Sixteen myths about online teaching and learning in higher education:

Don't believe everything you hear

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The first author has taught six online courses in the past four years, while the second author has completed her entire Master's program online. During those experiences, we have encountered a number of myths that affect the successful establishment and development of online learning environments. We discuss those myths in the light of our experience and explore approaches that may contribute to the establishment of successful online learning environments.

We are witnessing a drastic increase of online learning in different places. For workplace education, it was reported that 20% of training in "world class organizations" is being delivered online with a prediction of $11.4 billion to be spent on e-learning in the US in 2003 (Gill, 2003). Higher education has experienced similar changes (Guardian Unlimited, 2004).

Online learning has attracted different groups of people for different reasons. For business organizations in highly competitive environments, this method has the potential to "reach large numbers of employees at the same time or at the convenience of each employee" (Gill, 2003). Many institutions launch into "hasty and expensive developments [of online learning] not just because of the giddy promises but also for fear of missing the boat" (Felix, 2003). Felix contends that the promises of online learning are significant. For administrators, online learning provides real alternatives for course delivery which may save space, staff and instructors. This may result in improvement of access to education and increased enrollments. For instructors, this technology may provide a useful tool for redistributing time by transferring core rote learning to computers. More importantly, instructors realize the potential of the internet "as a window to the authentic world of the subject being taught, allowing for interaction and communication far richer than hitherto possible. Task-based projects, ranging from simple web searches to large collaborative ventures in virtual worlds, added enormous potential to the repertoire of dedicated teachers" (Felix, 2003). Our experience indicates that one attraction of online learning for students is the flexibility of time and place.

The newly expanding world of online learning, however (just like face-to-face learning), is fraught with myth. "There are literally thousands of tiny [myths] clinging like barnacles to teaching, while others perch on it like giant, fire-breathing creatures. These myths are available in every film about teaching, in ... popular literature, and in the common sense passed across the generations" (Ayers, 1993). With the emergence of a multitude of online learning courses in post secondary institutions, people realize that the best approaches for online learning should be driven by sound pedagogical considerations. Technology should be used only as a tool, and the objectives need to be set to create a learning environment "in which both the process and goals are stimulating and engaging, and which take individual student differences into account" (Felix, 2003). The myths persist, nevertheless.

This paper examines the myths we have recognized that are associated with online learning in the area of higher education. Possible strategies will be explored to help us move from myth to reality and ultimately to establish a successful online learning environment. This exploration is carried out through the lens of both students' and instructors' perspectives and is organized according to four major aspects: content, context, strategies and assessment. The myths addressed and our corresponding statements of reality are summarized in Table 1 (see page 59).

Content

Myth 1: Traditional courses can be copied to online learning

It is true that face-to-face pedagogy can and should be used to inform online pedagogy. But this in itself can not be the driving force to designing online courses; one must consider e-pedagogy to create a successful and meaningful course. According to Gill (2003), online learning is "only one instructional method among many, each better at achieving some instructional objectives than others" (p.21). Since the current online medium is less rich than face-to-face, selective adaptation of effective pedagogical strategies from face-to-face teaching are necessary. For instance, the instructional strategy of allowing students to form their own collaborative groups or designate members to a group can impact student learning and interaction differently in each of the modes of instruction. The success of one strategy in face-to-face setting does not guarantee similar success in the online environment.

To illustrate this, we reflected on the first author's experiences in teaching the same graduate course four times. The first and third times were face-to-face and the second and fourth times were completely online. The first time she taught the course, she presented the tasks and allowed students to form their own collaborative groups for their final projects. Because of the nature of face-to-face interaction, it was easy for the students to find collaborators who shared the same interests, experiences or personal goals. When asked to deliver this course in an online environment, the first author did the same thing. Soon she realized that, due to the inherent lack of social interaction in this environment and since the majority of students had never met each other, asking students to form their own groups took much longer and required more effort. In the asynchronous online environment, "team formation can be difficult ... because potential team members are logging on at their convenience and may not receive or respond to a request to join a team immediately" (Palloff & Pratt, 1999). In the course, some students could not find partners, while others tried to work on one particular topic which made the group too large to function. For the first author, the ability to facilitate the formation of the collaborative groups was limited in the asynchronous model and required much more time than it would have in a face-to-face class. The option of synchronous communication was limited due to the circumstances of the student population. Many were located in other time zones and/or had varied work schedules which did not offer the opportunity to work synchronously. Some students suggested that it would be easier if the instructor had assigned groups.

Based on this experience, the first author decided to use the strategy of pre-designated groups. The next opportunity to teach the course was in a face-to-face setting; when she tried to assign groups, the students strongly opposed this format and argued that it was completely adverse to constructivism. This reflection suggests that strategies used in each of the modes of instruction, online and face to face, may produce different effects and consequences in the various settings.

In face-to-face settings, even if issues arise, instructors tend to find and solve the problem rapidly. In online courses, however, it requires more careful observation for the instructors to detect possible problems and pitfalls in the process. Further, instructors need to provide as many tools as possible to facilitate online interaction and collaboration. These tools include online chat, email, phone, threaded discussion and private rooms for group work in online environments. Although asynchronous communication tools may help students' knowledge construction, students need synchronous communication to collaborate. For basic interaction, the phone or chat rooms work, while planning and project work might require them to share applications synchronously. Software like vClass, which allows application sharing and audio-conferencing, is very suitable for this kind of situation. This approach can also save students' long distance phone costs.

Another useful strategy to facilitate collaboration is to provide a space in the course shell to allow students to share their personal interests, background and professional goals. This instructional approach, of course, can also be integrated in face-to-face classes. One possible way to foster collaboration is to ask students to share this information through a webpage at the beginning of a course. This can serve as an excellent introduction that allows students to get to know each other and start to establish a rapport. Further, by reading students' biographies, they can gain historical knowledge from the vast experiences of the participants and develop a more global perspective on content through their interactions with their international colleagues. In addition, the biographies can allow students to identify collaborators who share the same interests.

Myth 2: Online learning is limited to content learning

Learning in online environments is ongoing. Learners take away more from online learning than the content itself. In considering a knowledge-building community, the learners are more broadly defined to include instructors, students and tutors. Students learn from each other and at the same time establish rapport with others. They have better opportunities to interact with a wider range of people than in traditional courses. For instance, it is very common for students from different countries with different backgrounds to enroll in an online course. In our university, the graduate program in the Faculty of Education has students from Europe, South America and the Middle East. Distance courses during the winter 2003 session took place at the time when the Iraq war started. One student from the Middle East shared his experiences, feelings and views about the course content from that unique perspective. These experiences enabled the students to gain much more beyond the learning of course content in that it allowed for the reflection of concepts beyond the classroom walls and into the global context. The

reality of students and citizens in the countries at war is different than the reality of those classes that are distant from the fighting. By expanding the membership of the learning community to a more global community, the concepts, topics and discussions are no longer limited to assigned texts but are enriched by the experiences and contexts of the various participants.

It is comparatively easier for instructors to bring experts from all over the world as guests into online courses than into face-to-face courses because travel is no longer necessary. We caution, however, that there are still important factors that must be met for this to work — as in any instructional setting. For example, do experts have the time to answer student questions reasonably quickly?

Students often develop collaborative relationships with a wide range of people that are beneficial to their learning and working. Community is created and friendships overlap amongst courses and then continue after classes have ended. Participants in graduate classes in education often have been working in a local environment for many years and have little knowledge of the reality of other school districts or learning communities. The online experience allows them to have a peek into the work and practice of educators in other areas of the province, country and the world. They also gain valuable e-learning strategies that are transferable to their own and others' teaching and learning practices. Similarly, instructors of the courses learn valuable e-pedagogy from their teaching practice and experiences.

Sharing the responsibility for facilitation with students promotes and even warrants active learning (Palloff & Pratt, 1999). One approach we used was giving students the challenge to play leadership roles. This exploration of leadership in online learning allows participants to gain knowledge and skills beyond the course content in that it provides practice in online facilitation and course delivery. One design is to require students to take turns facilitating online discussions. This approach, we found, not only allowed students to learn the content through interaction with others, but also provided opportunities for them to simulate the role of instructor in an online setting (Li, Akins, & Edmonds, 2004). Further, since the issues and questions were generated from students, online discussion tended to be more pertinent to them and hence more authentic. The experience was very rewarding for students because they appreciated the opportunity to experience the instructor's side of the distance learning equation which is just as important as the participant and learner side of the equation.

