AN EXPLORATORY STUDY ON FIRST SEMESTER STUDENTS' USAGE OF COURSE NETWORKING (CN) FEATURES

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ABSTRACT

This study explored first semester students' perceptions and usage patterns of a higher education institution's learning management system (LMS), Course Networking (CN). The population of this study was first-semester diploma students. Thirty two respondents were randomly selected to participate in this study. Descriptive statistics was used to compute and analyse the data. The findings suggested that the majority of the students were first time users with positive perceptions towards CN. The findings also indicated that the most frequently utilised CN feature was "Syllabus" and the most interested feature was "Gradebook." The majority of the students agreed that all their lecturers use CN for teaching and learning purposes. The students used it to obtain learning materials and to receive announcements from their lecturers.

Keywords: Learning Management Systems (LMS), Student Perception, Higher Learning Institutions, Course Networking (CN).

INTRODUCTION

The developments in the world of information and communication technologies (ICTs) have significantly transformed the way educators teach and the way students learn in higher learning institutions. Teaching and learning using an internet-based learning management system (LMS) has become a norm in higher education as it helps to improve the efficiency of teaching and learning processes, especially e-learning (Al-Busaidi, 2013; Lwoga & Komba, 2015). The emergence of LMS has created a virtual environment that supports distance and blended teaching-learning and has enhanced the speed and effectiveness in communication and educational processes (Dahlstrom et al., 2014; Fathema et al., 2015).

According to Gautreau (2011), LMS is defined as "a self-contained webpage with embedded instructional tools that permit faculty to organise academic content and engage students in their learning" (p. 2). Lee (2015) describes LMS as a software environment which is designed to manage learning interventions, deliver learning content and resources to students as well as aid in connecting students and lecturers without the limitations of the traditional classroom. The adoption of using LMSs in universities and colleges reflects a commitment to optimise learning-teaching processes using internet technologies.

Continuous and consistent improvement is always necessary once a system is established in order to enhance and optimise users' experience. As a result, studies concerning the usage and acceptance of LMS have become a popular research area among scholars in order to better customise the functionality to their respective user groups (Basioudis et al., 2012; Lee, 2015). This is because functionality plays an important role in influencing the perception of users towards a LMS which will in turn affect the extent of utilisation of the system. Hence, it is essential to understand the usage pattern and perception of users towards a system so that insights can be extracted and applied to further enhance the features.

Research Objective

The purpose of this research is to explore first semester students' perceptions and usage of an institution of higher learning's management system (LMS), the Course Networking (CN). Identifying and understanding the potential gaps of the usage among staff and students facilitates further improvement in the utility of the LMS.

Research Questions

The following questions guided the study:

1. What are the first-semester students' perceptions towards using a learning management system (LMS)?

2. Which LMS features are utilized?

3. What do first-semester students do with the LMS?

Limitations of the Study

This study was conducted among first-semester diploma students in a private higher education institution. The intake for that particular semester was low and as a result only 32 students in a diploma programme were the participants.

Significance of the Study

This study may result in a baseline approach towards collecting data about the teaching and learning process and impact with a LMS as a tool. It may contribute to understanding the way students leverage LMS in their learning process and in their interactions among themselves, with the lecturers and the content. The information obtained may serve as a guide for university administrators and lecturers to customise teaching-learning strategies based on students' usage patterns.

LITERATURE REVIEW

The factors that affect the usage of LMS such as student perception, prior experience using it, one's ability to use the internet efficiently are some of the areas of investigation done by various studies. Bayrak and Akcam (2017) examined the impact of demographic and other external factors towards student perception of LMS. The findings concluded that students' major, instructor, and course grade are important factors influencing student perception of a LMS, whereas year of study (freshman vs sophomore) and gender have no impact on student perception. In another study, external variables that were identified to exert positive effect towards students' adoption and use of LMS included prior experience of using a LMS, satisfaction, social influence, computer self-efficacy and teacher role (Binyamin et al., 2017). Orfanou et al. (2015) discovered that students' prior experience, students' self-efficacy on the internet, attitude towards the internet as a learning tool, and usage frequency of the LMS have significant impact on the students' perceived usability of LMS. Dahlstrom et al. (2014) found that students perceived the LMS as being able to augment their learning experiences. However, a phenomenon of underutilisation of LMSs was observed in the same study despite students appreciating these systems as an enhancement of the teaching and learning process.

Faculty members' perceptions towards LMS revealed that system quality (i.e. functions, contents, and navigation speed) and self-efficacy (confidence about skill in using LMSs) have a positive effect on the perceived ease of use and usefulness of a LMS (Fathema et al., 2015). In addition, facilitating conditions (i.e. availability of specialised guidance and instructions concerning LMS use) had a less significant effect on attitude towards LMS and the perceived ease of use. Nevertheless, the study argued that perceptions towards LMS usability vary among educators and students despite the fact that both groups are frequent users of the LMS (Islam & Azad, 2015). The findings of this study suggested that positive perceptions of one group of users may differ from the perception of other groups of users.

The features offered by LMSs are important aspects that determine and characterise the usability and uniqueness of the system. Basioudis et al. (2012) study on students from three different cultural backgrounds revealed that all of them considered the provision of notes as a desirable attribute on a LMS even though the findings suggested the provision of materials over LMS does not enhance class engagement. On the other hand, Dahlstrom et al. (2014) found that students are mostly interested in specific enhancements and additions to the LMS features (i.e., things the LMS can do) over improving aspects of LMS operational functionality (i.e., performance or functionality of the system). LMS features that students wished to add on or improve are communication mechanisms alerts and calendaring, grading tools, multimedia access, and mobile interface.

Jordan and Duckett (2018) found that a LMS environment that promotes engagement and communication with lecturers and peers is perceived as crucial by students as they felt engaged when they are able to experience a two-way communication with lecturers and peers. Schaffhauser (2015) pointed out that the features desired by LMS users have changed over time. Current LMS users are seeking for a LMS with an interface similar to consumer social networks, with the ability to facilitate collaboration beyond teacher-student boundaries, analytics that enhances teaching and learning and the ability to share organised resources locally and abroad. Vipond (2016) found that academic users have stronger requirements for mobile LMS functionality. Tablets and smartphones supported

LMS were perceived as highly important. Also, the context of learning tasks, the ability to relate the learning to real life examples, and peer learning through discussion are important for students.

Some studies looked into learners' intention and reasons for using the LMSs. Jordan and Duckett (2018) stated that the LMS helps in directing learners' attention quickly to the most important materials or comments from educators. Back et al. (2016) found that the primary purpose of using LMS among students was to gain organisational study information, for the preparation of exams, and as preparation and post-processing of lessons. Henderson et al. (2015) indicated in their study that students treated LMS as a repository of resources and information as well as a support for the logistics of their university study, which is characterised by practices like organising schedules, fulfilling course requirements, being able to engage with university studies on a 'remote' and/or mobile basis, and time management. Apart from obtaining learning resources and information, