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Perceptions about Teaching Online versus in a Classroom Environment

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This paper is based on research which was completed as one component of a Master of Education degree at Brock University.

Abstract

The introduction of computer and communications technology, and particularly the internet, into education has opened up some new possibilities for teaching and learning. Courses designed and delivered in an online environment offer the possibility of highly interactive and individually focussed teaching and learning experiences. However, online courses also present new challenges for both teachers and students. This study explored teachers' perceptions about the similarities and differences in teaching in the online and face-to-face (F2F) environments. The teachers shared some of the benefits they perceived about teaching online as well as some of the challenges they had faced and challenges they perceived students had faced online. Overall, the teachers felt that there were more similarities than differences in teaching in the two environments, with the main differences being the change from F2F verbal interactions involving body language to online written interactions, and the fundamental reliance on technology in the online environment. These findings support previous research in online teaching and learning, and add teachers' perspectives on the factors that affect them in the online environment.

Introduction

In the relatively short time span that technologies such as the Internet have been available as tools, numerous applications have been developed to incorporate them into the teaching/learning process. Applications include communication tools such as email and discussion boards, web sites used as course research materials, and course management systems to house digital course materials. Although there is no clear consensus regarding the benefits that computer and communication technology may bring to education, there is cautious optimism in the literature as to its potential (Garrison, 1997; Hara & Kling, 1999; Kilian, 1997; Spencer, 1998).

There is a wide spectrum of possibilities for incorporating the Internet into education. This spectrum includes courses with online materials used as supplemental information to face-to-face (F2F) classes, a mix of supplemental and core material online in addition to F2F classes, and all materials and interactions online without any F2F interaction. Each of these scenarios, and numerous others, can be referred to as "online courses," which presents difficulty when trying to study aspects of teaching and learning online. This study defined an "online course" as a course conducted entirely over the Internet with no F2F meetings or interactions.

Teaching and learning online presents two key differences as compared to a F2F classroom: participants do not meet in a physical space to interact with one another or with the course material, and the interaction changes, at this stage, from being primarily verbal to being primarily written. Because of this, students and teachers engaging in online teaching and learning need to develop new ways to interact with course materials and with one another in the online environment. The intention of this study was to explore, from teachers' perspectives, whether there are changes to the teaching process, to the roles of the participants, to the meaning and development of learning communities (groups of individuals assembled to collaborate in a learning experience), and to the requirements for administrative policies, procedures, and technological infrastructure when teaching and learning moves from a F2F setting to an online environment.

The following questions formed the main focus of the study.

1. How is teaching similar and/or different in the online and F2F classroom settings?

2. How are participant roles in an online teaching and learning experience similar to and/or different from the roles in a F2F classroom teaching and learning experience?

3. What are the characteristics of a learning community in an online environment as compared to in a F2F environment and how is a learning community established?

4. How do the existing policies, procedures, and technological infrastructure at the college affect teaching online?

Review of the Literature

The literature related to teaching and learning in the online environment was reviewed from three main perspectives: institutions, teachers, and learners. Each of these perspectives is critical to the experience of developing and implementing courses online. Institutions must weigh the costs and benefits of developing and supporting courses in the online environment, teachers must develop an understanding of how to design curriculum and facilitate learning effectively in an online setting as well as understand how their teaching style and students' learning styles affect teaching and learning online, and learners must learn how to interact with their peers and their course materials in an environment that is predominantly written rather than verbal.

Institutional Perspective

Institutions are increasingly under pressure to explore alternative modes of delivery in order to meet the needs of a growing number of learners who desire time and place flexibility in the courses they select, as well as to alleviate the need for increased classroom space (Oblinger, 2000). In the exploration of alternative modes, online education has surfaced as one model with substantial promise. However, it is important for institutions to recognize that not all students are likely to succeed in an online environment (Kaye, 1989); therefore, courses offered online should be regarded as one option available to students in selecting their

courses. A related issue that institutions need to consider is that of student access to the technology needed for online courses. While increasing numbers of students have their own computer or relatively easy access to one, access also includes internet connectivity, and technical support while studying away from their college campus.

There are significant costs involved in setting up the infrastructure required to implement and support online courses, as well as significant development costs. Developing courses for the online setting involves a substantial initial investment for an institution. Hawkins (1999) and Schrum (1998) discuss a number of factors institutions must consider, including faculty workload and incentives, organizational structures and policies, technological infrastructure requirements, academic and technological support structures for teachers and learners, and intellectual property issues. Each of these impacts on the success of implementing online courses.

Teachers' Perspectives

From teachers' perspectives, implementing online courses involves a number of issues, including course design in terms of content, assessment, and interactivity; the approach to teaching the course; and how they will support students in the learning process. Repeated often in the literature is the idea that there needs to be a complete reconceptualization of the teaching and learning process in the design of online courses (Bates, 1997; Elton, 1988; Harasim et al., 1995; Kaye, 1989; Schrum, 1998; Schrum & Berge, 1997). Although the fundamental aspects of curriculum design, the educational goals and objectives, should remain constant, the roles of participants, the methods, and the evaluation system all benefit from redesign to be effective in an online setting.