Context

In this section, we define context broadly to include every aspect of a learning environment, including learners, instructors and physical context.

Myth 3: Online teaching and learning promote isolation, lack of community

This myth floats pervasively on the surface of the higher education community. In general, because students learn online by themselves in their homes or workplaces, more than likely they do not have a chance to meet their colleagues or instructors face-to-face. If the course is not designed purposefully to involve social interaction, the learning journey for students can be painfully dull and mostly isolated. Sometimes, trivial technical problems or process techniques can create excessive difficulties for students.

Interaction may be fundamental in many learning processes and even more so in online environments. We, as online educators, need to strive to increase and encourage interaction. If the course is designed with various methods, techniques and tools intentionally used to increase social dialogue and interchange, a learning community can be built. This kind of learning community facilitates instructors and students around the world to interact with and learn from each other. One approach proven to be important is to incorporate online discussion into course grades. Further, it is rather vital for this course grade to reflect appropriately the amount of work involved in participating in online discussions. For example, contributing twice a week and reading regularly takes a lot of time and effort. When discussions compose 10% of the final grade versus 40%, the quality of interactions and postings will reflect that difference. Our experiences and previous research (Nicaise & Crane, 1999) show that often students try to do just enough to satisfy course requirements, hence they would not want to log in regularly if the requirement is not there. But when the online discussion is required, students take the effort to contribute and gain valuable lessons from it. They often enjoy it and believe they are building a learning community through their participation in it.

Students need to approach colleagues and instructors actively, and to establish a rapport rather than passively waiting for others to communicate. Taking advantage of all the resources and collaborative opportunities possible can help build a learning community. For example, students can use forums, emails, chats, even telephones to connect with peers and instructors. Further, it is optimal to encourage students to take the risk of sharing their thoughts, ideas, suggestions and even frustrations with their peers and instructors. These thoughts and frustrations may not be limited to course related issues. Students are usually surprised and grateful to see the amount of support and valuable help from their peers when they dare to share their personal feelings, dilemmas and unhappiness. One example involved a student who shared her frustration because her colleagues did not support her effort to integrate technology into a class. She was impressed by the support and suggestions provided by the online classmates. The suggestions enabled her to address the issues with a renewed sense of purpose which encouraged her to continue her efforts to integrate technology.

Instructors should have an open mind to encourage, value and, whenever appropriate, adapt students' comments and suggestions. For example, when students suggested

alternative approaches to the threaded discussions, those suggestions were adapted into the current course. Participants who had experienced traditional threaded discussion assignments, which were based on reading text and responding to questions, were excited to try the new format. The adaptation encouraged participants to take on various roles, debate and work in small groups within the threaded discussion. This new format fostered a new sense of interest in the discussion and ultimately promoted online community building.

In addition, carefully designed and thoughtfully implemented group work can nourish interaction. This can be facilitated in a variety of ways, including group chat, forums, projects, email, telephone calls, video conferences and meetings beyond the online course. These same principles apply to online teachers. Instructors teaching online by themselves may feel isolated. For example, they may feel a lack of connection to their colleagues because they are unable to go to the staffroom physically to engage in conversation. When schools or school districts develop spaces in the online environment (for example, when a virtual staff room was created for all the online teachers in WebCT shell), teachers can share their teaching strategies, effective approaches, arising issues, concerns, frustrations and even struggles. They can provide comments and supportive suggestions which will decrease the sense of isolation.

Myth 4: Learner and instructor must be proficient in technology

This myth is central to the understanding of online education. When people are not familiar with online teaching and learning, the idea of using technology tools such as online forums, multimedia and conferencing may sound daunting. This is true for both instructors and students. Many people say, "The only thing I know about computers is word processing and email. I do not think I can teach or learn online until I have learned all the technology skills, and I know that takes an enormous amount of time and effort." This is usually why there is a great deal of techno-resistance in schools and universities. Our experiences show that many university professors, especially more senior professors, often think that: "I am busy and I do not know any technology, so I do not want to teach online."

