0123 When the shoe doesn't fit: supporting students who are challenged by online educational technologies

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Abstract

Taking an action research approach, this paper explores the experiences of graduate level students who found a technology enabled classroom challenging. After taking part in an online orientation activity, the students began their studies in a three week face-to-face residency, followed by two distance learning sessions. At the end of the second session, 15% of the students had either taken a leave of absence, or left the program permanently.

Current literature focuses on several issues that have a negative influence on students' ability to achieve their educational goals in an online environment. These issues include isolation, lack of preparedness, and feeling overwhelmed. Building on this, we explored the following question: How can educational technology be used to increase retention for students enrolled in an online course? Aimed at identifying approaches to overcoming some of the problems associated with studying online, we sought to examine the perceptions of MBA students by asking the participants to take part in a focus group discussion.

This paper will discuss the challenges found by the graduate level students who worked in a computer-mediated educational environment, as well as highlight some of the solutions aimed at increasing student retention by enhancing the online classroom. Findings revealed that technologies aimed at encouraging student presence in the online classroom, as well as those that allow them to interact socially online could positively increase student retention. In addition, employing tools that support the students' desire to repeat and reflect on material serves to improve the experience for those studying online. Finally, instructors who display comfort with the use of technology also have a positive impact on student learning.

By providing a heightened awareness of the issues faced by graduate students working online, as well as spotlighting some key solutions, this study underscores the importance of targeting appropriate technologies when designing the online classroom. Further studies in this area could explore undergraduate engagement, generational differences, as well as learning preferences in the context of online learning.

Introduction

Building on a body of current research, the study reported in this paper explored the experiences of graduate level students who found a technology-enabled classroom challenging. At a small university in Western Canada that specializes in graduate and upper level undergraduate programs, MBA students worked in a blended learning environment. The MBA program began with a four-week online introductory session, followed by one of three on-campus residency sessions. After completing the residency component, students returned home and began the first distance learning session. The task of balancing career, family, and learning was challenging, and as a result, by the end of an eight month period, 15% of the students had left the program.

The aim of the study was to determine what tools could be incorporated in the online component of the graduate program that would support students in their learning. The specific objectives were:

- To explore the challenges facing students as they worked in the online environment.
- To discover which types of tools had enhanced the students' work in the online classroom.

In order to achieve these aims and objectives, a two phase action research plan was developed and students were invited to attend a focus group to discuss their experiences in the online classroom.

Background

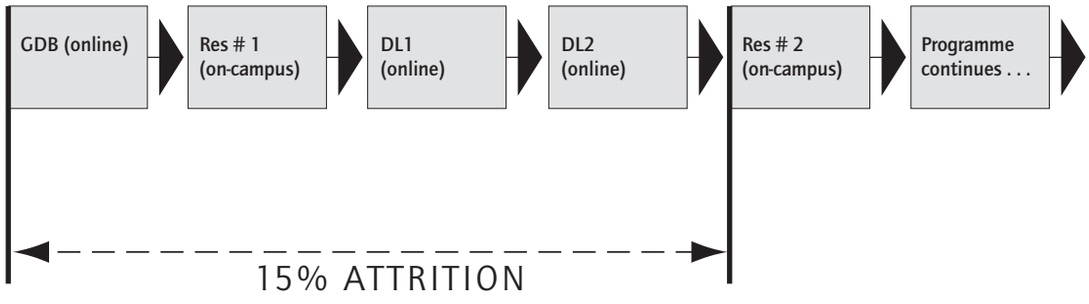
Some individuals experience challenges making the transition into higher education from secondary schools and from the workplace . As a result, students may need assistance from the institutions if they are to succeed with their educational pursuits. In our study we examined the perceptions of students who had started an MBA program at a university in Western Canada in May 2008. These students had an average of 17 years' work experience, and were, on average, 40 years in age. They came from a number of different geographic locations, both in Canada and worldwide, which meant the group of students had a wide variety of experiences and skill sets.

The graduate program operated in a blended learning environment, with the first classroom experience being an on-campus residency of three weeks. Prior to the start of the residency, students were directed to online, not-for-credit, activities which included course readings and an orientation to the learning environment. This online session, 'Getting Down to Business' (GDB), was four weeks in length, and was primarily intended to prepare the students for their upcoming on-campus classroom experiences and for their studies in general. The activities included instruction and navigation of several university-based sites, readings related to the upcoming residency, assignment submissions via online drop boxes, and an opportunity to interact with one another in an informal discussion area. It was hoped that

this ability to chat online with other students would aid in the creation of a learning community which would support the students throughout the program. Once in the residency, students had face-to-face classes in four subjects. While the classes were held in a physical location at the university, students were expected to make use of online tools and use a Moodle-based educational platform to locate a variety of resources.

