Minimizing Attrition in Online Degree Courses

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Abstract

The number of online programs in the higher education sector has increased dramatically in the last decade, and with it, an increase in attrition has become a recurring problem worldwide. Literature suggests that elements of culture, motivation, learning management systems and online pedagogy play a major role in attrition rates in the higher education sector. Using an interpretivist paradigm with qualitative case studies from six countries, the researcher explores online lecturers' successful engagement strategies on these four main thematic areas. Results provide a range of strategies that can be applied by lecturers to increase engagement and minimize online attrition.

Keywords: Online learning, engagement strategies, online pedagogies, online attrition, motivational strategies, diversity in online courses

INTRODUCTION

Online attrition has been one of the drawbacks of online degree programs. A large body of literature has investigated online students' perceptions of the online environment and their reasons for dropping out of courses, but not lecturers' views and challenges on the issue. The attrition problem has educational as well as economic implications, and it has also been attributed to the quality of education delivered by universities. This research aimed to examine the successful strategies applied by 18 online lecturers in six countries on their eLearning practices in the higher education sector. Based on an interpretivist paradigm, the researcher used qualitative methods to explore lecturers' views and challenges with online teaching and the creation of engagement in online environments. This research aimed to find alternatives to enhance the online teaching and learning processes, guiding institutions and lecturers to take measures to help reduce online attrition rates.

LITERATURE REVIEW

The number of online programs in the higher education sector has increased dramatically in the last decade, and with it, an increase in online attrition has become a recurring problem worldwide (Newman, Couturier, & Scurr, 2010). Herbert (2006) argues that in the late 1990s, the number of online courses offered by American institutions tripled, and by 2002, students enrolled in online courses were higher than 57%. A recent market size analysis report on global education expenditure indicates that the online market has a predicted global growth rate of 23%, from 2015 to 2017, which takes the market from US$90 bn to US$166.5 bn in 2015 and $255 bn in 2017 (Edtech Digest Market predictions, 2013). However, there has been an increase in attrition rates in online courses, which can be 10% to 20% higher than their face-to-face counterparts (Bart, 2012). Literature suggests that issues related to culture, motivation, effectiveness of

learning management systems (LMSs) and online pedagogies, play a major role in attrition in the higher education sector.

Culture

With the increased popularity of online courses, student cohorts have become more diverse, as some undergraduate courses, fully online, started to attract students worldwide. It has been suggested that these courses, mainly when attracting international students, are the ones in need of specialist designers that are knowledgeable about cultural differences, and who can create an inclusive, accessible and flexible learning environment (Gay, 2010). Researchers suggest that most online courses ignore the cultural and sub-cultural differences in learning behavior, and fail to address the diversity of their learners (Adeoye & Wentling, 2007; Mushtaha & Troyer, 2007; Rogers, Graham, & Mayes, 2007; Mercado; Hughes & Bruce, 2006).

Motivation

Researchers have claimed motivation to be one of the causes of online attrition (Willging & Johnson, 2004; Tyler-Smith, 2006; Herbert, 2006; Levy, 2007; Clow, 2013). Zaharias (2009) asserts that the affective dimension that affects motivation has been neglected in some eLearning developments, and without it, it is difficult to create a good connection between learners and their online courses, which makes them active and engaged. Visser, Plomp, Amirault and Kuiper (2002) tested the idea of using motivational strategies in a Pilot Test, where lecturers provided constant motivational messages to students in distant learning settings. As a result, there was an improvement on students' overall satisfaction and an increase in their completion rates. According to Timmis and Cook (2004), motivation is an essential element and part of good practice in online courses.

Learning Management System (LMS) and Online Pedagogy

In the discussion of effectiveness of LMSs, issues of a pedagogical and technological nature arise. LMSs are a suite of software tools that can be used to provide a range of teaching and learning activities and the services that enable their management and facilitation (Naidu, 2003). LMSs have, since early 2000's, become the technology commonly used by universities for their online programs (Steel, 2009; Rutkowski & Moscinska, 2010). It is argued that some educators are adding content online without applying sound pedagogical principles and LMSs are not used in effective ways (Vrasidas, 2004).

