

Enablements and Impediments to Students' Sustained Use of Blackboard in a Historically Disadvantaged Institution

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ABSTRACT This study investigated enablers of and constraints to students' use of Blackboard. It used Archer's social realist perspective to explore structural, cultural, and agential influences that bear on students' use of Blackboard, a Learning Management System. A qualitative approach using a survey design informed the investigation. Data were sourced through an online open-ended questionnaire obtained from a group of 100 students who were selected purposively. The content analyses of students' narrative responses involved the extraction of themes. Culturally, the study revealed that not all lecturers across the levels of the qualifications made courses available online, even though students keep appealing for the use of Blackboard for all courses. Structural issues uncovered related to network failure, compatibility with other devices, and the maintenance of computer hardware. It also emerged that some of the students exercised their agency in making Blackboard usable on their own gadgets, overcoming personal fears, in acquiring proficiency in the use of Blackboard. This paper concludes that the students' voice and perspective in the sustained use of technology is necessary to mitigate teaching and learning challenges for the benefit of learning. It is recommended that lecturers give students opportunities to exercise their agency to confront structural and cultural challenges they experience in the use of Blackboard.

INTRODUCTION

The use of online learning platforms is appraised for ensuring, amongst other things, collaboration, student-centredness, fostering a sense of community, the sharing of knowledge, multi-sensory experience, interactivity, and engagement (Selwyn 2007; Warburton 2010; Moule 2012). Contrary to the belief by some lecturers that online learning systems lead to a decrease in attendance and superficial learning, Gunu and Kuzu (2014) found that online learning platforms lead to the achievement of class engagement, improvement of attendance, and enable students to meet course requirements in terms of grades, whilst infusing the students with a sense of responsibility, enthusiasm, and willingness. Lonn and Teasley (2009) also found that students value the teaching and learning tools within the Learning Management System (LMS). The benefits that accrue as a result of their use include a change in how class time is used, interactivity, and an engaging instruction. Pendry and Salva-

tore (2015) argue that there can be underappreciated benefits to engagement in online platforms considering users' well-being and identity can play a major role in this regard.

Although positive sentiments are expressed about the use of technology in teaching and learning, there are negative context related comments and concerns raised by some. For example, Mafuna and Wadesango (2012) report low levels of usage of the LMS by students owing to their apparent lack of awareness, and distrust that the LMS as a resource that could improve their academic performance. The above authors also reported students' lack of confidence in their competency levels on the computer, resulting in fears of their inadequacies being exposed by other students and lecturers. These factors are seen as militating against the use of the LMS resulting in its low usage by students. This is aptly described by Selwyn (2007) as the "marginalisation of ICT within the lived student experience". Other challenges faced by the students' include limited access to the internet, detachment from other students and the lecturers, as well as the added costs to students that come with the use of the online platforms (Makura 2014). Another study by Smrithi and Venkatapathy (2015) reveals that discussion forums done through online platforms discourage some students from participating, especially if they are

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just question and answer sessions, so most students go to the forum to find solutions to their problems not to be active participants.

The achievement of student engagement through technology enhanced learning platforms such as Blackboard is influenced by amongst other things: the technology infrastructure of classes, the use of technology in campus activities, lecturers' competence and effectiveness in the integration of technological tools, the use of social media as a support to classes, and technology use in assessment (Gunu and Kuzu 2014). Van der Westhuizen in Gravett and Geyser (2004) observe that investment in online technologies for teaching and learning is undermined by the cultures in institutions that do not support the online technologies. He points to the dispositional and action tendencies of senior academics that do not encourage and support the use of LMS and other Web-based Learning (WBL) tools. He notes that some of these academics are not technologically informed themselves, and that their lecturer-room activities sometimes undermine the use of WBL. The lack of pedagogical skills and technological skills on the part of the lecturers prevents both lecturers and students from engaging in online teaching and learning technologies (Makura 2014). Similarly, Blin and Munro (2008) found that e-Learning is marginalised in the lives of most academics, and that where it exists, usage is at a low level, is sporadic, and uneven.

With respect to research that considers students at the delivery point of online teaching and learning technologies, Towndrow and Fareed (2014) argue that, even though most contemporary university students are digital natives, it does not necessarily translate into students' engagement, and improved academic achievement. They also maintain that students' use of computers when dealing with lecturers' instructional agendas is not effective and efficient. Instead, the above authors contend that it is the students' digital wisdom journey to digital maturity that explains students' engagement and productivity. Related to this notion of digital maturity is students' readiness to engage with LMSs, and other WBL tools. Van der Westhuizen in Gravett and Geyser (2004) argues that the use of LMS in educationally productive ways is related to students' readiness. He maintains that the issue of access to computers, and whether students have the necessary skills and compe-

tencies to engage in interactive, multi-media-based learning materials, bears on their engagement with the technologies. Also, students' perceptions of the learning processes that involve WBL and LMSs in particular, determine the extent of their use of Blackboard.

Harris et al. (2009) argue that it is important to consider stakeholders' perspectives, that is, institutions, teachers and students, in the development and the implementation of eLearning. Therefore, this research is warranted, because there is limited research that looks at LMSs from the vintage point of the students. This paper sought to look at how structural, cultural and agential influences/factors enable and/or constrain students' sustained use of Blackboard in a historically disadvantaged higher education institution. The study specifically sought to answer the following questions:

- How do structural influences enable and/or constrain students' use of Blackboard in a historically disadvantaged institution?
- How do cultural influences enable and/or impede students' use of Blackboard in a historically disadvantaged institution?
- How does students' agency enable and/or constrain students' use of Blackboard in a historically disadvantaged institution?

The above questions are informed and framed within the social realist perspective of Margaret Archer.

Theoretical Framework

Social Realism

Social realists argue that social reality is composed of three elements, namely: structure, culture, and agency. Structures and cultures are mediated to the agency of individuals and collectives (Archer 1995, 1996). Though these elements are studied separately for analytic purposes, the interplay and confluence between them is what maintains or brings about changes in the social system. This paper considered the structural and cultural influences that students perceive as enabling and/or constraining their use of Blackboard, and how these students use their agency to deal with these influences.

Structural Mechanisms

The structure refers to forms of social organisation and the relations that constitute them,

namely: institutional practices, roles, rules, positions, power, distribution of resources, et cetera (Archer 1995). The structure has autonomous existence, in that it pre-dates people, and can be seen as a given that exerts a causal influence on people's actions since it conditions people's actions. Archer (1995) argues that where social structures are reproduced, internal and necessary relations between social structures are maintained. She further argues that structures require the activity of agents to be reproduced or changed (Vorster 2010). This paper considered how structural influences enable and/or constrain students' use of Blackboard in a historically disadvantaged university.

Agency

With regard to agency, Archer (1996) argues that people are not passive but active and purposeful beings. This is because people rationalise, since they are reflective, creative, and innovative beings. Agents exercise their personal emergent powers in the choices and the decisions they make which either reinforce existing structures and cultures (morphostasis) or transform them (morphogenesis). Thus, people choose to adapt or find their way around structural and cultural impositions. She argues that agents possess generative powers of constraint and enablement which produce courses of action in relation to people's circumstances. This research sought to look at how students use their agency to negotiate their way around structural and cultural influences around the use of Blackboard.

Culture

Culture, according to Archer (1996), is made up of ideas, values, and beliefs existing in a particular context. She argues that cultural propositions or truth claims influence agents' actions. Because culture is anterior, it exerts influence on the structure. Specifically, Archer (1996) argues that culture conditions people's actions. With respect to the influence of culture on agency, Pereira (2012) argues that thought processes influence behaviour since they can provoke any kind of behaviour, leading to behavioural conformity or outright rejection of the culture imposed. Included in the realm of culture are those beliefs that are held as true or false, people's

practices, the things talked about in their daily discourses, and propositional statements. Thus, the paper interrogated students' discourses and how these condition students' use of Blackboard.

RESEARCH METHODOLOGY

Research Design

A qualitative survey or alternative diversity survey was used. Jansen (2010) maintains that a qualitative survey is used to determine diversity or relevant dimensions in a topic of interest with a given population. He states that a qualitative survey explores the views of a number of participants as expressed in their own words. He further asserts that this type of design allows for a switch from a qualitative procedure to a quantitative procedure, especially when there are a large number of cases in the data. The qualitative survey design was therefore deemed appropriate for this study since it solicited the viewpoints of a number of students who use Blackboard.

Sampling

The responses of 100 out of 322 students were analysed, from a purposive selection of courses that use Blackboard in varying degrees. In order to achieve maximum variation, a further selection of data thus acquired involved the sifting of data on the basis of the strength and richness of the data (Cohen et al. 2007). Therefore, crisp responses were not included in the analysis since the idea was to get meaningful units of information that would provide meaningful and relevant dimensions (Jansen 2010). A deliberate effort was, therefore, made to include students who differed in their familiarity and experience with Blackboard since Debski and Gruba (1999) advocate for the inclusion of a wide variety of voices in a data set.

Data Collection

This research canvassed students' perspectives on the use of Blackboard in a selected historically disadvantaged higher education institution. The online Blackboard survey, which was administered to all students on Blackboard, consisted of questions on access (where and how

often), features usage (purpose and extent of usage) and the use-value of Blackboard in self-management and regulation of their own learning. The open-ended question which formed the basis for this paper asked a question on the issues and challenges in the use of Blackboard.

Data Analysis

Content analysis was used to make sense of the data. Meaning units and emerging themes were allotted to the predetermined analytic categories suggested by the theoretical framework, namely: structure, culture and agency. Thus, the analysis was organised by research questions (Cohen et al. 2007) since the formulation of these questions was guided by the theoretical framework.

RESULTS

Structural Influences

Most of these structural influences are power and resource related. They involve rules and roles related to access and compatibility, and roles of different stakeholders related to the distribution of resources, and the maintenance of those resources. These structural influences can avail themselves as enabling and/or constraining. The results show that the majority of students find it difficult to access Blackboard. One of the students mentions *"A few incidents with me and blackboard happened, not being able to access blackboard and/or the assessments, and some assessments that I had expected to be available long before or prior expire date would have expired already when I access it."* This can be identified as a constraining structural influence. The student does not mention why he/she was not able to access Blackboard but does mention that not being able to access it did affect the submission of assessments.

Another structural constraint mentioned by the majority of students involved network failure and/or Blackboard down time. One of the responses was: *"All relatively fine, but Blackboard is down too often"*. This frustrates students as some missed their assessment due dates. Another student lamented: *"...frequent disconnects/website down cost me lots of marks because of tests managed through blackboard."* The above situations both suggest resource and

power issues. Students feel powerless, as the powers at play, that is, the system or administrators of Blackboard have cost the students the loss of assessment marks. Another constraining factor regarding access involved students forgetting their password or Personal Identification Number (PIN) for accessing the system. One student mentioned that *"...Blackboard should not be difficult to access. It must not have a pin because students forget those pins and end up not doing the work"*. Though there is a helpdesk, there is a possibility that students fear and fret about disclosing that they have forgotten their pins. This again becomes a power and a role issue.

Maintenance of Computer Hardware is a crucial access issue which pertains to structural influences. Computers that do not work and are not properly and timorously maintained constitute another constraint that was highlighted by most respondents. One of the students opined: *"I do not have challenges in terms of accessing or using Blackboard, the only issue I can raise is the lack of effective working computers in our computer laboratories such as the Great Hall."* With the already existing shortage of computer resources, this becomes very frustrating for students.

Other issues highlighted related to the use of students' own devices in class and on campus, which gives them flexibility to access class materials from anywhere, any time. For example, there are reported challenges, such as the one experienced by the following student: *"Blackboard would be a lot more useful if it was accessible more often. The chance of being able to connect to blackboard via your private laptop is zero to none. It hardly ever logs in and if it does log in, it takes ages for the course documents to load. If one needs to access blackboard it is normally done at the labs as this is where it seems to work more often."* This is a constraining influence, the reason students bring their own devices is also because computer facilities on campus are scarce and it's on a first-come first-serve basis, which means that students who do not have their own devices, will have to wait for long periods of time to have computer access.

The devices students use range from laptops, smart cell phones and androids, which sometimes need to be configured to be able to access the University network and Blackboard.

This speaks to compatibility issues. Some have mentioned both enabling and constraining factors with the use of own devices: For example, one of the students remarked that *"Blackboard has been helpful to me as I am getting used to it more and more. The only challenge is that sometimes I do not get WIFI at home to access it"*. This becomes a resource issue. Another respondent mentions compatibility issues with the use of different browsers: *"Compatibility issues arose especially with the browser I was using"*. Some of these constraining factors especially compatibility issues are attributable to capacity issues in the institution's technical support centre or division.