After completing the on-campus residency, students engaged in their first distance learning session (DL1), taking two online courses simultaneously. This was followed closely by another distance learning session (DL2), again with two online courses, and then students returned to campus for their second residency. Figure 1, below shows the flow of the program.

Figure 1: Flow of program



Between the start of the MBA program and the end of DL2, 15% of the students left the program. While it was understood that students left for a multitude of reasons, we were interested in finding out how the students that remained perceived the role of technology in their choice to continue with their studies.

Current literature speaks to the power and effectiveness of the online learning environment. Palloff and Pratt discuss the mutually empowering act—a means by which people share with each other, work, and live collaboratively. However, there are also several potential concerns for students who work in the online environment. For example, Bender (2008) noted that the feeling of being overwhelmed can contribute negatively to students' experiences in the online classroom . In addition, McInnerney and Roberts (2004), as well as McConnell (2006, 2000) focussed on the isolation experienced by some students in the online classroom; isolation that can cause students to feel dissatisfied with their choice of educational environment. While isolation may be counteracted by the development of a learning community, it could serve to exasperate existing problems , if not built and supported effectively.

Palloff and Pratt (2007) also discussed some of the key threats to success in the online classroom. They noted one of the main issues that had a negative influence on students' ability to achieve their educational goals was conflict with classmates, conflict which may be compounded by asynchronous online communication tools . In an earlier work (1999), they also discussed students' resentfulness at being asked to work with others. This can result in a variety of team-related issues such as mistrust, reduced participation, and even attrition . Building on these observations, we explored the following question:

How can educational technology be used to increase retention for students enrolled in an online course?

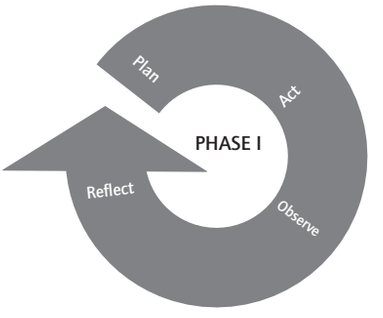
Aimed at identifying approaches to overcoming some of the problems associated with studying online, we sought to examine the perceptions of MBA students by asking the participants to take part in a focus group discussion.

Method

Using action research to frame the study, we developed an approach that included the four steps shown in Figure II: plan, act, observe, and reflect . As participants in the research we were able to not only observe the subjects, but also to enter into conversations that extended the information available. Our plan involved two phases, the first of which was exploratory in nature, directed towards finding out the issues that concerned the students . The second phase has not yet been completed, but, based on the feedback provided in the first phase of this study, we expect to implement and examine the use of some additional online tools for students.

In Phase I, we planned our approach to data collection and analysis, completed an ethical review for the project, and identified potential participants. In addition, we gathered background information on program attrition rates and student demographics. With regards to the analysis, we wanted to allow themes to emerge from the data, rather than concentrating on predetermined categories . This desire for an emergent approach led us to pursue qualitative methods. We determined that a focus group, with a small number of students, would allow us to use semi-structured, open ended questions that would enable participants to explore the concepts, and allow us to probe more deeply to obtain thick, rich data. In addition, the focus group setting would allow us to study the interactions between the group members, and put the participants on a an equal basis with each other. This was a key consideration as we wanted to insure that the participants felt comfortable discussing some of the problems they had encountered and bringing forward potentially contentious issues.

Figure 2: Phase 1 approach



The focus group consisted of two males and three females, aged from 33 to 54; this represented 8.5% of students who started the MBA program in May 2008. The participants came from a variety of locations across Canada, from British Columbia to Newfoundland. The focus group lasted approximately one and a half hours, with questions covering three domains: (1) students' expectations of online learning; (2) the challenges faced in the online environment; (3) tools that were or could be effective for students studying online. The first domain contextualized the discussion by allowing the participants to reflect on their perceptions of what online learning meant. In the second domain, students explored their experiences in the online courses. While some of the issues they exposed were content related, others provided insight on course design and online technologies. Questions asked under the third domain allowed students to elaborate on the answers provided earlier, focusing on the tools that they had found effective as well as their overall impressions of what is important to an online learner.