A combination of theories (behaviorist, cognitivist and constructivist) have been used to develop web-based material, as there is no single learning theory to follow (Ally, 2004). Despite the increase in online offerings in the higher education sector, courses are not always tailored to students' needs (Hughes & Bruce, 2006; Herbert, 2006; Uden, 2007). For eLearning to be successfully implemented, it needs to be rooted in strong pedagogical foundations (Govindasamy, 2001). According to Vrasidas (2000), the use of technology in teaching makes lecturers approach the design and delivery of courses with a constructivist approach, considering online education shifts the focus from knowledge transmission to knowledge construction. With learning that increasingly happens within online environments, researchers are also looking for new terms to describe it. Siemens (2004) introduced the idea of connectivism which, according to Ally (2004), is a more appropriate term to the globalized and networked world we live in today. Al-Sheri (2011) claims that previous learning theories (behaviorism, cognitivism and constructivism) focus on learning that happens inside the individual, and do not take into account the use of technology, which allows us to learn through networked knowledge and by processing knowledge through online social interactions. Sahin (2012) clarifies that our digital era includes

technology and connection-making as learning activities, and connectivism provides insight into these dynamics, providing greater relevance to learners' present needs.

Theoretical Framework

According to Schultz and Hatch (2012), interpretivism gives an associative model of analysis where researchers can explore the association between meanings, creating concepts that are unique to each context, and expanding cultural analysis. In qualitative studies, the researcher makes claims based primarily on constructivist perspectives, collecting open-ended data to develop themes that can be interpreted to reach to conclusions (Creswell, 2003).

Conceptual Framework

According to Smyth (2004), a conceptual framework is a useful tool to scaffold research, and therefore assists in making meanings of subsequent findings. The framework is what helps researchers to develop awareness and a greater perspective of a situation, framing the approach and perspective. Following this principle, this study's literature review underpinned the investigation through the conceptual framework by providing reference points from which the research questions emerged and analysis of data was conducted.

The four themes, presented by literature as main areas related to attrition are the basis for the construction of a web-based survey and interviews conducted with 18 online lecturers, in six countries: Australia, Brazil, Canada, Norway, Spain and the States, from February to April, 2014. All relevant University of New England IRB regulations were precisely followed during recruitment and data collection and Ethics approval from the University of New England was received before any contact was made with prospective participants.

The main research question was: *What are the effective engagement strategies used by online*

lecturers in order to reduce attrition rates? From this question, four sub-questions emerged, as follows:

Sub-questions:

• How do lecturers engage culturally diverse cohorts?

• What are the strategies used to keep students motivated?

• How do lecturers make use of LMSs to foster online engagement?

• What pedagogies are used to foster engagement?

Most studies have explored students' reasons for dropping out of online courses. The literature review highlighted the fact, for students, aspects of culture, motivation, the use of LMS and the online pedagogy chosen were the main reasons for leaving their courses. The importance of culture was highlighted by Andrade (2006), Caruana (2004) and Kim and Bonk (2002), explaining that lay culture is usually the norm and educators end up not providing an inclusive environment to culturally diverse students who end up not fully engaged in the online environment. Motivation and its effect on attrition was presented by Packham, Jones, Miller and Thomas (2004), Herbert (2006), Levy (2007) and Jones (2013) who explained the importance of creating strategies to increase students' motivation to learn. Other researchers, such as Rutkowski and Moscinska (2010), McGill, Klobas and Renzi (2008) and Christie and Jurado (2009), claimed that the ability to integrate technology using proper pedagogical skills while using LMSs can greatly affect students' attrition rates. Attrition caused by lack of a sound online pedagogical design was also explored by Tyler-Smith (2006), Levy (2007) and Godwin-Jones (2012), emphasising the need for training lecturers in the use of online pedagogical strategies. These recurring contexts in literature, considered as main reasons for attrition, led this research

to focus on four main thematic areas: culture, motivation to learn, LMS and online pedagogy, as outlined in Figure 1.
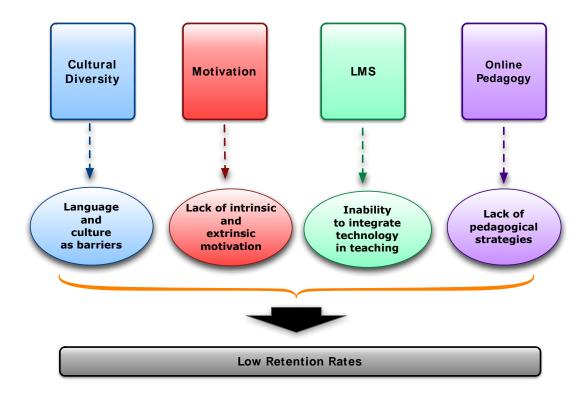

Figure 1: Conceptual Framework - Four Engagement Areas. Copyright 2014 by Eliani Boton

Considering most studies presented in the literature review concentrated on students' reasons for dropping out of courses, this research focused on lecturers' views on online attrition and the strategies they currently apply in their online courses.

METHODOLOGY

The four themes, presented by the literature as main areas related to attrition, were the basis for the construction of a web-based survey and interviews conducted with 18 online lecturers who teach in six universities, located in different countries, facilitating cross-case analysis and triangulation of data. A qualitative methodology was applied, with case studies used as instruments for the collection of data. Case studies help participants reflect on their

perceptions while communicating participants' point of view of the issue being explored. This research was based on constructivist and connectivist learning theories. The settings for this research were six universities, ranking as some of the most acclaimed online institutions in their respective countries. These universities are located in Australia, Brazil, Canada, Norway, Spain and the United States of America. Considering that online programs attract students from different geographical locations, it seemed more productive to have a holistic analysis of the problem, viewing it from the perspective of lecturers working in different countries and continents. Lecturers were chosen using purposive sampling, as participants needed to be carefully selected on the basis of their experience. For this research, the choice was to select only lecturers who teach core subjects in education, fully online. Bluff and Cluett's (2006) advice that a smaller sample size is more manageable in qualitative studies, hence, the choice of 18 lecturers (three in each university). However, data from multiple sources may be sufficient to collect relevant information and cross-check their consistency in order to increase the sturdiness of findings (Wahyuni, 2012). The aim is not generalisation of results, but the discovery of best practices in terms of the four themes that emerged from the literature review (cultural diversity, motivation, use of LMSs and online pedagogy).

Subjects were all education-related (see Table 1), with 12 undergraduate and six postgraduate courses.

Table 1

Subjects taught (n=18)

Subjects	Response	Percent
English Language	1	6%
TESOL, Languages and Literacies	1	6%
Education Technology	2	11%
Issues in Education	8	44%
Educational Psychology	4	22%
Pedagogy	2	11%

The courses represented in this research had from 54 to 350 enrolled online students. Lecturers have many years experience in their university careers. The lowest number of years teaching at university level reported was eight, and the highest 30 years. The lowest number of years teaching online reported is four, with 16 being the highest (see Figure 2).
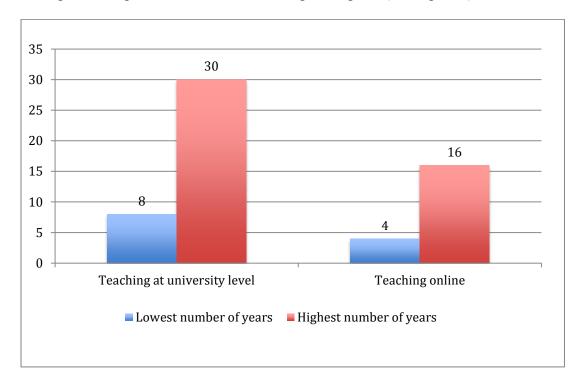
Figure 2: Number of years teaching at university level and online

Data was collected using a web-based questionnaire and individual interviews and analyzed in a qualitative way.

Results

Cultural diversity

Lecturers were asked about their views on strategies required to engage a diverse cohort, with the following question: *In your experience, do culturally diverse cohorts need specific strategies to foster student engagement when learning through an online course? Yes ( ) No ( ) If 'Yes', please provide brief details.*

A total of 16 out of 18 (89%) lecturers affirmed that diverse cohorts do not require specific engagement strategies. Three lecturers (17%) explained that they make use of thought-provoking questions or statements that challenge ideas as incentives for students to start a conversation. One lecturer (6%) added that moderation on the part of the lecturer is important to keep ideas flowing within a diverse cohort without criticism. Some interesting comments from lecturers highlight the fact that courses should always have a multicultural focus:

Multiculturalism and online classes are almost synonym. It is important to design a course that offers variety and choice of activities for the different learning types so to please a wider audience.