There is a lot of discussion in the literature that an important component of effective learning in an online course is interaction among students and between students and the teacher (Berge, 1995; Burge, 1994; Harasim, 1989; Harasim, et al., 1995). Harasim et al. (1995) suggest that the challenge for online course designers is to incorporate as many meaningful collaborative activities into the course as possible. In order for online interaction to be successful, an environment with a sense of community is needed that will be inviting for all members to participate (Harasim et al., 1995; Wegerif, 1998). This sense of community is often called a "learning community," and it was an important aspect to the discussions among the teachers in this study. Indeed, one of the most important tasks of an online teacher is setting and maintaining that kind of welcoming and safe environment, and modeling effective online communication (Burge, 1994; Davie, 1989; Harasim et al. 1995; Kowch & Schwier, 1997). Without such an environment present from the very beginning of an online course, students will not be willing to interact with one another in the way that leads to meaningful discussion and therefore learning online. The development of discussion that is open, yet structured by accepted group norms, is an essential component in establishing the sense of a learning community.

Having provided the learning materials, a structure, and a model for participation, many studies recommend that online teachers allow their presence to fade into the background, and so encourage students to develop the dialogue using their own voices (Davie, 1988; Harasim, 1987; Schrum & Berge, 1997;

Solloway & Harris, 1999). This concept is referred to as "scaffolding," where teachers provide support at a level appropriate to the development of the learner (Stiles, 2000; Wegerif, 1998). This is not to say that the role of the teacher is no longer needed after the start-up of an online course; rather, it changes from an initial role of leader to that of supporter. Indeed, the role of the teacher remains critical in clarifying any misunderstandings, intervening to bring a discussion back on track, weaving comments from different participants to illustrate their interrelatedness, signaling that the time has arrived to move onto a new topic, summarizing a completed discussion, encouraging participation, and providing frequent feedback (Annand & Haughey, 1997; Burge, 1994; Feenberg, 1989; Harasim, 1989; Hillesheim, 1998; Schrum & Berge, 1997). These facilitating functions are all aspects of supporting the learning process in the online environment.

Throughout the duration of the course, the teacher needs to pay particular attention to students who are not actively participating. It can be difficult to ascertain why someone is not participating, or "lurking." Some reasons include discomfort with the process of communicating in an online environment, technical difficulties, misunderstanding about participation requirements, lack of a sense of belonging to the online community, and an inability to process and respond to the discussion. Online teachers need to monitor closely the participation level of all students and contact students who are not actively participating. Although silence is considered by some as a legitimate form of online communication (Davis, 1997), much of the literature suggests it should be negatively reinforced, either with a general comment to the entire group or with private messages to specific individuals (Davie, 1989; Harasim et al., 1995). Feenberg (1989) makes the point that receiving a response to a message, no matter how trivial, is often interpreted as success, while silence is interpreted as failure.

Students' Perspectives

Just as there are changes in the role and experiences of teachers as they move from a F2F classroom to an online setting, there are parallel changes in the role and experiences of students. Carlson and Everett (2000) talk about transformative learning being an unanticipated result of online learning in that merely becoming involved in an online learning activity challenges students' traditional views of teaching and learning. The different way of relating to teachers and other students requires students in an online course to reevaluate teacher and student roles. The shift in control from teacher to student results in the learning process becoming more learner centred and therefore requires that students take on more responsibility for their own learning (Annand & Haughey, 1997; Harasim et al., 1995; Hillesheim, 1998; Kaye, 1989).

There are a variety of challenges that students face in an online environment, from the newness of the technology to the process of communicating with students without visual or verbal cues. Student success in the online setting depends on various factors. Schrum (1998) lists specific student characteristics that have led to increased student success, including a strong motivation for taking an online course, a supportive environment in which to do online work, an existing level of technological familiarity, an independent approach to learning, and a disciplined approach to working through course materials. Eastmond (1998), Bates (1997), and Brunt (1997) note that students not only require a supportive teacher

during an online course, they also need other academic and administrative supports from their institution.

Both teachers and students face challenges in the online environment. The main challenge students face is learning to function in the online environment while at the same time learning new course material. There is an initial learning curve for all students in learning how to use the online communication software, and this can be especially stressful for novices with technology generally. The main challenge teachers face is how to engage all the students in the online environment, with all students having different learning styles, different comfort levels in communicating through writing, different levels of technological experience, and different levels of self-direction.

Methodology

This was a qualitative study to explore teachers' perceptions of the similarities and differences between teaching in a F2F classroom and in the online environment. The data gathered came from discussions with teachers about their experiences in teaching online courses. Their perceptions of the processes involved in developing and teaching online courses as compared to F2F courses were used as the basis for the study. The focus of research using a qualitative approach is understanding processes rather than outcomes, and how people create meaning out of the events that happen around them (Glesne & Peshkin, 1992). The qualitative approach is appropriate in studying educational questions such as the ones in this study in that the words of the actual people involved in educational experiences are used to express the complexity of the human interactions involved in the teaching and learning process.