In addition to audio taping the focus group, we engaged a scribe to capture the key points raised in the discussion. After the scribe transcribed the handwritten notes, we independently reviewed both the tape and the transcripts, coming to independent conclusions on emergent themes. We then met several times to discuss the themes and how they were situated in current literature.

Contribution

There are many reasons to explore the appropriate use of technology in the online educational environment. Traditional teaching pedagogies are making way for newer constructivist methods, where students are encouraged to work together in different learning environments. The use of computer mediated communication in distance learning continues to increase and, as Dawson noted, there has been a change in student demographics—from those who have traditionally populated the more conventional, brick and mortar institutions towards a greater number of older students desiring

a more flexible approach to their learning . Competition is increasing for distance learning programs and, therefore, the need for institutions to explore educational technology and its impact on retention in the online learning environment is critical.

By studying students' experiences with online technology, educational institutions can be better informed when selecting online educational platforms. Understanding students' perceptions of the online learning experience, as well as the tools that best serve the needs of these students, will be invaluable to universities and schools as they move to expand their methods of delivery. Furthermore, students considering online learning can feel confident that educational providers have done their due diligence by exploring research that validates and informs their decisions on the use of technology. Therefore, research such as this study can not only benefit members of society who are seeking higher education, but it can also benefit those who work institutions seeking to provide newer ways of delivering their programs.

Evaluation

At the time of the Phase I focus group, participants had completed the GDB activity, five on-campus courses taught face-to-face in Residency I, and four online courses. This allowed the participants to share their insights based on a solid understanding of both online and face-to-face delivery models. Accordingly, the comments gathered for this research were based on the participants' lived experiences . Several themes emerged from our analysis of the data: (1) presence, (2) review/reflect, (3) social context, and (4) skill sets. In this section, we will explore these themes in light of both literature and the perspectives of the research participants.

Twenty years ago, Feenberg (1990) wrote of personal presence in the online environment when he discussed the then "new phenomenon of computer mediated communication (CMC)" . Feenberg noted that in the online environment, there is an emphasis on active participation, and a lack of presence may be met with anxiety . Still relevant two decades later, this observation was affirmed in comments from one of the focus group participants. This student echoed Feenberg's observations, noting that while student presence was important, it seemed to ebb and flow throughout the course and at times "there was a panic of people posting things" (S1). Nonetheless, focus group participants agreed that one of the key requirements for successful online learning was the need to have a strong connection with fellow classmates. Unfortunately there was the potential for a negative impact when new students arrived in the online classroom. As the following participant stated, "reading posts from people I didn't know was difficult. I didn't have any context. Once I met them, it was different. The context was better because I knew them" (S2).

Linked to personal presence, the benefits of learning in a social context have also been widely noted. However, establishing an inclusive social context can be challenging in an online class with over 40 students. The ability to read, reflect, and respond to multiple discussion threads can be overwhelming and, as Bender found, feelings of being overwhelmed contribute negatively to students' experiences of online learning . One student found a way to reduce the impact of high post volume by prioritizing the posts, reading only those from classmates s/he already had an existing relationship with, "in looking at the posts from people I didn't know, I just disregarded them and read the ones from the people that I knew" (S2). Unfortunately, this meant that (s)he was only engaging with a selection of classmates, so the social context was limited.

Creating an environment where students can engage socially can be challenging for an instructor new to the online teaching environment as it requires a different skill set. One focus group member identified the need to have "instructors who are comfortable with the technology" (S5). Other participants expressed surprise at the lack of interaction from some instructors, stating that "I expected it to be more 'back & forth' with the faculty" (S1) and "if I'm paying for an education, I'm looking to your experts to learn. If it wasn't for my cohort, I probably would have quit" (S2). This frustration not only speaks to the strength of the students' relationships, but also emphasizes the value of an instructor who maintains an active and engaging presence on the course site. Clearly then, instructors need to be comfortable and at ease when using online learning tools, as well as contribute to insightful discussions, if the students' experience is to be both positive and meaningful. The result of working with a skilled instructor can be seen in the following participant's remark "she was phenomenal; she answered your question, but also posted another, and she would post a link or to YouTube to check out" (S5). It is apparent then that this instructor was adept in making use of the technology in a purposeful way.

