

Next Generation Technology and the Net Generation: The Case of a Malaysian Private Higher Education Institution

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ABSTRACT

As private higher education in Malaysia seeks to keep updated with the latest technology in online learning, more and more academic institutions are investing in infrastructure in direct relation to the characteristics of the Net generation.

To have a clearer understanding of the ongoing phenomenon, the researchers carried out an ethnographic study of undergraduate students of a business program who were first time users of Blackboard, an online learning management system. Interviews were also conducted to gauge student's usage and understanding of Blackboard, as the study was exploratory in nature.

The objective of the study was to examine the effectiveness of Blackboard in supporting a student's holistic learning experience and to leverage on student's capabilities as the Net-Generation, in promoting technology enhanced learning.

Although the use of Blackboard was viewed positive due to the assumed characteristics and skills of the Net Generation students, the preliminary findings supported by interviews and ethnographic field notes found otherwise. It supported a changing education environment of users (students) who perceived Blackboard as cumbersome and merely as another medium of exchange for information, although it afforded flexibility to their multi-tasking lives.

However the students were open to use Blackboard more effectively and frequently if certain enhancements and improvement are made to make it more accessible to the Net Generation.

KEYWORDS

Next-generation technology, Blackboard, Net Generation, Net-Geners, Holistic Learning, Teaching & Learning, Online Learning Management System

1 INTRODUCTION

1.1 Net Generation and Next Generation Technology

It is evident that Private Higher Education (PHEs) institutions in Malaysia have been seen steadily investing in new teaching and learning technologies such as online learning management systems and e-learning modules. Some of these institutions have even moved to fully online courses to cater to the increasing demands of the Net-Generation. These institutions seem to have evolved the issues surrounding how Net-Geners learn into a business decision that serves to meet a customer's (students) expectations and demands.

In keeping up with current education trends, private higher education institutions in the country jumped on the bandwagon with the earliest adopters being Open University Malaysia (OUM) and Universiti Tun Abdul Razak offering degrees via hybrid and virtual learning environments and

SEGI University through its implementation of online learning management systems since early 2000^[1].

As the momentum of online learning increases in-line with the demands of the new breed of students, other private education institutions have also followed suit through the introduction of online platforms like SEGI University Online, PACE (Professional and Continuing Education) through their MBA programs and the introduction of online modules in INTI International Colleges and Universities programs^[2].

Referred to as the new breed of students, the Net Generation was born in the Internet bubble of the 1990s and web boom of the 2000s. These Net-Geners are said to rely highly on technology with learning styles that are highly dictated on hands-on practices with a focus on doing not knowing^[3]. Carrying characteristics such as instant communication, on-going multi-tasking etc., this new breed of students are said to be changing the landscape of education as we know it.

As these new breed of students join PHEs, educators have been urged to alter their teaching methods from traditional modes of teaching to the use of online tools actively in their classrooms causing much resistance among the academia as they learn to accommodate these new generation that requires greater autonomy, connectivity and socio-experiential learning^[4].

1.2 The Background

Scholars like Oblinger and Tapscott find that the immersion of this Net-Generation in technology influences student's skills and interests. This is further supported by specific characteristics attributed to this generation that frequently use technology for communication purposes rendering them experts in technology^[5]. This can be a motivating factor for Malaysian PHEs to jump on the bandwagon but various studies question the findings of these scholars that refer to this generation of students.

Many empirical studies point to a questionable outcome of generalizing these students into a

specific mould. Questioning the homogeneity^[6] various scholars note that the situation is far more complicated and that the influences of how students use technology could differ from other perspectives like gender and academic discipline.

Hence, the importance of this study in understanding the relation between Blackboard, and the characteristics of the Net Generation in creating a holistic learning experience and to leverage on student's capabilities as the Net-Generation in promoting technology enhanced learning.

2. THE STUDY

2.1 Objective

The objective of the study was to examine the effectiveness of Blackboard in supporting a student's holistic learning experience and to leverage on student's capabilities as the Net-Generation, in promoting technology enhanced learning.

