The Need to Focus on Digital Pedagogy for Online Learning

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Abstract

As pedagogical approaches to teaching and learning continue to evolve to meet the needs of students in a rapidly changing, globalized world that is heavily influenced and reliant on digital technologies, it is anticipated that the learning environments in Higher Education will also be transformed. Consequently, this transformation of learning environments is often synonymous with the adoption of and continued focus on the potential benefits of online learning in the Higher Education sector. It is within this context that this paper reports on a small-scale case study in a large Nordic university where the learning management system, Blackboard was piloted and implemented using a top-down approach consisting of the comprehensive training of academic staff, students and support staff. The explorative approach used in this study identifies three common themes in the data as it follows a group of academic beta testers (N=23) who are involved in the initial phases of implementation. The study explores the educators' primary use of Blackboard, whilst attempting to understand how academics perceive and interpret the role of online technologies to support effective pedagogical practices. Drawing on data from participant interviews, the study highlights the need for increased academic support for online learning design and a renewed focus on staff development of effective pedagogical practices

Keywords: Online Pedagogy, Higher Education, Learning Design, Blackboard.

Introduction

Background to the Study

The proliferation of digital technologies in society has been met with much gusto by many academics and administrators in Higher Education Institutions (HEI), as they seek to exploit their potential use as a catalyst for transforming teaching and learning practices. Of particular note is the growing number of HEI that are making significant investments in the possible benefits that online teaching and learning strategies can afford them. This is evidenced in the ever-increasing student enrolments in Massive Open Online Courses (MOOCS) (Mkhize, Mtsweni, & Buthelezi, 2016) and the increasing number of HEI continuing to invest in Learning Management Systems (LMS) (Allen & Seaman, 2013). However, with an increasing number of online course offerings and the associated increase of students opting into online courses (Gregory & Salmon, 2013; Margaryan, Bianco, & Littlejohn, 2015), there is a growing concern with regards to the pedagogical approaches associated with these online learning environments (Brown, Millichap, & Dehoney, 2015; Kirkwood & Price, 2014; Salmon, 2014).

The transformation of teaching and learning in HEI is often associated with the affordances of digital technologies. However, according to Henderson, Selwyn, and Aston (2017) while digital technologies are clearly evident in the students experience of undergraduate university education, "digital technologies are clearly not transforming the nature of university teaching and learning" (2017:1577). This lack of transformation in teaching and learning practices reinforces the need for HEI to focus further attention on developing highly effective pedagogical practices that meet the needs of learners – especially within these changing online learning environments. MOOCS are often plagued by "relatively low completion rates" (2017:170) and in general there are reports of high dropout rates and achievement problems associated with online courses (Kizilcec, Piech, & Schneider, 2013; Margaryan et al., 2015). There is no doubt that online learning and teaching is complex, and that there is a need for academics to embrace new approaches that meet the demands of the changing student population. It can be further argued that many academics unfamiliar with the new and emerging digital technologies that can be used to support online teaching and learning, struggle to shift beyond traditional approaches that they have used in face-to-face classrooms.

While some of these traditional approaches may be effective in these new online learning environments, there is a need for educators to think differently about their pedagogical approaches and challenge their existing approaches. Academics transitioning from a place of comfort in their teaching (face-to-face) often need to challenge their professional identities as they redefine themselves in a new role as a facilitator and designer of online learning experiences (M. Kebritchi, 2014). According to Kebritchi, "the teaching methods of online instructors are one of the major factors that greatly influence the atmosphere and effectiveness of online

courses" (2014:468). In a recent study of the design of online learning opportunities associated with MOOCS (Nash, 2015), it was found that the quality of instructional design across 76 MOOCS was limited and there was a need to rethink the principles of online course design. While the educator cannot control all factors associated with a successful online course, they do play a very important role. It has been noted that an inherent problem associated with the design and facilitation of online courses is associated with the fact that many educators have not taken online courses as students and are unaware of the many challenges that are faced by students in these environments (M. Kebritchi, 2014).

The role of the educator and their ability to adapt to new approaches while also understanding effective digital pedagogies that can support innovative approaches to teaching and learning are central to the success of online courses. There are many different digital tools associated with the delivery of online courses and each of these tools can serve multiple purposes. The focus of this study relates to online learning delivered through an LMS. The role of the LMS is varied and it can be argued that the intention of such a tool is to support students as a supplement to face-to-face learning (in a blended learning mode) and for students undertaking online learning without a face-to-face component. A 2014 study into how LMS were used, found that the majority of the academics using an LMS, predominantly used the basic features of the LMS to merely distribute content, though it was noted that there were academics that saw the potential of the LMS to enhance learning and teaching (LLC, 2016). According to Luckin, Bligh, Manches, Ainsworth, Crook and Noss, "what is clear is that no technology has an impact on learning in its own right; rather, its impact depends upon the way in which it is used" (2012:9), hence placing an emphasis on the important role that the educator plays.

It is within this context that this study explores the relationship between the introduction and implementation of an LMS to support effective pedagogical practice in a large Nordic university. This study explores the educators' primary use of Blackboard, whilst attempting to understand how academics perceive and interpret the role of Blackboard to support effective pedagogical practices for the delivery of online courses.

Research Approach

A qualitative case study approach was used to examine the ways in which academics designed and facilitated online courses. The study is situated within a large Nordic university where students attend in either a face-to-face, blended or online learning mode. The participants (N=23) are academics at the university and have had previous experience using digital technologies to design and facilitate learning experiences for their students. The participants describe themselves as professional users of digital technologies and as having a passive consumer approach to use of social media. For example, they are registered users on most common social media platforms like Facebook but have a reluctant relationship towards an active engagement with these

tools in their personal lives, using them only where needed within their role as an academic.

In 2016, the university publicly procured a new LMS (Blackboard) after a costly drawn out process. It is the implementation and pilot of the new Blackboard system in 2016 that is the focus of this study. The LMS was implemented according to a controlled technology mature approach, starting with a pilot phase and then a second phase to include targeted user groups consisting of university educators and students. The implementation process was a large and complex undertaking, consisting of the internal promotion of Blackboard, beta testing, creation of learning resources on how to use the LMS and the training of educators and students. This research paper reports on the initial phase of the study as the participants pilot the use of Blackboard pilot of Blackboard where a small group of participants (N=23) interested in the use of digital technology to enhance learning and teaching used the new LMS to design and implement learning experiences for their students. The participants taught across the disciplines of geomatics, teacher education, radiography, informatics, nursing, bio engineering, sociology, psychology, public health, and business management studies. The implementation of Blackboard and associated training employed a "top-down" approach which is not dis-similar to other implementations of an LMS in HEI (M. Kebritchi, Lipschuetz, & Santiague, 2017).

The study made use of an explorative qualitative research strategy. This approach was applied to facilitate an in-depth investigation of the ways in which university educators interpreted and used Blackboard. Participants in the study were selected from volunteers based on pre-established criteria to ensure that a range of disciplines from across the university were represented. Data was collected through semi-structured qualitative interviews which were conducted between October 2016 and March 2017. Each participant was interviewed individually with each interview approximately 30mins in length. The focus of the interviews was on how the educators used blackboard and designed learning experiences for their students. Interviews were digitally recorded and then transcribed. The study was based on informed consent and the informants were anonymized. The data analysis was inspired by an open coding strategy of the interview data. Here, the main focus was on finding emerging patterns, which consisted of grouping and comparing the informants' perceptions, user patterns, and experiences of with reference to how they use Blackboard. In order to offer the informants a voice, direct quotations are used in the data analysis.

Findings and Discussion

While the literature on facilitating and designing for online learning places an emphasis on the educator, there are a number of additional factors that can play a crucial role in the success of an online course. These factors can include the perceived role of the technology and whether it is used as a tool for administrative tasks or for other tasks such as distributing content or communicating with students. An analysis

of the qualitative data in this study resulted in the emergence of three main themes associated with the design and implementation of online learning in Blackboard; technology issues, pedagogical approaches and social connections. These three emerging themes are consistent with the four different roles that Kebritchi (2014) associates with academics teaching online courses. Kebritchi (2014) refers to these roles as being pedagogical, social, managerial and technical.

Theme 1: Technology issues

Blackboard to design and facilitate online learning courses. This theme identified two common factors associated with technology; user experience and the expertise and experience of the participant in using digital technologies. Blackboard's *user experience* emerged as an important and consistent theme in our data. While the educator has some control over the organization of content in the system, the overall user interface is a design of the Blackboard system. An analysis of data revealed that 60% of participants (*n*=14) experienced issues with the user interface and saw this as problematic. They identified the user interface as being overly messy and complicated to use. Some participants used descriptions such as "rigid", while another participant referred to Blackboard's navigation page as "a web site from the 90s".

The data indicates that the participants were challenged by the many "clicks" needed to access areas of the LMS with some links leading to dead ends. Many features were not self-explanatory and required the participants to search for explanations. The user interface was referred to as being ambiguous, sometimes too complex, and having too many options. The LMS was sometimes perceived as being overly time consuming to manage basic educational tasks.