Yes, it is true that both online teaching and learning involve the employment of technology and require that the users master some skills. But what makes this a myth is that a) this view focuses online learning on technology — the assumption that technology controls teaching and learning, and b) it assumes that teaching and learning online requires the mastery of all technologies.

It is important to note that technology is always just a tool for us. We recognize that at the beginning of an online course, especially for new learners, technology may play a central role since all communication and access to content is mediated by technology. Technology, however, should move out of the center of the learner's experience as using it becomes more ubiquitous. Although the amount of required technology skills differs greatly from course to course and from instructor to instructor, understanding of basic skills such as keyboarding and the Internet is sufficient for many online courses. These basic skills are easy to master. Instructors usually provide tutorials and other material to help students grasp the skills they require. Further, institutions and classmates can offer assistance as the course progresses. Many of the courses we were involved in used online forums intensively. The students enrolled in the courses need to know how to log in into the course shell (e.g. Blackboard, WebCT and others, most of which are similar), how to view postings, how to post and to respond to others' postings, and how to email. Depending on learners' backgrounds, the amount of time required to master these basic skills can vary. Some learners need repeated exposure to the basic steps, while others may have no technology learning curve. Regardless, the basic technology skills can be learned within a limited amount of time.

For online instructors, institutions (e.g. the Learning Commons in some institutions) generally provide preparation workshops, peer mentors, one-to-one technical support and sometimes graduate assistants who have expertise in technology to help with their design and instruction.

Myth 5: The instructor is the expert

This myth is tricky and does not apply just to online learning. What makes it unique in online learning are the novelty of online learning and the constantly changing nature of technology. On the one hand, there is no doubt that instructors are experts in their subject field. And just like any good teachers/instructors, good online teachers need to know a lot about the pedagogy of online learning, and they are always pondering, exploring and absorbing new ideas and information to expand their knowledge and interests. On the other hand, because online teaching and learning is still at its infant stage, no set of ground rules are firmly established yet. In addition, technology advances rapidly. Instructors often explore and experience pedagogical approaches in this unique environment along with their students, and often learn through trail-and-error. This inevitably forces online teachers to "plunge into the unknown alongside their students, simultaneously enacting productive approaches to learning and demonstrating desirable dispositions of mind, like courage and curiosity ... Learning with students can be a powerful approach to teaching. Good teachers often teach precisely so that they can learn" (Ayers, p. 13). For instance, when we started a new course, we designed the course using threaded discussion thinking of using only a question-answer format to interact with students. Thinking of improving students' learning experience, the instructor invited student feedback at the middle of the course. One of

the responses she received concerned the boring nature of the format of threaded discussion. Though excited about the idea of varying the format, the instructor did not know what kind of formats she could use or how to use them. Keeping an open mind, she then invited suggestions from students and received a wealth of information. Students not only learned from this experience but also were motivated to try out all the suggestions. The varied threaded discussions thus become more attractive to students and better facilitated the development of a learning community.

Students, by watching their instructors experimenting with technology, which can include a pretty steep learning curve, learned that it is ok to take risks to learn new stuff. Further, a teacher is a part of an expert team, facilitating guests who can provide expertise.

Myth 6: Online learning is only for people who are in remote locations

This is an interesting one; for the biggest advantage claimed for online learning is that one can have great flexibility which includes freedom from bondage to a certain time or location. It is true that many students take online courses because they are at a distance. However, the reality is that there are many others who choose online learning for ease of scheduling, for the rich nature of the course interaction, for the ability to mix work, learning and family, to extend their learning experiences and to meet new people around the world. We have had many graduate students, including the second author of this paper, who enrolled in a distance program because they wanted to keep their full time job and also be able to have time to enjoy life with their families. In fact, on average, 15% of the distance students we taught are local students.

Myth 7: Online learning is for everyone

This may sound contrary to myth 6. People often think everyone can learn well in an online environment. From some administrators' perspective, the more students who take the same online courses the better for economic reasons (Guardian Unlimited, 2004). The assumptions are that all learners, regardless of their background, self-confidence, intellectual preferences and so on can learn the same content on a computer screen in roughly the same amount of time.