The research design incorporated a focus group discussion with five teachers, followed by in-depth interviews with two of those teachers. The participants selected for the study were full-time teachers from a large community college in southern Ontario. In order to generate detailed data of teachers' perceptions of the similarities and differences between teaching in a F2F classroom and an online environment, participants were selected using the method of purposeful sampling. Random sampling from among all of the college's faculty members could not have guaranteed participants with experience teaching in both the online and F2F environments, which was critical to this study. Each of the participants had over 10 years of F2F teaching experience and each had been involved in the development and teaching of at least one online course.

The number of faculty at the college who had previously taught online courses at the time of the study was still fairly low, which posed a limitation in terms of participant selection. The faculty in this study were part of the group of "innovators" or "early adopters", so called due to their interest in and willingness to explore new technologies (Jaffee, 1998; Collins, 1999). The selection of teachers who were innovators or early adopters of instructional technologies may have been a limitation in that those teachers were most likely to seek the potential benefits of the technology. However, at the time of the study, it was possible to select only from among this group of teachers at the college to learn about online teaching experiences as the majority of teachers had not yet begun exploring online teaching.

This study was not intended to look at issues such as what specific technologies (eg. course management systems) were included in the courses taught by the participants. While it is recognized that the use of certain technologies to support an online course may contribute to the level of satisfaction users experience throughout the course, a discussion of the different technologies was outside the scope of this study.

Findings

The study focussed on how teaching in the online environment compares with teaching in the F2F environment. The themes that evolved from the study included what roles teachers and students adopt in each setting, what learning communities mean online and F2F and how they are developed, and how institutional policies, procedures, and technological infrastructure affect teaching and learning F2F and online. The teachers supported the claims in the literature in terms of the issues that they faced in the online environment, and added their own experiences as innovators in the field of online education.

A number of factors were identified as affecting teaching in an online environment. Motivation was an important factor for the teachers in this study. They were actively interested in new software and hardware developments and wanted to explore the potential of the new technologies as they related to education. They were also interested in seeking ways to integrate the new technologies effectively into their teaching practice. Several of the teachers said that they came to online teaching because they wanted a new experience, different from the one they were familiar with in the F2F classroom. These motivations are similar to those found by Rockwell, Schauer, Fritz, and Marx (1999), who suggested that teachers explored new instructional technologies for reasons that were primarily focussed on intrinsic rewards such as providing innovative instruction and exploring personal interests. Despite the challenges, obstacles, and frustrations that they experienced during their explorations, these teachers came for the express purpose of exploring the possibilities.

The design of online courses was an important topic for the teachers. The general goals of F2F and online courses were seen as being essentially the same. An additional goal in the online environment was developing proficiency in the specific methods of communication to be used in an online course. The teachers felt that the strengths of different media needed to be considered carefully to ensure that they would be used to their best advantage in supporting students' learning. Akyurekoglu (1996) recommends that the choice of media be considered carefully, since it plays a critical role in developing a quality educational experience. The teachers felt that using the online medium for housing primarily text-based notes was a significant waste of an expensive medium, and that the medium really should be used in ways that helped students visualize concepts, provided opportunities to interact with the material, and gave students feedback.

Schrum and Berge (1997) talk about the need to adapt the educational activities and the evaluation process from the F2F setting so that they are effective in the online setting. The teachers felt that the structuring of the assignments was a critical part of an online course, perhaps even driving the structure of the course itself. This was one of the important differences noted in the online environment when compared to a F2F classroom environment. Because of the loss of visual

cues in the online environment, the teachers felt that the best way for them to know whether or not their students were understanding the materials was through the completed assignments. Therefore, these assignments needed to assess more than the basic absorption of facts, but rather a deeper understanding of the course materials. A related issue was that of flexibility within online course design. The teachers discussed the importance of allowing student choice of activities, reviewing timelines throughout the course to help students reach their learning goals in a new environment, and even assessing whether other content should be included in the course based on discussions with and by students during the course.

Teaching style was discussed as having an important impact on teaching online. The teachers felt that, for the most part, the teaching style that a teacher had in a F2F classroom would likely be the one brought with her/him to the online environment. Those who had a primarily lecture-based teaching style in the classroom would likely have difficulty initially in interacting effectively in the online environment. Those who had a collaborative teaching style in the F2F classroom would likely find the move to the online environment comparatively more manageable. Schifter (2000) also suggests that those teachers who are familiar and comfortable only with a teacher centred teaching model in F2F classrooms may have difficulty adapting to the online environment. Berge (1998) suggests that online teachers need to be responsive to the different nature of the online environment as compared to the F2F environment and they need to shift their role of primarily content expert to group facilitator, consultant, and resource person.