Cultural Influences

Cultural issues are manifested in different forms, namely: through practices, ideas, values and beliefs systems. Making courses available online, it would seem, is not a practice that all the lecturers across all levels of the programme or curriculum subscribe to. A suggestion that all courses should be made available online as well, as expressed by this sentiment from a student: *"I wish every course would be available on Blackboard"*, is an indication that the practice of using Blackboard as part of course delivery is not across all programmes, courses and lecturers. This might pose a constraint for the student, who would have like to have access to all courses through Blackboard. Some of the respondents have challenges relating to the use of Blackboard as they feel they are not competent enough. This suggests that some of the students find Blackboard more complex in the beginning. The response that highlights the issue of capacity is, *"At first it was so difficult for me to log on to blackboard and hardly knew what is Blackboard exactly. The challenges that I experience is that I find it very difficult to submit some assignments online and it [Blackboard] is quite confusing sometimes"*. This point was highlighted by the majority of students and relates to the persistence of the constraint experienced. Though students undergo training on the use of Blackboard and have a helpdesk where they can call for assistance, the challenge is seemingly recurring. The problem of all lecturers in faculties and departments and across programmes not using Blackboard manifests in students' operations of the Blackboard platform

resulting in students who are competent in the operation of the Blackboard platform. One of the students opined that *"...I struggle on how to operate the blackboard properly"*.

Some aspects mentioned relate to tensions within value systems. Students expressed frustration with missing due dates without extensions. One the students' distaste with some of the practices around Blackboard is expressed thus: *"Due dates [have] no extension. If you miss the due time there is no way to submit. To me that is not fair."* Blackboard's minimisation of face-to-face contact with the lecturer was also observed as bearing on the feedback on tasks given to students. For example, one of the students commented that *"Feedback is not detailed and there is not interaction with the lecturer."* In this case the student might have needed more explanation on the feedback and now feels that with Blackboard the interaction with the lecturer is no longer available. Another student responded by saying *"I have a major issue with the person in charge of blackboard! I still do not have my second semester subjects on blackboard and this is unacceptable. I do not see why we need to email the person in charge to ask them to upload our subjects; Because of this I have not been able to check on my progress, announcements nor my lecture slides. Please sort this problem out as it is really unprofessional."* The above response is very critical to the department that supports and administers Blackboard as it indicates a crucial constraining issue pertaining to the online helpdesk. These constraints may be seen as gibberish but they showcase the diverse needs of the students and question the practices of those whose task it is to service and support students with the use of Blackboard.

Agential Influences

An aspect of agency that enables students' use of Blackboard in a programme involves deliberate and conscious efforts to know and understand how the LMS works. One of the students remarked, *"Once I got the hang of how it [Blackboard] works...[I]found it was very simple in using"*. Related to this issue of knowing and understanding the system is the issue of proficiency in the use of the Blackboard platform which requires practice so that one gets used to it. One of the students mentioned, *"I am*

getting used to it more and more". Through exercising their personal agency, students come to find on their own, ways of making the LMS to work for them by finding out about ways of making Blackboard usable on their own gadgets, and also about ways of getting around compatibility issues that might hinder their use of the platform. As one of the students remarked, *"I had to find and install a new browser that was more compliant"*. Another issue that calls for personal agency is fear of using the LMS. One of the students reported, *"It was scary...as time went on I really enjoyed it"*. Overcoming fear of the LMS is indicative of an individual's agency and shows that the person's emergent power is mobilised and ushered in to deal with the medium of interacting and engaging with the content materials, peers and lecturers.

The anywhere, any place, and any time so characteristic of virtual reality is realised once the students use their agential powers to overcome the challenges of using Blackboard. This is illustrated in the experiences of one of the students who opined, *"The first time of using Blackboard it was very challenging but now I can access Blackboard using my phone at home"*. The role of training or capacitation of students to use Blackboard contributes a great deal to their personal agency. One of the students remarked that *"...because the training of Blackboard was given before using it"* he was able to use Blackboard. Agential influences are also manifested differently. Although there are a lot of constraining factors in the use of Blackboard, there are equally a lot of enablers. Agency can also be negative unintentionally. The students' responses suggest a lot of agential challenges on the part of the students. The following quote give evidence of this: *"At first I found it very tricky and confusing but once I got the hang of how it works and found it was very simple in using."* The student took charge of getting past the difficulty. This is also illustrated by another respondent *"At first it was scary because am a first year student but as time goes on I really enjoyed it"*. This indicates agency on the part of students getting past the stumbling blocks. Again this is indicative of agency by overcoming fear. Agency is very evident in most of the students' responses, even though they experienced constraining influences in using the Blackboard they overcame those constraints through their own personal agency.

DISCUSSION

The use-value of Blackboard in the management and regulation of students learning confirms Towndown and Fareed's (2014) observation that performance is militated by the students' and lecturers' inability to use the LMS effectively and efficiently. The personal agency of the students still needs to be mobilised so that they are able to confront personal fears around the use of Blackboard, whilst at the same time finding ways of addressing gaps and competency levels on the computer. The lecturers' non-use of Blackboard in the delivery of courses is a cultural issue that is maintained by their agency in the form of choices and decisions around the modes of instruction. Similarly, Blin et al. (2008) in Gravett and Geyser (2004) observed the refusal by particularly senior academics to use the LMS in the delivery of course contents. These findings are similar to Mafuna and Wadesango (2012) and Makura (2014) on the challenges faced by students in the use of LMS's and other web-based learning tools. This may also be associated with Pendry and Salvatore's (2015) argument in identification as a means of gaining access and the under-appreciated benefits of engagement with online platforms considering users well-being. When users join online platforms and engage, they get a certain level of identification which gives them agency to further engage. This paper argues that in order to address access, compatibility, navigation, and proficiency problems, students' personal and collective agency needs to be harnessed and mobilised by Blackboard administrators and lecturers. Students are expected to struggle at first with the LMS as observed in the findings of this study. But, as some of the students surveyed alluded, it takes practice to get used to the Blackboard system. This is a cultural matter that can realised by the agency of the students concerned.

The results have implications for Blackboard administrators and technical support services. For instance, many students have come to rely on accessing Blackboard through their own devices, which comes with compatibility and instability issues. Also, the findings of this research on the structural issues pertained to computer resources and their allocation, compatibility issues, the roles of the lecturers, Blackboard administrators, technical support systems, as

well as the rules that govern the enlisting of courses and students on Blackboard. These issues have the potential to constrain and/or even curtail the use of Blackboard by some lecturers and students. These findings concur with Selwyn (2007) and Makura (2014) who also found that computer access and compatibility issues were some of the challenges that undermine the uptake and usage of eLearning tools. This paper argues that some of these challenges can be mediated by the agency of the parties involved, particularly that of the students.

CONCLUSION

Margaret Archer's social realist mechanisms of structure, culture and agency are evident and at play in the use of Blackboard in the selected historically disadvantaged university. Structural issues uncovered related to network failure and the Blackboard system being down; compatibility with other devices and browsers; and the maintenance of computer hardware in computer laboratories. It emerged that some of the students exercised their agency in making Blackboard usable on their own gadgets, overcoming personal fear of acquiring proficiency in the use of Blackboard. The study concludes that students' use agency in making their lecturers use Blackboard for their courses is a cultural aspect of the reality of Blackboard usage. This paper also concludes that the students' voice and perspective in the use of technology is necessary to mitigate teaching and learning challenges, and for the maximisation of learning.

This means that some of the ways that are used to assist students with the use of Blackboard are not entirely effective or reaching out to the entire student body, and hence this paper's contention that students' perspective should be canvassed and bargained for in the use of Blackboard, since students have the potential, through their agency, to mitigate the structural and cultural impediments identified in this particular paper and those of others.

RECOMMENDATIONS

It is recommended that lecturers give students opportunities to exercise their agency to confront structural and cultural challenges they experience in the use of Blackboard. There should be on-going awareness and training programmes

for both students and lecturers in the use of Blackboard. Students who know their way around Blackboard could be assigned as mentors to those who are beginners and/or struggling with Blackboard.

Technical support services could take the initiative to inform students about compatibility issues, and other technical glitches that they are likely to encounter when accessing Blackboard on their personal devices, and how to get by these. In mitigating issues of network failure, it is recommended that students be made aware of such issues before hand, through announcements about the network and Blackboard down time. If the university is making technology a part of its teaching and learning culture, then provision and maintenance of computer facilities should be a priority. There is need for flexibility on the part of the Blackboard administrators in the registration of courses and the enlisting of students on Blackboard, as well as in attending to students' requests and queries. This paper suggests that the online system should be complemented by face to face consultations.

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