In reality, learners need to be highly motivated and self disciplined with great persistence and commitment in order to be successful in online learning. In fact, it is reported that online learning has very high attrition rates. Academic and family matters, instructors, finances, full time jobs, dissatisfaction and lack of direction or lack of reasons to complete academic courses all contribute to students dropping out of online courses (Martinez, 2003). For instance, "even the most well-intentioned e-learners can experience flagging interest when no one is looking over their shoulder or when no incentives are provided for completing an e-learning course … e-learners do not always understand what is expected of them, sometimes missing deadlines or … the required e-learning prerequisites" (Gills, 2003, p. 23).

The key to deciding whether online learning is the right choice for any student is being clear about his/her needs. Learners need to assess their learning needs by asking themselves questions such as:

- What are my personal goals?
- What do I need to learn in order to achieve these goals?
- How can online learning facilitate my learning?
- Can I complete the course work on the job, squeezing it in-between job tasks, or after work?
- Does my family support me in this endeavor? (Gill, 2003)

Myth 8: Online learning will make the teacher redundant

For the past several decades, the development of every new type of technology has caused such an illusion. People have worried that teachers may be replaced by radio, TV, computers and now the internet. For example, in an interview of secondary mathematics and science teachers, three out of fourteen practicing teachers expressed their fear of eventually being replaced by technology. Among the three, two were new teachers and another one had taught for 30 years. This view typically reflects the fear of the unknown. The fact is that humans are the center of education, no matter what and how technology is advanced. Technology can and should be used only as an effective tool to enhance teaching and learning and can never be the center of education. Teachers are always needed to plan, design and facilitate learning experiences. They must respond to the real students and their diverse needs. This has always been a complex and difficult goal for them, and it will always be so.

Myth 9: Students require expensive equipment to participate

Yes, online learning requires the use of some equipment for students to participate. Often, an internet connection and basic computer workstation is enough. Interactions in many online courses are text-based (e.g. asynchronous online discussion and synchronous chat) and do not require multimedia, hence modem speed is not an issue. In fact, students do not have to own such equipment; they can even use public library facilities if necessary. In fact, some of our students do not own computers. They often use equipment in schools or their work units for the learning purposes.

Strategies

In this section, we discuss strategies related to online learning. This includes organizational strategies, delivery strategies and management strategies.

Myth 10: Question-and-answer is the best approach for threaded discussion

Threaded discussion is probably the tool that is used most frequently in online teaching to promote interaction and collaboration. Because of its asynchronous nature, instructors like to use it extensively to generate ideas, discuss issues, present multiple perspectives and address diverse needs. Our experiences and previous research (Li, 2003, 2004b) show that many online instructors simply use a question and answer format for discussion, and this format can be effective and efficient for learning. However, after extensive use of threaded discussion in various courses, students can feel quite bored. Some students told us that after they took four courses online, with each course using the exact same format, they become tired of threaded discussion. They complained that in face-to-face teaching, even if the instructors were only exercising stand-and-delivery, at least different instructors had different ways to present.

We believe that threaded discussion is a wonderful tool and, if its use is varied by employing different approaches, it can meet its fullest potential. For example, during discussion, students can conduct debates by dividing into groups; each group takes a position and argues with other groups. Other possible formats in threaded discussion include role playing, interviewing of each other and creative ways of completing assignments and participating in the discussion. Students can also take a leadership role by leading and facilitating discussion of topics. They can exercise higher order thinking skills by engaging in activities such as synthesizing discussions (Li, 2004a; McDuffie & Slavit, 2003).

Further, there are other media that can be used to support online teaching and learning. For instance, video clips and PowerPoint presentations can be used to share understandings, present ideas and collaborate. As technology advances, video conferencing becomes more and more accessible and can be another effective tool to be incorporated into online teaching. When threaded discussion is used in varied formats and coupled with other media, it can increase student motivation level and improve learning greatly.

Myth 11: Online teaching and learning is quick and easy

Many people, especially those who have never taught or studied online, including students, teachers and administrators, believe this. They know that you do not need to go to school, or be at a certain place at a certain time; hence they assume that one can cruise through the teaching and learning processes. Although it is true that online teaching and learning probably have a greater flexibility than face-to-face study, the work load for both the teacher and the students usually is much greater. We fully recognize that depending on the design of the courses, teaching and learning online or face-to-face may take similar amounts of time. However, our experience and some previous research (Collis, Winnips, & Moonen, 2000) show that at least twice as much time and effort are needed to teach and learn online compared to face-to-face. There is a lot of reading and writing involved in online courses. Understanding course content, which is often conveyed through text information, requires more time. Further, the lack of face-to-face interaction and often limited synchronous exchanges demand extra time and energy if we want to establish an online learning community.