2.2 Methodology

Study participants were selected using the criterion sampling based on a pre-determined criterion of importance. The pre-determined criteria involved students in their first semester of an undergraduate Business program in a private higher education institution in Kuala Lumpur, with little or no experience using Blackboard that belonged to the Net Generation.

Ethnomethodological analysis of interviews was used to make-sense of the data, as the participants explain and attribute through discussion of events, people and actions. Those chosen for the interviews are assigned to specific categories or roles found suitable by the interviewer. These specific roles or categories that are assigned are in the hope that the interviewees are able to represent Net Generation students who are using Blackboard for the first time.

In the case of this paper, the sample targeted for the interviews, have been utilized through the use

of membership categorization whereby interviewees are meant to represent or position themselves as social actors in that particular group. As reflected by Baker^[7], the purpose of the research is not aimed at a truth-functional approach to the content of the interlocutors accounts but it is more directed to the central aspect of how these accounts investigated come together to form the bigger picture.

In-depth interviews were conducted from December 2013 to January 2014. Interviews were conducted within the vicinity of the private higher education institution. Interviews conducted were outlined to provide context to the analysis through the use of membership categorization. The analysis of each interview was through the breakdown of raw data. Data collected was divided into a few main themes with major and minor categories.

Using Blackboard access online, the researcher was able to gain direct access to the community of online users (students). Via this online management system, crucial information on the behavior and usage of the system was recorded. In making sense of events and situations, the researchers used membership categorization. Baker states that membership categorization is used to describe and make sense of events and situation and collect interviewees within or as a representative of a posited category of social actor.

In membership categorization, more or less tightly associated activities that belong to a set or device are used to identify the audience. In this research paper, the categories identified are first-time Blackboard users/students that belong to a private higher education institution.

During the beginning phases of analysis, three main themes were explored to analyze the raw material derived from the interviews conducted with the students. With the research questions in mind, themes are derived from the raw data gained from the interviews conducted. The following themes were identified;

Table 1: Themes, Major and Minor Categories of Blackboard and Net Generation"

Themes	Major Categories	Minor Categories
Learning Systems	Functions Knowledge Accessibility	Tools Training Customization/ Compatibility-App/Browser
Technology	Fluency Development	Lecturer/Student Upgrades
Service Quality	Faculty Support Learning Environment	Content Internal/External Impact on Teaching & Learning

This research paper combined the use of ethnographic research and in-depth interviews to inform the study.

The study of ethnography is more concerned with explicating how things are accomplished by members to have the character that they do in any given site in the social world^[8]. The ethnographic research will provide the researchers a platform to uncover a deeper understanding of how students use Blackboard within their online community and in their classroom.

The use of this approach was done to gain information on how students make sense of their world, their identities, their contribution and the impact of the usage of Blackboard on their learning experience. Virtual ethnography also played its part in supporting the study, as the researchers got an enriched sense of meaning through the analysis of the community online.

Ethnography is chosen despite the potential issues of researchers getting too involved as it is believed that the necessity of the researcher to fully participate is crucial towards making sense of realities that form this community. Furthermore it will increase their familiarity with the learning system and provide experience to maneuver within the community throughout the research.

Through collection of first-hand information via in-depth interviews with the sample, the researchers gained insight into whether Blackboard contributes towards a holistic learning experience for students in a private higher education institution.

2.3 Findings

Ethnographic field notes were collected since the beginning of the study from August 2013 throughout the semester on the knowledge, level of usage, proficiency and efficiency of the system.

At this point, Blackboard implementation was at its infancy stage, as it had been newly introduced as the mode for the management of the courses in the institutions. The data was also supplemented by the use of in-depth interviews with students.

In-depth interviews with students were scheduled upon their completion of the final exams. Researchers found difficulty getting students to commit to the time required as it was already their semester break. Students were initially reached through their Centre of Student Engagement Facebook group through an announcement. Although most responded positively towards contributing to the study, in the beginning only two came forward to be a part of the interviews.