The teachers discussed the strength of the online medium in supporting the learning styles of their students. The online environment creates the possibility of presenting the same course materials in a variety of ways using different media. So the same concept could be described in text, illustrated with a graphic, explained in a sound file, demonstrated in an interactive exercise, and displayed in a short video segment. Of course, developing each concept within the course materials using each of the media would be prohibitively expensive in terms of time and other resources, but the possibility does exist to develop various ways of explaining the same idea in order to appeal to very different learning styles. The teachers used the term "redundancy" to describe this idea. Besides appealing to a wider variety of learning styles, building in redundancy in terms of various presentations of the same concept might increase the possibility that students would be able to access the material in the situation that some of the technology was functioning while other technology was not.

In discussing roles, the teachers described a shift from a teacher-centred to student-centred approach to learning, with students gradually taking on greater responsibility for their own learning. The teachers felt that they should provide a high level of support and interaction at the start, then fade into the background and let the students take over the responsibility for the direction and development of the discussion and their learning. Another aspect of the online teacher's role was to model effective online behaviour and interaction so students would understand the norms for the online environment. Davie (1988), McDonald and Gibson (1998), and Wegerif (1998) recommend this type of modelling, suggesting it is more effective than a description of what should be the norms. One of the teachers cautioned that teachers needed to be careful about the types of messages they posted in the online discussions because it was likely that students would take

those as models of appropriate messages, whether or not the teacher intended them to be used as models.

The issue of what is meant by a learning community online and how that compares to a F2F learning community was discussed at length by the teachers. In general, the teachers agreed on the value of having a community of students learning together online. The concept of learning community is described as an integral part of online teaching and learning in the literature (Berge, 1995; Burge, 1994; Harasim, et al., 1995). However, some of the teachers felt that it was not the only way for students to learn. They also felt that there could be different levels of online discussion and different levels of learning community forming within some courses, without detracting from the value of the course. The type of course, the teacher's preferred teaching style, the teacher's skill in facilitation, and a clear structure and purpose for student participation in the community were some of the factors involved in the creation and maintenance of a successful online learning community.

There were a number of characteristics that the teachers felt contributed to the likelihood of teachers and students succeeding in the online teaching and learning environment. One of the main characteristics or skills recommended for online teaching was the ability to communicate effectively in writing. There was a general sense that many teachers did not currently feel as comfortable communicating in writing as they did communicating verbally and that there was a learning curve to learning how to write effectively for the online environment. Another characteristic that was recommended for online teachers was a comfort level with technology. This was described as an ability to not only use technology when it was working properly but to deal with technology issues when the technology was not working as expected. There was a general sense that teachers who came to teaching online voluntarily because they were personally interested in exploring the online medium found it a good experience.

The teachers listed a number of characteristics that could increase their students' chances of success in the online environment. These included strong motivation for taking an online course, an existing level of technological familiarity, an independent approach to learning, and a disciplined approach to working through course materials. These characteristics are echoed by Schrum (1998) and Truman-Davis et al. (2000).

Throughout the discussions, the teachers described challenges that they had come across in their experience in online teaching, and their perception of the challenges students were experiencing. The lack of body language and visual cues online was one of the main challenges noted by the teachers. The inability to read the reactions from students about whether explanations or descriptions of the course materials were making sense was an important concern. To compensate for this loss, the teachers talked about needing to get information across in different ways, namely knowing how to communicate effectively in writing. The teachers felt the main challenge their students faced was using the technology itself. Students in an online course have not only to accomplish the requirements of the course, equivalent to students in a F2F course, but they have the additional challenge of completing these requirements in a new environment. Other student challenges included the requirement to submit work to a public forum and having to wait for colleagues to respond to their postings, and the requirement for greater

discipline from students to remain in contact with the teacher, the other students, and the course materials in an online setting. The teachers felt it required a higher level of motivation and discipline for students to connect to the online course than it would for a F2F course.

The teachers developed a number of strategies for dealing with the challenges they or their students encountered. One of the most important strategies teachers used for dealing with communication-related challenges was to create an environment in which they and their students were able to get to know one another. This included personalizing the environment by posting photographs of class members, using positive messaging to help students feel they were being treated as individuals rather than as messages in a computer, using invitational, informal, and welcoming language to help create an environment that was not intimidating to students, and including social comments in messages to students. The teachers in the study described how the interactions in the online environment were different from those found in F2F, and that it could feel like a dehumanized environment for some people. One of the teachers suggested we were at a relatively early stage of exploring online teaching and learning, and while online interactions may seem somewhat unnatural at this stage for some people, that with more time, we may come to appreciate the possibilities inherent in online teaching and learning and enjoy the types of interactions possible in that medium.

In terms of institutional issues, the teachers talked about the college's decision to pursue online education. They felt that the college did not have a clear plan for why it was pursuing online education, but felt that the college had decided that it might be wiser to pursue it in some way than not at all. Bates (1997) strongly recommends that an institution develop a clear plan for how to integrate instructional technology into its organizational structure and processes, or otherwise the institution runs the risk of investing in costly resources without getting efficient and effective use of them. The teachers felt there was a strong need for a comprehensive plan for how online education would fit into the existing institution.

Echoing Kaye's (1989) recommendation to consider whether the online environment is suitable to all learners, the teachers felt that online education should be considered an alternative option to F2F courses. They felt that for some students, online courses could be an excellent option. Generally, there was agreement among the teachers that there should be various options available to students in terms of types of courses so they could choose based on factors such as their learning style, schedules, and travelling restrictions.

The teachers talked about the need to adjust administrative policies and procedures related to the delivery of online courses. For the most part, it seemed the college had been using existing policies and procedures developed for F2F courses and trying to adapt them to online courses. They felt this was a "band-aid" approach and tended to lead to confusion among students and teachers. This included procedures such as scheduling, which has an inherently different meaning in a F2F and online environment. There was a clear need expressed for new procedures to be developed to take into account the different structures of online courses and to provide clear documents (such as schedules and timetables) for students and teachers involved in online education.

The teachers expressed concern about some policies that had been applied in the case of online courses. For example, they were concerned that students were being registered late in the semester into online courses, something that generally would not happen in the case of F2F courses. They felt it created the impression that missing time in an online course was not as important as in a F2F course, and that online courses were somehow easier than F2F courses, which all the teachers agreed was not an accurate impression.

What was missing from the teachers' discussions were issues related to intellectual property and faculty workload as related to teaching online. These issues have importance in the literature on online teaching and learning, and it is notable that they were missing from this discussion. Hawkins (1999) and Boettcher and Conrad (1999) in particular talk about the issue of intellectual property as one of great importance in creating incentive or disincentive to teachers moving to the online environment. It is possible that these issues were not mentioned because this group of teachers were the innovators in this field and they placed greater emphasis on exploring the new medium rather than focussing on the obstacles or limitations they found in their explorations. However, it is likely that these issues will become important as the mainstream group of teachers begins exploring online teaching, and they are important issues to be clarified by the college's administration.

The teachers were all in agreement about the critical role that technology played in online teaching and learning. There was discussion about the level of frustration they felt at the loss of control when the technology was not working. All of the teachers shared their experiences in dealing with technology failures, and many suggested that there were some resource-demanding technologies, such as video, that they were not willing to incorporate until they were more stable. One of the teachers likened servers being down in an online course for two days to a teacher not arriving at a F2F classroom within 15 minutes of the start of class. In the latter example, there is a college policy stating that students can leave without waiting any longer for the teacher to arrive, and the teacher questioned whether students should expect a parallel policy in the case of an online course.

The teachers discussed the college's technological infrastructure and felt that in this area also there needed to be a comprehensive plan for supporting everyone involved in online teaching and learning. One of the problems seemed to be that it was not evident which areas of the college were responsible for certain situations and who should be contacted in the case of problems. They felt that the roles and responsibilities for maintaining the technological infrastructure needed to be clearly identified and communicated to the college community so that all the academic and support services involved in supporting online teaching and learning would be aware of precisely where to get help when it was needed. One of the teachers summarized the issue of technical problems and the technological infrastructure with the statement that no matter how effective and well designed an online course is, if the students are not able to access it, or get help on how to access it, the course's value is minimal.

Discussion

The teachers identified a number of benefits to teaching online. These included the possibility that the online medium might be able to facilitate group

discussion better than a F2F classroom could, the possibility to develop online activities to accommodate a variety of learning styles, and the opportunity for teachers to explore new ways of teaching and learning. Other benefits included the different types of interactions the online environment provided, such as the flexibility that online discussions allowed in terms of developing numerous conversations on various themes and the ability to follow numerous discussions simultaneously. As well, being based primarily on written communication, another benefit of the online environment was that it required teachers to be much clearer in their explanations to students and it provided an opportunity for the teachers to develop their ability to communicate in writing more clearly. For students, one of the benefits identified for online courses was the possibility for them to explore a new medium and learn about things beyond the requirements of their courses.