Although online learners are very motivated and dedicated in constructing knowledge, time management is essential. For instance, students should set aside short periods of time to log in to their courses regularly. Logging in 15 minutes a day for 7 days tends to work much better than working 4 hours intensively on one day but ignoring the course completely during the other 6 days of the week. They also need to set aside time to log in only for reading but not contributing. These principles also apply to instructors. If instructors are not available for certain days, e.g. weekends, it is very important that they inform their students at the beginning of the course. Otherwise, tensions may be created since students often expect instructors to be accessible 24 hours a day and 7 days a week.

Further, it is important to improve efficiency of online course delivery. According to Collis et al. (2000), more communication, discussion, summary or feedback may not be better. In fact, generalized encouragement and automated reminders contribute the same as personalized feedback, and are significantly better than no feedback or encouragement at all. Moreover, it was found what really matters to students were the instructors' prompt feedback rather than the type or length of the feedback. Hence, the scaffolding techniques proposed by those authors may prove to be useful for improving efficiency: courses start with instructors' detailed and personalized feedback and gradually fade to more generalized and abbreviated comments.

Myth 12: Learners' responses to discussions cannot evolve. They must be correct when posted

It is not uncommon, especially for students who are new to online environments, to feel afraid to post messages. They tend to think and rethink, check and recheck before they post anything. Our experiences in online teaching and learning indicate that students fear that their answers may be wrong, their thoughts may be naïve and their postings may not be what instructors expected. Unlike traditional courses, their postings are recorded permanently for the entire class to view and review, which can likely create anxiety for students. To help reduce this anxiety, it is important for instructors to inform students directly that learning is ongoing and that learners need to abandon fear and take risks in order to expand their learning. For instance, we experienced that students were afraid of repeating other people's views in online discussions. We hence had a discussion on the benefit of repeating and paraphrasing others' thoughts. They then realized that even repeating other's views helped them to reaffirm their thoughts and understanding.

To promote a learning community in an online environment, it is important for instructors to recognize their role must shift from lecturer to facilitator. Hence, they need to have a balanced appearance pattern in the discussion forum. On the one hand, they should be careful not to jump into any discussion too fast or too often, or to impose too much control, because this may constrain interaction or shut off conversation among students. On the other hand, an instructor's messages can be too sparse, causing students to think that the instructor is not paying attention, which in turn may result in students' decreased interest in discussion (Smith, 2001). Instructors also need to make it clear up front that they should be treated as a regular participant in discussion, and that their opinions and thoughts can be discussed, critiqued or even challenged.

Another approach is to establish a safe and non-threatening environment at the beginning of the course. This includes providing space and opportunities for students to share their personal interests and background as we discussed in myth one.

Instructors need to watch for those significant points addressed in the curriculum that have not received a discussion response after three or more days. Instructors should respond appropriately and redirect students' attention to them. This can be done in various creative ways, for example, by interjecting new ideas into the discussion. Intentional and purposeful redirection thus not only enhances student learning but also strengthens the connections among them.

Authentic topics for discussion are another critical aspect to promote students' interaction. The authenticity of those tasks enables students to relate their prior knowledge and experience to the new learning. Instructors need to be prepared and open that some postings may be different from what they expected. Students also need to be encouraged to interact with and make reference to each other. They should be encouraged, even required, to critically evaluate each other's work and give constructivist feedback and suggestions rather than provide simple 'pat-on-the-back' type of comments. Explicit instructions about the desired type of feedback, together with concrete examples need to be given up front. Sharing these kinds of feedback in online forums thus helps achieve group cohesion but also enhances student learning.

Higher order thinking skills need to be facilitated and exercised. For instance, students need to be continuously encouraged to reflect and synthesize their learning: what are they expected to learn? What have they accomplished? What are they missing? Such reflection and synthesis need to be shared in online forums from which new thoughts will be promoted and more ideas will be generated. This way, both the students and the instructor are often more fulfilled and rewarded because effective knowledge construction is fostered.

Further, instructors need to emphasize that it is effort and creativeness of students' thoughts, rather than the correctness of their thoughts, that are to be evaluated in the learning process. This can assist in the establishment of a safe environment for students to express their ideas freely. A clear expectation from the instructors at the beginning of the course is also extremely important for the establishment of a learning community.

Even though it may not be directly related to the curriculum, it is important to provide space for the students to develop their personal and social relationships in a knowledge building community. Creating virtual spaces such as a "student lounge" or "virtual café" allows learners to express emotions and feelings, such as happiness, anxiety or warmth. This enables establishing and maintaining "human relationships, affirming and recognizing students' input; providing opportunities for students to develop a sense of group cohesiveness, maintaining the group as a unit, and in other ways helping members to work together in a mutual cause" (Collins & Berge, 1996). The lack of such space might create a dry and sterile atmosphere, devoid of a sense of community (Brown, 1996; Li, 2004a; Rahm & Reed, 1998). A low sense of community often leads to feelings of loneliness, low self-esteem, isolation and low motivation to learning and consequently drop-outs from the learning (Frymier, 1993; Rovai & Lucking, 2003). Researchers (Rovai, 2002; Rovai & Lucking, 2003) claim that it is vitally important to build communities in order to have a successful online distance learning experience.

Myth 13: Classroom management issues are not important in online learning

It is true that in online classrooms, especially in asynchronous settings, students do not disturb each other as easily as in face-to-face settings. Even in synchronous environments, the lack of visual cues would make it difficult for instructors to notice if someone is daydreaming. This is not to say, however, that classroom management is not an issue anymore; rather, it takes a different format and effort.

One aspect of this is attendance; although attendance is not usually viewed in the traditional way online, instructors do need to monitor the involvement of students. For instance, one common method of checking attendance in online asynchronous discussions is based on the duration and frequency of students' login times and frequency of their contributions. A synchronous environment which includes text-based chat and audio-text combinations such as v-class as well as occasionally calling upon individual students is another way to check student attention and understanding. Whether these events are real time or delayed interaction, instructors need to encourage participation from all students and prevent the dominance of a few vocal participants. A positive, respectful environment is necessary and should be fostered. To establish a safe environment for the participants to engage in, instructors need to set up expectations and clear rules at the beginning of each course and monitor the flow and content of discussion to be sure they are not going off on tangents or becoming inappropriate. In case unhealthy conflicts or flaming behavior occurs, instructors should take immediate action to intervene and stop the conflict at its inception.

Myth 14: Online learning is a one-way learning process, teacher-to-student in a given time block

The shift toward a constructivist philosophy in the last two decades calls for a shift of focus to students, and this shift is especially important for online education. The nature of the online medium for communication and instruction requires students' autonomous involvement and engagement in curriculum. Because online learning is not attached to a particular time and space, learning is a continuum extending beyond one class period instead of being contained in face-to-face environments for only a few hours once or twice a week. In addition, many online courses, particularly seminar classes, call for a reflective and collaborative approach to online learning which inevitably results in the adaptation of a collaborative knowledge-building approach. Students and instructors actively search for new information, learn from each other and advance knowledge. In the courses we experienced, learning is ongoing. For example, we check our courses everyday. Students contribute to discussions and resources. Everyone's work is published in the course website and becomes the foundation for further learning by the whole class. One assignment for a course was generating an annotated bibliography for the class focusing on distance learning. Students identified various interesting and useful web resources and posted them on the course website. At the end, the class collectively developed an annotated list of most useful web links on distance education.

Assessment

Myth 15: Assessment of online learning equals counting the number of messages

Although we acknowledge that a common assessment method for online learning is evaluating students' participation by checking the frequency of student log-ins and contributions as described previously, other evaluation techniques are required and vital. Because it is difficult for students to get information from primarily textual information, clear communication of expectations from the instructor via those materials is crucial. Course outlines, expectations, assignment rubrics and examples are all integral to the success of the course. Previous research shows that students appreciate most "the clarity of expectations and systematic, fair, and timely handling of the expectations by the instructors" (Collis et al., 2000). Students need to know exactly what is required of them and what is to be assessed. It is essential to provide rubrics and detailed explanations of assignments at the beginning of courses and these rubrics need to be followed in assessing student work. Another important strategy is to provide examples of possible results for assignments. It is optimal to offer both good and bad examples so that students can have a clear idea exactly what character of performance is expected.