We are living in a modern world, with most higher degree institutions offering online courses. See the example of MOOCS and their global success. Online classes are global and diverse, and they are expected to be that way.

Lecturers agree that online environments attract students worldwide, and consequently, are already global and diverse. These results are consistent with those of Leask (2006), Morse (2003) and Mayes (2007), who suggested that online programs should always ensure cultural

inclusivity with the creation of collaborative strategies that promote culture awareness and cross-cultural communication among peers.

The different types of engagement activities lecturers adopt in their online environments were explored. *Question*: *What strategies do you use to foster student engagement within a diverse student cohort when teaching online courses?*

Lecturers, who participated in this study, have unanimously stated that they teach diverse cohorts in their online courses. Diversity is mostly described as students from different cultural backgrounds. Four main strategies clearly emerged from the responses, which were: collaborative activities for different learning styles, exchange of ideas through social interaction, multiple case studies for group activities and videos and mini lectures for team work. These elements can be seen in Figure 3:
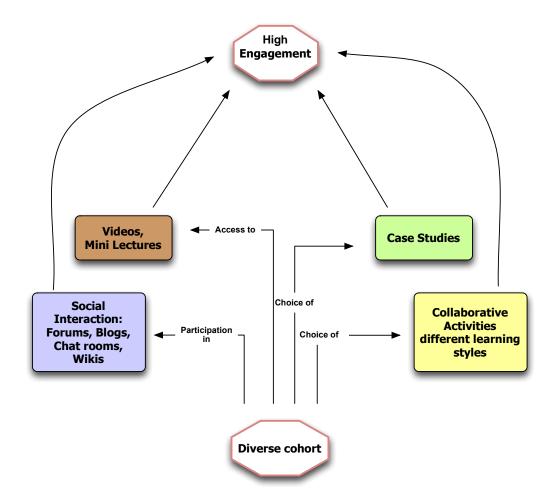
Figure 3: Fostering engagement within a diverse cohort. (Copyright 2014 Eliani Boton)

These four strategies are described separately:

1. Collaborative activities – All lecturers from the six countries agreed that by providing different collaborative activities that cater for different learning styles, they are able to get students more engaged, as there are more options and opportunities for them to engage with others. Nine out of 18 lecturers (50%) mentioned the use of synchronous and asynchronous activities for group-work as being very effective.

2. Social interaction - A total of 12 out of 18 lecturers (67%) – four from Australia, three from Brazil, three from Canada and two from Norway, listed social interaction with the

use to blogs, chat rooms, wikis and forums as efficient collaborative tools that are present in their online environment, where students can share their thoughts and ideas. Three out of 18 lecturers (17%) added that they participate in these activities with thought provoking views, because, as noted by one of them (6%), this makes students view the issue with a broader, and more diverse perspective. Social interaction among students has been widely applied in online environments, however, adding a lecturer's online presence as part of those interactions seems to be an added advantage.

3. Videos and mini lectures - Six out of 18 lecturers (33%), two from Canada, three from Brazil, and one from Spain, mentioned the use of pre-recorded and real time videos, where they presented a mini-lecture or topic for discussion. They explained that they use videos related to the subject matter, not only of themselves, but also from other lecturers whom they work in collaboration with, as a way of enriching the class and fostering student engagement with online content.

4. Case studies - Case studies were also listed and provided as examples of activities used by four out of 18 lecturers (22%), one from each of the following countries: Australia, Canada, Norway and Spain. They mentioned that multiple case studies were used as a way of creating meaningful group activities that are more related to students' future work life, thus fostering engagement due to an increased interest in the subject. Three of these same lecturers (17%) mentioned that groups could be formed by students' interest in the topic. Therefore, providing a few case studies and allowing students to choose which ones interest them is a good way of fostering engagement, as their interest support the exchange of ideas.