The researchers then approached the students directly via face-to-face interaction to set-up the remaining interview sessions. Such an approach yielded more productivity resulting in five out of the nine students that were initially enrolled, becoming part of the sample. It is also important to point out that out of the remaining four students, two students were absent from the institutions regularly during the course of their study. It was also noted that ethnographic notes reflected their lack of participation and presence in Blackboard through the semester.

Insight on student's knowledge, level of usage, proficiency of skills and efficiency of the system in the use of Blackboard was gained via ethnographic notes from observations of their behavior throughout the semester. Among key

points gathered, student's knowledge of Blackboard was limited to the downloading of notes at the early stages despite an induction given to students at the beginning of the semester. Prior to the induction most students were clueless on what it was and how to use the system as reflected in their interviews.

It was important to ascertain the perception of student of the Blackboard system in their daily learning to understand how effective it would be in their learning process. Hence perception was gauged through the interview session that reflected the following from interviews;

"It's convenient and through Blackboard you can get your lecture notes. Don't have to waste papers, it is accessible anywhere. You can even use mobile phone/tablets. It's compatible."

Clayton

Equating the Net Generation as natural born computer users, they were categorized as multi-taskers who are more inclined to technology and it was noticed that the level of fluency for basic skills was evident but it depended on the level of usage of the said system.

The perception was also gauged through observation that reflected that student found the application easy to use for basic function but found it challenging when it went beyond just downloading notes.

This was identified by the way students requested for consultation on assistance of using Blackboard. Three students were found seeking consultation with their lecturer on the skills of using Blackboard when it came to using other function like the discussion board, blogs and journals. The study also revealed that students familiarity with Blackboard and their comfort levels in using the system.

It was evident that students only used Blackboard if there was a push or encouragement from the

faculty as they viewed it as something that was for their classes directly.

Observations noted, also pointed to a need to basic usage, whereby students only viewed it as a system to retrieve materials if pressured by the lecturers or needed by their subjects, although it was not viewed as highly important as reflected below;

“For all of subjects, Mathematics, Marketing, Public Speaking and Business. Mostly for uploading lecture notes and there was one discussion board. For example, there was a discussion board for Business, but not everyone participated, maybe 3 to 4 students out of 9. Few were not even aware of it. It is not very important in their perception. I think it was also a small part of our assessment-for one topic”- Clayton

Although students were not aware of all the functions offered by Blackboard as gathered through the interviews; they saw a need more an expansion of functions so it would become more accessible by students as mentioned below;

*“There should have general academic information, what’s going on in campus, event dates, workshops, and then it will be used more widely than academic.”
Cheryl Lum*

Although Reuben disagreed, believing that it would not make much of a difference;

*“Blackboard was redundant with Facebook when talking about getting students to access it more frequently. Blackboard can only be used as an educational tool alone.”
Reuben*

Through observations and tracking of student participation, it was obvious that not all students explored Blackboard function exhaustively. Most times, they focused only on what the lecturers requested of them, despite their ability to use the system.

Service being paramount criteria in every educational institution, students reflected positive answers on how support was given, how faculty was managing Blackboard for the student’s usage among others. A crucial tool to measure the effectiveness of an online system like Blackboard, support was an important function. It was noted that despite the institution not having a primary personnel who was in-charge of the technical aspect of the system on-site, students were comfortable with the level of support accorded to them by the private higher education institution in regards to the type of infrastructure and compatibility.

As lecturers often used Blackboard to upload lecture notes, students were familiar with the system. Students were also aware of avenues of support that they could reach out to citing lecturers and student engagement as the main contact points for support. In relation to more in-depth use of Blackboard, student commented that more training would assist them to become familiar with the advanced function, moving beyond downloading and viewing notes. One of the students expressed that getting more acquainted with the system might peak their interest to use Blackboard more frequently and efficiently.

With Blackboard changing the way students and educator teach and learn, it was essential to understand the type of enhancement or upgrades that could foster more support and encouragement for students to use the system more productively.

Adding on to necessary enhancements that would increase engagement, Cheryl Lum commented that Blackboard should have short videos like the self-help videos on Google; such links would make it easier for students to operate Blackboard.