A number of participants report that some tasks cause continuous frustrations whilst trying to complete simple tasks such as system slowness, changing background colors, arranging media in a visually appealing way and uploading photos to support teaching activities. While these frustrations could be attributed to Blackboard user design, it could be argued that a lack of expertise in using digital tools is the limiting factor causing the participant to be frustrated. Participant *x* claims:

"I do see that there are limitations, for example, on uploading pictures. If the pictures are too big, then it takes a very long time before it shows. The feedback I get from the students, is that if they use a laptop, then it takes so long before they see the X-rays. And when nothing shows, they go on to the next step because it has not worked".

However, in contrast to this, we must also stress that our data shows that some participants (*n*=5) had a positive experience when navigating the Blackboard user interface and designing learning experiences for students. These participants had few challenges in adopting Blackboard and saw little difference from the previous LMS that they had been using. It is possible that these users could be referred to as having a stronger grasp of digital technologies. This finding is supported by current literature

that places an emphasis on academics having confidence in the use of digital technologies (M. Kebritchi, 2014; LLC, 2016).

Theme 2: Pedagogical Approaches

The second theme pertains to pedagogical approaches associated with academics using blackboard to develop and facilitate online courses. In this theme, most academics used the LMS as a supplementary tool in face-to-face lectures where Blackboard was used for the organizing of learning materials and making these resources available to students. Blackboard does not take on a leading role in the learning processes, as the main educational activities are related to on-campus learning. In general, the academics perceive Blackboard as an "extra space" where learning material is made available to their students. In this sense, they upload PowerPoint presentations from lectures, publish information on compulsory assignments, circulate syllabus, and post other relevant learning materials. This is similar to their traditional approaches used in face-to-face teaching (M. Kebritchi, 2014).

However, the data shows that the participants use Blackboard as a supplement to established educational practice in more nuanced ways, which is at least on display in three different ways in our data.

Firstly, several educators use Blackboard as an *administrative tool*, meaning that the purpose is to store learning material that can be accessed by students. Several participants explained that they used features to structure course content with a simple intent to give a good overview of their courses. Not surprisingly, academics used features to organize course content according to a folder structure logic, which in practical terms indicates that course content is organized according to numbered modules or by themes. In other words, Blackboard works as a type of "Dropbox" function. Participant *y* claims that:

"For me, Blackboard is a content management system. The content of the course is available to the students and not so much of the features"

whereas participant *b* claims:

"I had the learning content, so I have tried to create a good course structure and present it in an intuitive and user-friendly way. In this way, the students can find it quickly and go to the exercises, learning materials, videos and so on. I have spent a great deal of time on that and hope that I have come up with a good solution that can be used by our colleagues in the future".

Secondly, Blackboard offers opportunities to organize learning experiences beyond being a mere digital space where one uploads and makes learning material available for students. Blackboard can be used in a blended learning context. The LMS has a range of features allowing educators to modulate learning in innovative ways, like using, wikis, blogs, and discussion forums. During the initial phase several educators

used features like blogs, polls, wikis or simple gaming apps like Kahoot. A number of academics also tried a more advanced approach using Blackboard as part of the educational practice of "flipping the classroom". Here, educators prepare instructional content in online, which students use before they arrive and engage with traditional campus learning. In our interviews, a number of participants (n=3) had this as a pedagogical goal, but to what extent they succeeded with it, is unknown. Participant *a* claims:

"For both courses, we used a flipped classroom approach. We have filmed all the lectures, cut them into 10 to 15 minutes pieces which are put into the various learning modules. So, I'm quite happy that Blackboard is used for something more than managing learning resources or a place to communicate with the students. We need to develop these systems so that they help a new pedagogy. One of the benefits, for example, is that we can find out where the students need feedback, on what is difficult, what is easy, what they master and don't master.

The third approach that emerged in this theme illustrates how Blackboard is used as a supplement to established educational practice, to live stream lectures through Blackboard Collaborate. The initial phases included a number of participants working with off-campus students where this technology could be used to live stream content as an extension to existing lectures. Participant *d* claims:

"I set it up when I was going to have a lecture one day. I uploaded my slides. Those who had signed in saw the slides and heard the sound. I adjusted the camera a little. Those who logged on heard the discussion in the lecture room, or at least what I said. I used it throughout a whole day. Plus, I used the recording function, which is a tool in Blackboard. It worked incredibly well".

Theme 3: Social Connections

In this theme three methods of social communication were identified; for communicating, providing feedback and as a group tool for communicating.

In the first instance the data contained several examples of how the participants used Blackboard for *informing student practice*. This is where Blackboard was used to push out announcements to students – usually one to many. While this was a positive attribute raised by participants, issues pertained to the ability of the participant to use synchronous and asynchronous communication between a student and an academic. Given that the previous LMS had this ability there was quite a lot of disappointment amongst the participants. Participant *b* claims that:

"The students think the challenge is that the messaging function has disappeared, because they are used to sending us messages through the old LMS, Its learning. The ideal had been to have such a small mail button somewhere in Blackboard, so that they can talk to us".

Learning that Blackboard cannot be used to effectively communicate between students and academics has resulted in the participants looking for alternative ways to communicate. In this case a number of participants avoided responding individually to emails from students and actively responded to the questions via a frequently asked question (FAQ) discussion forum to ensure transparency and to avoid an overload of inbox emails. As participant *f* claims:

"If I get questions from students by e-mail, I publish the questions. I try to be consistent on using the discussion forum. I wish for the students to access the discussion forum and comment. I hope that the discussion forum will be used, because I think it can be a great way to keep up the communication".

Consequently, a number of participants commented on the fact that their students have created outside groups via social media to communicate with each other. Participant *g* claims:

"Slack is more for the students talking amongst themselves, while one of the TA's is a member of the group also, and for the students to contact me or the teaching assistants, they use Skype mostly".

Secondly, participants recognized that Blackboard provided an easy to use gradecentre for their students to submit assessment and an interface for them to provide feedback on the assessment. However, it should be noted here that a large number of participants experienced challenges in navigating the grade center. This was foremost related to that Blackboard's user interface was seldom experienced as intuitive and user friendly (see theme 1 – technology issue) resulting in some students not receiving timely feedback. Participant *g* commented:

"This fall when we talked about using Blackboard, we wanted to try something new, a way we couldn't do in Its learning. Then we started with digital submission and grading of lab reports. Lab reports have always been submitted on paper. I like the way you can grade in Blackboard. Now, I don't grade student tasks on paper anymore".

Particular aspects of the student feedback feature have also been commented by some educators, which raises concerns about how educators should give feedback, by using qualitative feedback consisting of comments or the point system embedded in Blackboard. Participant g referred to the fact that a quantitative mark was needed even though they had only ever given qualitative grades to their students. This is an example of how the digital technology is dictating how academics should work pedagogically in these online environments. The comment from Participant *g* claims:

"You have to give a score, and that's not natural to me. We give qualitative feedback on what they have written, and then it is approved or unapproved. So, it's very unnatural for me to say that it was 70 out of 100, I don't know".

Thirdly, an aspect creating concern among the participants, is the inability of Blackboard to effectively display and organize the division of students in. For

example, educators claim that they do not have accurate data on the *status of their students*. Some educators have a mixed population of campus and online students in their courses and the participants explain that it would come in handy to know which students were on-campus or off-campus students. Participant *f* claims:

"I don't think we get a good overview of all the users. We receive a list, but we have several types of groups and students attending different study programs – online and face-to-face. This does not show who belongs to which group and what study program they attend".

Many participants were used to a *group feature* from an earlier LMS where the educators themselves could select the students into groups according to how they organize them in their campus teachings. This is highly relevant in professional studies like teacher training and nursing education that send their students regularly into practice. Here, the educators rely heavily on having good and exact overview of their groups, but they experienced that Blackboard served the opposite purpose. Instead, the educators could not name the groups, creating organizational mismatch. Participant *d* claims:

"Perhaps not for my own part, but my colleagues have missed the opportunity to create groups within groups. For example, within groups of online students one could create separate group of online students. It could have been helpful".

Conclusion

The study highlights three main themes associated with the design and facilitation of online learning courses by 23 academics using Blackboard in its initial introduction at a large Nordic university. These themes related to technology issues, pedagogical approaches and social connections. While the theme based around pedagogical approaches was evident in the analyzed data, the responses from the participants demonstrated little evidence of the participants demonstrating pedagogical approaches that went beyond the approaches that they were familiar with in a traditional face-to-face environment. The findings also highlight the differing views that participants had towards the use of Blackboard and how there is a possible link between the participants digital literacy skills and their interpretation of and ease of using the LMS. The study highlights the need for academics to shift their thinking towards pedagogical approaches related to online courses to best activate student learning in online learning environments. While this is a small case study based in a Nordic university these results are significant for Nordic universities as they look further towards online learning courses to support a wider audience of students. It also demonstrates the need for Higher Education Institutions to invest more in staff development related the design and facilitation of online courses.

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