These results reflect the need to create a variety of engagement activities, considering that these are large cohorts, ranging from 54 to 350 online students. An unexpected finding was that a total of 17 out of 18 lecturers (94%) have mentioned that they work in collaboration with other lecturers, which means that they have support when applying the above-mentioned activities. One of the most unexpected results of this research is the fact that cultural diversity is considered a contributor to engagement and not a barrier. The term 'culturally diverse' refers to the quality of representing different cultures, as opposed to one single or a monocultural group. In this research, the term 'diverse' relates to students who live in different countries, and are, consequently, from different cultural, and mostly always, from non-English speaking backgrounds. A diverse cohort means that students from different countries are on the same online classroom environment, bringing their different views and perspectives to the online environment. It is the diversity of cohorts that is explored in this research, their challenges and the richness of their contributions to online collaborative activities.

By sharing the successful engagement strategies applied by these lecturers within their diverse cohorts, these findings are a great contribution for others who would like to test similar engagement strategies if they are also teaching in diverse online environments.

Motivation

When asked about the causes for low motivation, eight out of 18 lecturers (44%) claimed that low motivation is present when students are studying a core subject that is not their main interest, which had been already been claimed as an important cause for high attrition by Jung, Choi, Lim, and Leem (2002) and Ally (2008), just to cite a few. The successful motivational strategies lecturers in this research apply online are discussed and presented at the end of this section.

The second main cause, according to seven lecturers (39%), is when students have too many work or personal commitments, which minimize the time they have available for their studies. This confirms what Norton (2013) and Hachey, Conway and Wladis (2013) had already presented as results of their study in online attrition. Poor online design and lack of a sound pedagogical approach were cited by three out of 18 lecturers (17%) as causes for low motivation in students (see Figure 4). Considering that the courses represented in this research attract a high retention rate (70% or higher), it could be linked to the fact that lecturers are trained in the use of online pedagogical approaches. In this research, 14 out of 18 lecturers (78%) claim to be experts in their ability to integrate technology in teaching. Reasons for low motivation were similar in all universities selected for this research.
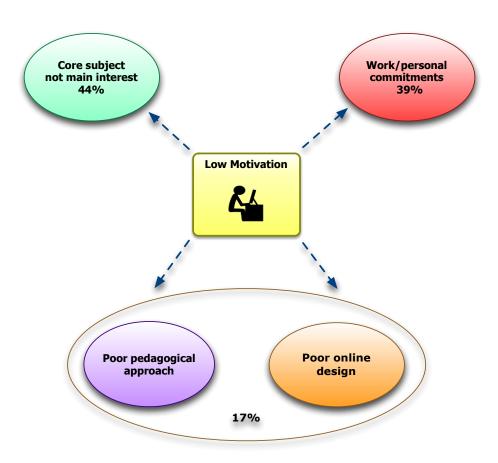

Figure 4: Causes of low motivation. (Copyright 2014 Eliani Boton)

Lecturers were asked to share the strategies they apply to keep or increase students' motivation in online classes. These are extremely important, considering that retention rates for these courses were claimed to be 70% or higher. They are as follows:

- *Multimedia resources* - The use of multiple forms of presentation (text, audio, video) are considered very important to keep motivation high, considering students present different preferences when learning a new subject (Mandernach, 2009). All lecturers (100%) listed the use of different multimedia resources as a way of keeping students motivated;

- *Lecturer's online presence* – A total of 15 out of 18 lecturers (83%) - five from Australia, four from Brazil, three from Canada and three from Norway - mentioned that they are able to effectively motivate their students through the use of ongoing presence and encouragement via participation in chat rooms, forums, by providing announcements to the whole class or even using personal email. According to them, students seem to be more active online when lecturers post messages and ask them to comment, or when they send a personal email to ask students if they require any support;

- *Problem-solving activities* - According to 13 out of 18 lecturers (72%) - four from Brazil, four from the United States of America, three from Spain and two from Norway - problem-solving is another effective way of keeping students motivated, considering that, in this type of activity, students demonstrate higher participation than other activities, like revision quizzes, for example, as they are encouraged to express their views and also discuss how they found the solution to a problem;

- *Authentic activities* – A total of 12 out of 18 lecturers (67%) - five from Brazil, three from Canada and four from Norway - listed the use of activities featuring real-life situations as

effective ways to promote engagement and motivation to learn. According to these

lecturers, online engagement is higher when they present activities that are applicable in

real life, creating interest as they complement students' learning; and

- *Challenging activities* – Five lecturers from Brazil, three from the United States of

    America and three from Norway, a total of 11 out of 18 lecturers (61%), claimed that

    when they provide challenging activities for collaboration, where students need to discuss

    and find solutions for them, motivation is increased, as this type of activities stimulate

    critical thinking.

Figure 5 shows the strategies applied to successfully increase students' motivation in online

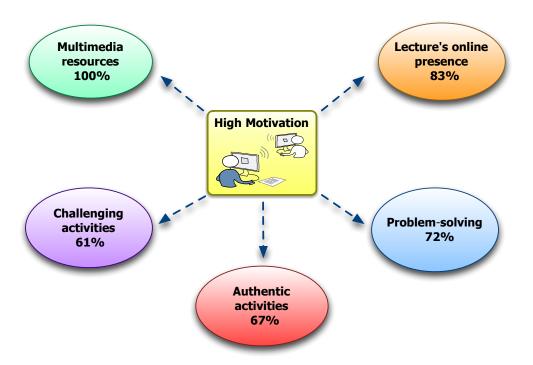degree courses with the corresponding percentage of lecturers listing them as effective.

Figure 5: Motivational strategies. Copyright 2014 by Eliani Boton

Answers indicate that lecturers use a combination of strategies, and not one single one. These

findings further support the importance of multimedia for increased motivation in online

activities, which had been previously reported by Jones (2005), Couros (2008), Mandernach (2009), Zaharias (2009), Siemens (2004) Anderson and Dron (2011) and Brecht (2012). Lecturers' online presence and its importance for students' increased motivation, reflects findings by Visser, Plomp, Amirault, and Kuiper (2002), who tested the use of motivational strategies with students in distant learning settings, achieving an improvement in students overall satisfaction and completion rates. The use of problem-solving, authentic and challenging activities in online courses were previously claimed to lead to online course success by Ally (2008) and Leppisaari et al. (2011).

Learning management system

To explore lecturers' proficiency in the use of LMSs, they were asked: *In terms of your use of computers and the Internet for university teaching, how would you rate your ability to use/integrate the technologies in teaching*? According to responses, five out of 18 lecturers (28%) had formal training in the use of eLearning, while only two out of 18 (11%) argued that they are able set up their own courses. Only two out of 18 lecturers (11%) declared that they learn as they go and nine (50%) have technical support.

Findings in this research suggest that, although lecturers seem to be successfully integrating learning activities into their online environments, reflecting their pedagogical skills, there is still a lot of dependence on specialized technical support, considering that nine (50%) of the lectures who participated in this research claimed to rely on technical support for their LMS environment. This research confirmed findings by McGill, Klobas and Renzi (2008) that lecturers need to acquire expertise in making use of technology to be more independent in the creation of their own courses.

Online pedagogy

Lecturers were asked about the online learning theories they adopt. This is represented on Table 2. The learning theory of choice for lecturers in this research is a combination of constructivism and connectivism with a total of 11 out of 18 lecturers (61%). Three lecturers (17%) follow a connectivist approach, two (11%) a constructivist one, and two lecturers (11%) use a combination of humanistic and constructivist theories. The findings of this research confirm what Ally (2008) and Siemens (2004) suggested, that connectivism is being used by lecturers to define the online learning theory in our digital age.