Putting students in the driver's seat of enhancing the system, they were supportive of discussing the possibility of new ideas that would enhance the system further. Adding on the importance of it being a friendly learning space, it could be more user friendly by adding more functions that allow for customization and interactive elements;

"We should be able to customize it to our profiles, not just the custom made profiles they give you but we should be allowed to customize it. It should be open to more students, not just participants of the subject, instead of the boring ordinary things. Add games, interactive visual and more visual/graphic notes." **Clayton**

Disagreeing with the elements of games as part of the interactive features, Reuben felt that blogs and trivia would be a more productive function. But caution that it would not work unless there was encouragement, citing;

We need to encourage the usage with the online community but not with monitoring by the lecturer. Someone has to initiate and conduct online discussion to move it forward." **Reuben**

Notification on updates and easier management of folder was important elements to ensure easier access to Blackboard;

"There should be dates recorded each time we download notes, because I'm not sure

when the class was held. It would be great to add a side-bar to indicate when the notes was uploaded so I can revise without getting confused as it would reflect dates rather than topics alone." **Suki**

Clayton and Rueben stressed that how lecturers post it in different folders, made a difference to how they searched for their notes.

Through observations and the interviews, there were obvious patterns of what students imagined Blackboard should look like and function. More directed to the likeness of Facebook, the social networking site, students commented.

"Put about events, create a network between students. Like facebook—add a friend system. See that student have access to the said material or not, make it more like FB." **Cheryl Lum**

"For me it would be nice if you take a little from social networks-add in chat function. Profile more detailed, also interact with students from other campuses. Nice- if you have functions like skype- tele conferencing." **Suki**

Echoing Cheryl, Matthew also wanted an- add a friend system and also noted that opening up Blackboard to other classmates would allow for the sharing of knowledge, just like Facebook.

It was very clear that students wanted the system to be shared among their other classmates not taking the particular subject; they felt that it was essential in the learning process.

Being part of the Net Generation it was not surprising that the students suggested the use of applications on smartphone and direct links to

Facebook or other social network accounts. Citing its convenience, the students mentioned;

“If we can download Blackboard as an application on a smart-phone, it can be more user-friendly. You know... handy and more practical. Also there has to be link that links us to Facebook.” **Reuben**

“It should be connected to their facebook or phone numbers where notifications can be sent. Lecturers can set a reminder then blackboard can sent to those with each update, to those platforms.”-**Suki**

Narrowing down to the impact of this Blackboard system to the whole process of teaching and learning in this education institutions, students saw the system mostly as a medium but emphasized the importance in terms of preparation and discussion with classmates;

“For academic stuff, like notes, forums- so we have easy access, easier for students to communicate with lecturers and know what’s happening with class, accessing notes and all.” **Clayton**

“It is also a good way to communicate with lecturers” **Reuben**

“I would say that a lot of people are on smartphones all the time so for example they can read it in train, like doing something, answer questions- if you have an electronic devices, you type. Allows you to search for the answers- search google, makes it easier online as you use your device”- **Suki**

“For example, Maths, it is effective if there is a discussion online, to solve problems. But, just by

downloading materials, no it does not help.” **Reuben**

While Cheryl reflected a bigger indirect impact, focusing on more elaborate skills learned such as soft skills. Citing the benefits of the system, she commented;

“It’s more than the concept of the old blackboard, it has a give and take concept, voice out opinion and you can discuss on the space”. **Cheryl Lum**

Matthew on the other hand mentioned that it helped him improve his English and knowledge on subjects like Public speaking especially during discussion as they were forced to write proper English and present ideas to ensure the discussion went smoothly.

According to Suki, it was way better than using email and its saves paper but more importantly she stated;

*“One different is that when the lecturer uploaded the notes in advance allows students to read it first, know what to expect when coming in class so can prepare the weaker ones. Not knowing what to expect-have to cope a bit harder, with some preparation in advance it helps. They can take time to prepare.”***Suki**

It was evident that there were benefits linked to using Blackboard and changes in the way students viewed education due to their generation and the change of system they were accustomed to during their studies at the earlier stage of high school. The system was also something new to them and required more self-direction on the student part. The next section will discuss the conclusion and ways to move forward to leverage on this next generation technology that has the potential to serve students of this generation productively.

