite) learning environment, do not transfer easily to an online e-learning format. Students, for example, sometimes conflate the ease of access to online learning with a more manageable workload. Numerous participants discussed unmet expectations for peer relations. Additionally, participants reported significant challenges and conflicts related to issues of frequency and timing of participation and required group work.

Given these ongoing challenges in online learning, we recommend the development of structures that take into account the particular nature of the online environment. We suggest that programs be structured such that students move through courses together as a cohort, facilitating the development of a learning community. The peer contribution to learning is also fostered when courses are structured in a way that paces or contains student participation. While group work can be a valuable learning opportunity for students, the online environment brings additional chal-

lenges to this endeavour, particularly when students are working across time zones.

Since completing the study, we have had the opportunity to implement an onsite, face-to-face orientation for students in the online master of nursing program. This required orientation focuses on building intellectual and social communities, appraising and upgrading writing skills, and, where needed, practising technological skills that support student learning. Strategies to connect students to peers in their geographic locations, areas of practice, and even areas of personal interest can be easily integrated into onsite orientation sessions. With a deliberate focus on the influence of peer dynamics, education in the online format provides opportunities for students to develop their own intellectual and professional capacities and, through mentorship, to provide support and leadership to their peers.

In addition to such strategies, educators are encouraged to resist the convenience and security of pre-established course packages and engage with students spontaneously and individually. While attention to what we have critiqued as instrumental issues is necessary, embracing the subjectivity of teachers and learners is central to the success of all learning. The curriculum of the online classroom, as with the face-to-face classroom, relies on interaction between students, teacher, and content; however, the context of e-learning changes the situatedness of all those involved. Therefore, teachers and administrators cannot assume that teaching approaches will transfer across these contexts; faculty development for the online learning and teaching environment is imperative.

In summary, the digital revolution is a fact of 21st-century nursing education. The issue resides not in whether to adopt e-learning but, rather, in determining how the digital revolution and e-learning can best contribute to nursing education.

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