In an asynchronous environment, where personal presence and social context are not always easy to promote, the use of video or audio recordings can be of some consolation and may play a significant role in students' success. As this participant commented, video clips that accompany text-based course notes can help to reassure the student, "s*eeing the face of the instructor on the screen gave me comfort"* (S4). Other students confirmed the value of video clips and the Moodle platform when they stated that, *"the only way I got through Finance was those videos!"* (S3) and *"the advantage to having Moodle over straight lecture was that you always had Moodle to go back to*" (S4). Here the students were referring to their ability, in an asynchronous environment, to review material multiple times and reflect on it without the pressures found in the face-to-face classroom, where an instant reaction and response are often necessary. However, as the following student found, reliance on Moodle was not without problems:

> "It's funny how quickly Moodle becomes part of your everyday world, so there was this funny shift when Moodle went 'down'. There was this little voice in my head that went "oh my, I'm going to be so screwed because there are all these assignments due." (S2)

In this case, a platform upgrade was scheduled that caused disruption in the availability of the Moodle-based course, leaving students without access to their online classroom.

When asked to recommend online learning tools that could increase their chances of success, the focus group members concluded that the use of visual tools such as webinars, video conferencing, and videos clips would serve their needs well. As the following participant stated, an ideal course would "have a webinar, and have it recorded so that you can play it back if you can't be there for the presentation" (S4). It is therefore clear that seeing the instructor, in digital format, or hearing his/her voice, was perceived as a key to success in the online learning environment.

Regarding the use of technology in the online environment, the participants' identified the need to address four critical areas. First, they expressed the necessity of having technology that supports both student and instructor presence. Secondly, tools that allow them to review and reflect on the course material are necessary. Third, the social context of learning was highlighted, and finally, it was important to have instructors who were able to use technology well. Students did not express the need for a multitude of complex tools, but quite simply expressed the need for technology that supported these identified needs.

As a consequence, our recommendations addressing the identified needs are shown in Table 1, below.

Table 1: Recommendations

Identified need	Recommendation
Presence	Video conferencing, webinars, audio clips
Review/reflect	Video clips, PowerPoint slides
Social context	Discussion areas, asynchronous and synchronous tools
Skill set	Training for faculty on the use of online technology and pedagogy

From our analysis of the data, we believe that if these relatively straightforward technologies were available in all online courses, and faculty were to receive training to support their use, students could achieve greater success, which would lead to a decrease in attrition of online students. Based on this study, perfecting existing tools, making them easy for both the instructor and students to use, as well as ensuring they are readily available, is a key to successfully retaining students in the online classroom. Also, when developing new tools, the emphasis should be on technologies that support students' ability to create a presence, review and reflect on course material, and engage socially, as this would have a positive impact on students' experiences in the online classroom.

While this study is still in its early stages, it is evident that careful use of educational technology is imperative if Higher Education Institutions are to provide appropriate online learning environments. Incorrect choice or application of technology can negatively impact the student's ability to learn. Identifying obstacles to learning, as well as gaining a clearer understanding of strategies that can be employed to mitigate challenges faced by students studying online, will lead to an enhanced learning environment, which in turn could positively influence student retention.

Conclusion

The participants in this research project clearly identified the need for synchronous tools that could enhance the asynchronous environment. These tools would not only provide the opportunity for students and faculty to be present in the courses, but they would also allow members of the online classroom to engage socially. In order to achieve this goal, participants recommended the use of visual tools, such as webinars and video lectures. Students also recommended tools that would be available for viewing on a repeat basis, as well as those that would facilitate reflection. With this in mind, education providers must seek out versatile tools that can mimic some of the positive attributes of the face-to-face classroom, using modern technology that allows repeated access.

In addition to providing tools, it is critical to have instructors who can comfortably navigate and use technology; merely translating lecture notes into a digital format is not sufficient. Instructors who are well-versed and comfortable with visual and audio aides, who can bring other resources to the virtual classroom like YouTube, and who can express themselves with creativity and energy in discussion threads will most likely be received with enthusiasm and excitement from students. By engaging students online in this way, it is expected that they will be motivated to continue with their studies and not just become another attrition statistic.

In conclusion, we were reminded of Feenberg's comment that "we must remember that CMC is a technology in process. Designers and users should involve themselves in the invention of the systems they require, rather than passively accepting what they are offered as a final product". We

must therefore continually strive to adapt and change technology to fit our requirements, finding new ways to accommodate our need to connect with others as we learn.

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