The teachers raised many important issues affecting online teaching and learning. Based on the discussions with the teachers and on the literature, a visual summary of the factors that affect teaching in an online environment is shown in Figure 1.
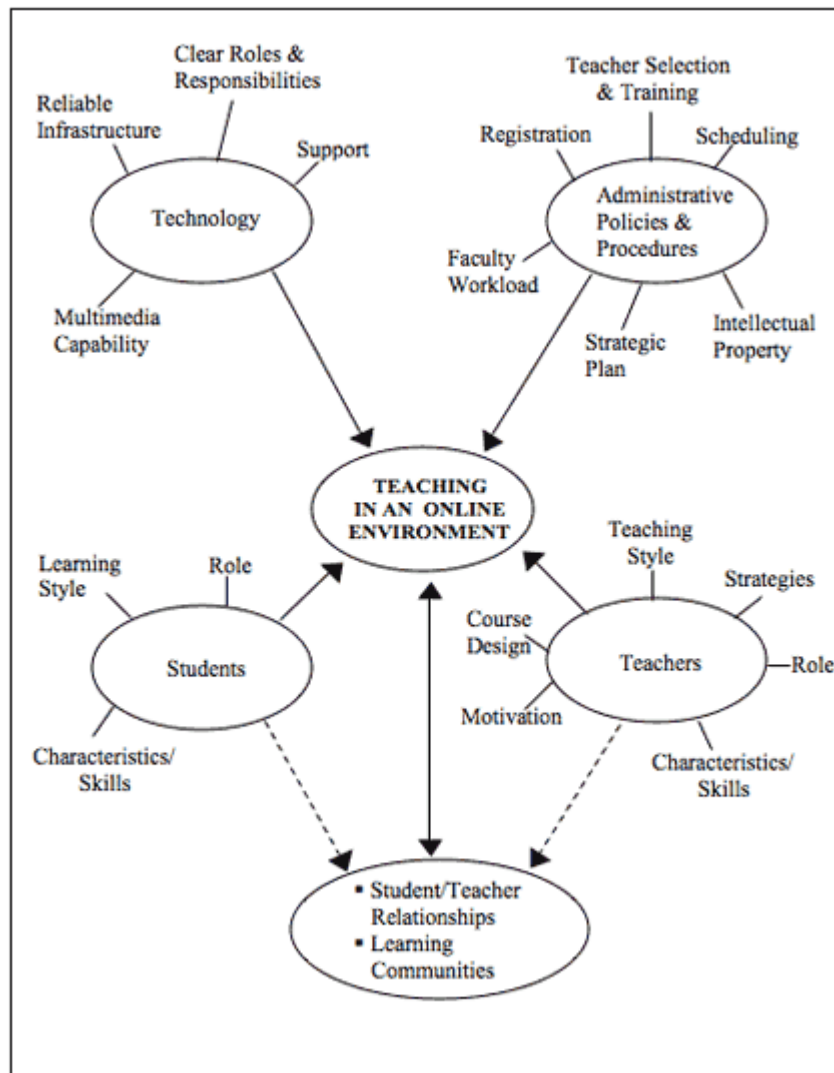
Figure 1. Factors affecting teaching in an online environment

The main factors affecting teaching in an online environment are technology, administrative policies and procedures, and the teachers and students themselves. Technology has a critical role in affecting teaching online. Teachers and students require technical support throughout an online course, and there needs to be a reliable technological infrastructure and a clearly delineated structure for roles and responsibilities for maintaining that infrastructure. As well, the multimedia capability of technology is important in creating environments and learning materials that can support effectively the teaching and learning process online. The institution's administrative policies and procedures affect online teaching in the areas of teacher selection criteria and teacher training, intellectual property and workload policies, registration and scheduling procedures, and the existence of a comprehensive strategic plan related to online teaching and learning.

Teachers and students have a critical impact on teaching online. The way in which teachers design their online course, their teaching style and role online, the characteristics or skills that help them teach effectively online, the motivation that brings them to the online environment, and the strategies they employ to support students have a significant impact on the success of an online course. Factors related specifically to students include their learning styles, the characteristics or skills that help them learn effectively online, and the role they play in the online environment.

The development of teacher/student relationships and learning communities in the online environment depend on both teachers and students. Indeed, there is a two-way connection between online teacher/student relationships and learning communities, and teaching in an online environment. The relationships that develop online affect the teaching that occurs in an online environment, and at the same time, the types of relationships and learning communities that can develop online are themselves affected by the teaching that occurs in the online environment. They are at the same time dependent on one another and affecting one another.

Teaching in any environment is affected by administrative policies and procedures, by any technology that is integrated into the process, and by the students and teachers themselves. The main differences between teaching in a F2F and online environment would be the types of interactions possible among course participants (teachers and students) in the online environment, particularly communicating primarily in writing rather than verbally and without nonverbal signals, and the critical reliance on technology. These are the areas that need to be focussed on by teachers, students, and institutions in order to develop the environment necessary for students to be able to learn successfully and for teachers to be able to teach successfully in the online environment.

Rationale for the Study

As more educational institutions are exploring alternative mode courses, including online courses, there is an increased importance to research the issues affecting teaching and learning in the new environments. In order to prepare the participants, both teachers and students, for the experiences they will encounter in the online environment, there is a need to develop a good understanding of the changes that happen in the teaching and learning process when moving to the new medium.

Once there is an understanding of what differences exist between the online and F2F environments, teachers can plan for how to take advantage of the positive features and diminish the anticipated challenges for themselves and their students. One of the challenges with technology has been that it has evolved faster than educators' strategies for using it effectively, and there is a great need to develop these strategies and approaches. Teachers could greatly benefit from experiencing the differences between an online and F2F environment from a learner perspective and reflecting on these differences before moving their practice into the online environment. Often pressures to implement online courses within a short timeframe limit the amount of time teachers have for experiencing and reflecting on the differences between the online and F2F environments. This study was intended to provide teachers who have begun or are considering teaching in the online medium with reflections on the similarities and differences in teaching in the online and F2F settings, as well as insights or possible strategies for using the online medium, from practitioners who have experience in both environments.

Conclusion & Further Research

There are a number of questions that need to be addressed relating to the online medium in education. We need to explore what we know about online teaching and learning, what the benefits and challenges are, what the potential is, what we can do with what we do know, what we can expect for online courses, and what needs to be researched. The intent of this study was to add to that exploration.

Several directions for further research surfaced in this study. The teachers in this study perceived that the online environment accommodated learning styles at least as well as, and in some cases possibly better than, a F2F environment. However, it was suggested by one of the teachers that the majority of online courses offered at this stage primarily support students who prefer to take in information by reading. As the possibility appears to exist to support various learning styles, more research is needed to determine which media can support which learning styles. With that kind of research as a basis, more focussed effort can be expended in developing activities and interactions using specific media to support specific learning styles.

The teachers who participated in the study were the innovators at the college, comprising a group of teachers who actively looked for new technologies and explored and experimented with the possibilities of the new technology as related to teaching and learning. It would be valuable to do longitudinal studies with this type of teacher to see how the issues and factors affecting teaching online changed over time as perceived by the teachers. Also, it would be valuable to raise the types of questions that were asked in this study with groups of teachers who came after the "innovator" group of teachers to see how their perceptions of issues and factors affecting teaching online compare to the perceptions of innovators. This would be valuable information for institutions, to see what kinds of structures and policies are needed to effectively support teaching and learning online as greater numbers become involved in the practice.

Overall, although there were important differences noted by the teachers in terms of reliance on technology and different methods of communicating and

     interacting in an online environment, the teachers felt that there were more similarities than differences between teaching in a F2F and an online environment. The social process of teaching in any setting is based on the relationships that develop between teachers and students and depends on the creation of a supportive environment in which teaching and learning can take place. Learning how to do that in an online environment, using interactive technologies, is an exciting opportunity for teachers and students to explore the potential of new media and to add a new dimension to the process of teaching and learning.

References

Akyurekoglu, H. (1996). A critical perspective on using communication and information technologies in adult and continuing education. Journal of Continuing Higher Education, 44(1), 25-29.

Annand, D., & Haughey, M. (1997). Instructors' orientations towards computer-mediated learning environments. Journal of Distance Education, 12(1/2), 127-152.

Bates, A.W. (1997). The impact of technological change on open and distance learning. Distance Education, 18(1), 93-109.

Berge, Z.L. (1995). Facilitating computer conferencing: Recommendations from the field. Educational Technology, 35 (1), 22-30.

Berge, Z.L. (1998, October 29-31). Concerns of online teachers in higher education. Paper presented at the Tel Ed 98 Conference, New Orleans, LA. Retrieved June 21, 1999, from the World Wide Web: http://jan.ucc.nau.edu/~mpc3/berge/iste98.html

Boettcher, J.V., & Conrad, R. (1999). Faculty guide for moving teaching and learning to the web. Mission Viejo, CA: League for Innovation in the Community College.

Brunt, J.M. (1997). Can you put your arm around a student on the internet? In J. Field (Ed.), Electronic pathways: Adult learning and the new communication technologies (pp. 29-32). Leicester, UK: National Institute of Adult Continuing Education.

Burge, E. (1994). Learning in computer conferenced contexts: The learners' perspective. Journal of Distance Education, 9(1), 19-43.

Carlson, R., & Everett, D.R. (2000). Taking instruction online? Paper presented at the Mid-South Instructional Technology Conference, Middle Tennessee State University, TN. Retrieved May 19, 2001, from the World Wide Web: http://www.mtsu.edu/~itconf/proceed00/carlson.html

Collins, M. (1999, September 20). Leading faculty gently by the hand. Online-Ed. Retrieved June 30, 2000, from the World Wide Web: http://www.edfac.unimelb.edu.au/online-ed/mailouts/1999/Sept20.html

Davie, L. (1988). Facilitating adult learning through computer-mediated distance education. Journal of Distance Education, 3(2), 55-69.

Davie, L. (1989). Facilitation techniques for the on-line tutor. In R. Mason & A. Kaye (Eds.), Mindweave: Communication, computers, and distance education (pp. 74-85). Oxford, UK: Pergamon Press.

Davis, M. (1997). Fragmented by technologies: A community in cyberspace. Interpersonal Computing and Technology, 5(1-2), 7-18. Retrieved April 21, 1999, from the World Wide Web: http://www.helsinki.fi/science/optek/1997/n1/davis.txt

Eastmond, D. (1998). Adult learners & internet-based distance education. New Directions for Adult & Continuing Education, 78, 33-41.

Elton, L. (1988). Conditions for learner autonomy at a distance. Programmed Learning & Educational Technology, 25(3), 216-224.