Table 2

Learning Theories (n=18)

Learning Theory	Response	Percent
Constructivism and Connectivism	11	61%
Connectivism	3	17%
Constructivism	2	11%
Humanism and Constructivism	2	11%

Summary

Overall, the cases reported in this study demonstrate that adopting online activities that are fit for diverse cohorts and support higher motivation, combined with the ability to integrate technologies in teaching with a constructivist and/or connectivist approach, result in higher engagement and retention in online programs, as shown in Figure 5.
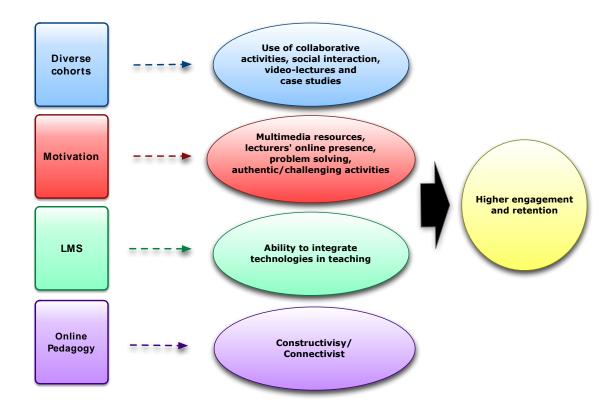
Figure 6: Successful strategies for higher online engagement. Copyright 2014 by Eliani Boton

Discussions and Implications

The key findings in the four thematic areas are presented here.

Culture

Teaching diverse cohorts require lecturers who are able to create an inclusive learning environment. They are able to demonstrate impartiality for having cultural sensitivity and an ability to create interaction among students in a way that they also learn to appreciate differences. Lecturers in this study have claimed that online courses should have a multicultural focus as priority, considering that they attract students from different parts of the globe.

Motivation

One unanticipated finding of this research was that lecturers claimed that motivation is not one of the challenges they face in their online environments, which is contrary to the claims

of researchers such as Levy (2007), Tyler-Smith (2006) and even more recently, Jones (2013), who listed motivation as one of the main causes of online attrition. Motivation was not considered a primary factor for the lecturers in this study, as their motivational strategies have been successfully keeping students engaged, with the use of multimedia resources, lecturer's online presence, and the use of challenging, authentic and problem solving activities.

LMSs

As universities introduce more online course offerings, lecturers seem to be taking the challenge to teach online, even though just a portion of them have received formal training in the use of eLearning. Lecturers in this research claimed to be successfully integrating learning activities into their online environments. This can be related to the fact that the ability to integrate technologies in teaching for the participants in this study is mainly at an expert level, with 14 out of 18 lecturers (78%) claiming to be at that level. It can be affirmed that lecturers' main challenge is not in how to structure their online courses, pedagogically, but the technicality of doing so, with a total of nine out of 18 (50%) lecturers affirming that they require technical support for the use of the LMS platform.

Online pedagogy

Lecturers in this research have claimed that they adopt a mix of constructivism and connectivism learning theories. All lecturers agreed that the eLearning pedagogies differ from traditional ones and emphasized the need to prepare an online environment that caters to the diversity of their learners. There is also agreement among participants that the new generation has been using computers and the Internet more often than previous ones, creating a great impact in the way people communicate and learn. It seems obvious for the lecturers in this research that

there is a need to continuously rethink how they can benefit from technology and its application into teaching in the higher education sector.

Limitations and Future Directions

One limitation of this research is its sample size, with only 18 lecturers from six international universities. The participants in this research were recruited from groups of lecturers who were teaching fully online subjects. A research using a larger sample and from a wider range of universities providing online degree courses is necessary.

This research depended entirely on lecturers' views and experience teaching online. Research observing online lecturers in practice and the conditions in which these practices happen were not considered. Another limitation is that the online environment, curriculum and lecturers' epistemological perspectives are likely to influence the outcomes if the same research is conducted at other universities and with other lecturers, because for this research, findings reflected fully online education courses only.

CONCLUSION

The conclusions of this research are presented as an answer to the major research question: *What are the effective engagement strategies used by online lecturers in order to reduce attrition rates?*

Results support the following key findings:

- Cultural diversity is the norm in online courses, considering they are open to students worldwide. Diversity can support student engagement if appropriate collaborative and interactive activities are available in the online environment;

- Motivation can be increased with the use of problem-solving, authentic, challenging activities, multimedia and lecturers' constant online presence;

- The use of LMSs could be simplified by providing formal training to online lecturers;

- Online pedagogies of choice are a combination of constructivist and connectivist theories.

The current findings contribute to a growing body of literature on online attrition issues with suggested strategies that can be successfully implemented in online environments. When these strategies are taken into account, the result is increased student engagement and retention, which in turn benefit lecturers, students and universities.

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