To make learning more authentic for students, one strategy is to provide opportunities for students to develop their own learning goals and assessment tools. For example, instructors and students work together to create rubrics for the evaluation of authentic projects or position papers. Depending on the comfort level of instructors and learners, these assessment tools can be cultivated via various approaches. Our experiences show that when there are time constraints, a useful approach is to have instructors draft the evaluation rubrics and then invite students to critique and comment.

Myth 16: It is easy to cheat online

The Internet has made plagiarism much easier than before, and the nature of online learning in particular has made people wonder what can be done to prevent digital plagiarism (Lathrop & Foss, 2000; Pain & Le Heron, 2003). The fact is that there are many ways we can ensure authentication of student work. First and foremost, online courses are typically password protected. Students need to be registered to participate. Secondly, throughout the course, instructors become familiar with the students' disposition through responses and assignments, so that it is generally clear if a student was not the author of an assignment or posting. Third, as acknowledged by many people (Heberling, 2002; Lathrop & Foss, 2000; Rava, 2001; Turnitin, 2003), it is critically important to educate students about the issues surrounding plagiarism. Plagiarism education can be integrated into lessons in order to build students' awareness and understanding of this complex issue. We can also teach students essential writing skills such as planning, organizing and citation for successful completion of course work and research. Fourth, instructors can create assignments to promote original thinking and help with identifying plagiarism. One effective approach is to require students to provide an early outline and interim draft for a major project or paper so that students have a hard time just turning in a finished, plagiarized paper (Turnitin, 2003). And lastly, there is an increasing number of software solutions, such as *document source analysis©*, that can help prevent plagiarism.

Conclusion

Quality education through online learning depends on clarity of goals, sound e-pedagogy, committed and dedicated learners and instructors, excellent support from administrators and staff and opportunities to practice application of new knowledge and skills. It also depends on a reasoned view of online learning — not subscribing to myths without questioning them. In the cases where the myths contain elements of truth, we must seek methods to overcome limitations of a medium that offers great potential for the present and the future.

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Myth	Reality
1. Traditional courses can be copied to online learning	Since online and face-to-face are different mediums, selective adaptation of effective pedagogical strategies from face-to-face teaching is necessary.
2. Online learning is limited to content learning	The learning in online environments is ongoing and learners take away a lot more from online learning than the content itself.
3. Online teaching and learning promotes isolation, lack of community	When appropriately designed, a learning community can be built in an online environment. Students share their own feelings, seek help, and establish relationships in the virtual learning community.
4. Learner must be proficient in technology	For most online courses, basic technical skills are required and these basic skills are easy to master.
5. The instructor is the expert	Often, the instructors learn online pedagogies and even technology along with students.
6. Online learning is only for people who are in remote locations	Many people in the same location choose online learning because of the flexibility inherent in this medium.
7. Online learning is for everyone	Learners need to be highly motivated and self disciplined with great persistence and commitment in order to be successful in online learning.
8. Online learning will make the teacher redundant and not needed	Technology can and should be used only as an effective tool to enhance teaching and learning and should never be the center of education.
9. Students require expensive equipment to participate	The equipment requirement is usually minimal that an internet connection is enough.
10. Question-and-answer is the only approach for threaded discussion	Threaded discussion can take various forms such as debate, role playing, and interview.
11. Online teaching and learning is quick and easy	Although online teaching and learning have greater flexibility than face-to-face, work load for both teacher and students usually is much bigger.
12. Your responses to discussions can not evolve. They must be correct when posted	The online learning is ongoing. Students need to abandon fear and take risks.
13. Classroom management issues are not important in online learning	Classroom management requires different formats and efforts.
14. Online learning is a one way learning process, teacher to student in a give time block	Learning is continuum extends beyond one class period rather than contained to face to face type environments that might be 3 hours once a week.
15. Assessment of online learning equals counting the number of messages	Other evaluation approaches are important and vital.
16. It is easy to cheat online	There are may ways that we can assure authentication of student work.

Table 1. Summary of myths and statements of reality from authors' perspective

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