Feenberg, A. (1989). The written world. In R. Mason & A. Kaye (Eds.), Mindweave: Communication, computers, and distance education (pp. 22-39). Oxford, UK: Pergamon Press.

Garrison, D.R. (1997). Computer conferencing: The post-industrial age of distance education. Open Learning, 12(2), 3-11.

Glesne, C., & Peshkin, A. (1992). Becoming qualitative researchers: An introduction. White Plains, NY: Longman.

Hara, N., & Kling, R. (1999). Students' frustrations with a web-based distance education course. First Monday, 4(12). Retrieved January 13, 2000, from the World Wide Web: http://firstmonday.org/issues/issue4_12/hara/index.html

Harasim, L. (1987). Teaching and learning on-line: Issues in computer-mediated graduate courses. Canadian Journal of Educational Communication,16(2), 117-135.

Harasim, L. (1989). On-line education: A new domain. In R. Mason & A. Kaye (Eds.), Mindweave: Communication, computers, and distance education (pp. 50-62). Oxford, UK: Pergamon Press.

Harasim, L., Hiltz, S.R., Teles, L., & Turoff, M. (1995). Learning networks: A field guide to teaching and learning online. Cambridge, MA: MIT Press.

Hawkins, B.L. (1999). Distributed learning and institutional restructuring. Educom Review, 34(4). Retrieved January 31, 2000, from the World Wide Web: http://www.educause.edu/ir/library/html/erm9943.html

Hillesheim, G. (1998). Distance learning: Barriers and strategies for students and faculty. The Internet and Higher Education, 1(1), 31-44.

Jaffee, D. (1998). Institutionalized resistance to asynchronous learning networks. Journal of Asynchronous Learning Networks, 2 (2). Retrieved April 3, 2000, from the World Wide Web: http://www.aln.org/alnweb/journal/vol2_issue2/jaffee.htm

Kaye, A. (1989). Computer-mediated communication and distance education. In R. Mason & A. Kaye (Eds.), Mindweave: Communication, computers, and distance

education (pp. 3-21). Oxford, UK: Pergamon Press.

Kilian, C. (1997). F2F – Why teach online. Educom Review, 32(4). Retrieved January 31, 2000, from the World Wide Web: http://www.educause.edu/pub/er/review/reviewArticles/32431.html

Kowch, E., & Schwier, R. (1997). Considerations in the construction of technology-based virtual learning communities. Canadian Journal of Educational Communication, 26 (1), 1-12.

McDonald, J., & Gibson, C.C. (1998). Interpersonal dynamics and group development in computer conferencing. The American Journal of Distance Education, 12(1), 7-25.

Oblinger, D. (2000, March/April). The nature and purpose of distance education. The Technology Source. Retrieved July 10, 2000, from the World Wide Web: http://horizon.unc.edu/TS/commentary/2000-03b.asp

Rockwell, S.K., Schauer, J., Fritz, S.M., & Marx, D.B. (1999). Incentives and obstacles influencing higher education faculty and administrators to teach via distance. Journal of Distance Learning Administration, 2(4). Retrieved July 10, 2000, from the World Wide Web: http://www.westga.edu/~distance/rockwell24.html

Schifter, C.C. (2000). Faculty participation in asynchronous learning networks: A case study of motivating and inhibiting factors. Journal of Asynchronous Learning Networks, 4 (1). Retrieved June 27, 2000, from the World Wide Web: http://www.aln.org/alnweb/journal/Vol4_issue1/schifter.htm

Schrum, L. (1998). On-line education: A study of emerging pedagogy. New Directions for Adult & Continuing Education, 78, 53-61.

Schrum, L., & Berge, Z. (1997). Creating student interaction within the educational experience: A challenge for online teachers. Canadian Journal of Educational Communication, 26(3), 133-144.

Solloway, S.G., & Harris, E.L. (1999). Creating community online, Educom Review, 34 (2), 8-13.

Spencer, B. (1998). Distance education and the virtual classroom. In S.M. Scott, B. Spencer, & A.M. Thomas (Eds.), Learning for life: Canadian readings in adult education (pp. 343-352). Toronto, ON: Thompson Educational.

Stiles, M.J. (2000, April). Effective learning and the virtual learning environment. Paper presented at the 2000 European Universities Information Systems Congress, Poznan, Poland. Retrieved July 6, 2000, from the World Wide Web: http://www.staffs.ac.uk/COSE/cose10/posnan.html

Truman-Davis, B., Futch, L., Thompson, K., & Yonekura, F. (2000). Support for online teaching and learning. Educause Quarterly, 23 (2). Retrieved July 7, 2000, from the World Wide Web: http://www.educause/edu/ir/library/pdf/eq/a002/eqm0023.pdf

Wegerif, R. (1998). The social dimension of asynchronous learning networks.

Journal of Asynchronous Learning Networks, 2(1). Retrieved April 3, 2000, from the World Wide Web: http://www.aln.org/alnweb/journal/vol2_issue1/wegerif.htm

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