3 CONCLUSION

A review of the findings of this study points to a deeper insight into the complexities of the Net Generation students. Despite the expected attributes or characteristics of the Net-Generation that are reported to be immersed in technology, the findings reflect that being a Net-Gener doesn't necessarily render them as expert of the technology.

This truly points to a more complicated relationship between Net Generation students, technology and education as reflected by scholars in higher education like Conole & Laa et.al and Lohnes & Kinzer^[9]. Findings from this study prove that many students still hold a traditional view of teaching and learning and only use technology as a supportive tool as reflected by Suki;

“Studying in front of the computer is different, not encouraging. Online, blackboard has different functions, but that doesn't mean they (students) won't come to class. It is a supporting tool to connect students and lecturers. Without blackboard- it is harder to access/cluttered with it, it's easier to retrieve. But it does not replace classes.” Suki

Although students are found to be more proficient in processing information and accessing information, seeking information or support when needed, these students still require training when introduced to a new system.

More importantly the study points to the necessity of putting more emphasis on understanding the student's perception of the use of this systems rather than placing them in one category, under a

one size fits all (Net Generation) category. Failure to address how students perceive the technology will cause inefficient usage of the online management system and in this case as there will be a gap between the technology, facilitators and the students themselves.

The potential of using online management system and in this case, particularly Blackboard has high potential for the development of teaching and learning in Malaysia but it would be crucial for both institutions and educator to understand the purpose of such systems. This study points out that students are using it as another medium to retrieve information rather than a learning platform. Many believe it is easier for them to communicate with lecturers and know what's happening in class.

This supports an Ipsos Mori^[10] study that also reflected how students are viewing learning technologies as merely a system to access information and failed to see it as a learning technology promoting new forms of learning. As technologies like Blackboard have the potential to develop students beyond the classroom in areas such as creative and critical thinking and even forming opinions.

There are some major topics that emerged to inform this study namely the personalization, appropriation of technology and ownership.

In this study, it was noticed that students found the inability to customize their profiles on Blackboard as a major issue on accessibility of the system. The inability to personalize impacted how frequently students accessed the system. They found this to be important in creating a safe, comfortable, friendly and familiar learning space. They also often used Facebook as a benchmark towards how they imagined all systems should operate. Feedback from interviews highlighted key features from Facebook such as adding a friend to sharing links to a bigger number of people as

crucial features that should be made to Blackboard to make it more accessible for students.

It is also important to understand the element of control with the concept of personalization. If a student feels comfortable and in control of the technology used the likeliness of it being used successfully is even higher. But if the student finds the system to be redundant as reflected by one of the student's interviews, they would instead source for other forms of technology as a substitute.

Another emerging topic to look at is the appropriation of technology. This directly relates back to the personalization topic as students use technology within their own context. In this study it was noticed that students made sense of Blackboard based on their understanding of how a technology should operate using Facebook as their benchmark of a system that they were comfortable to use.

That brings us to the last emerging topic which is ownership. Hence, providing a sense of ownership to the student is crucial in ensuring maximization

of the said technology otherwise the student will only use it by force and will not be able to maximize the use of Blackboard for learning in this case.

Although the results of this study are still considered preliminary, it is evident that students who are using the Blackboard are not excited about using it even though they deem it as useful. They may be more encouraged or more inclined to use Blackboard more actively if enhancement were made to the operations and layout of Blackboard. It is also important for student to feel empowered to use the technology hence the importance of knowledge of the learning systems of Blackboard.

Further analysis in a longitudinal study would be effective in comparing the success of Blackboard if the key findings of this study are taken in account. As it will provide a baseline understanding of how students perceive technology and hence ascertain the effectiveness of Blackboard in enhancing teaching and learning in a private education institution.

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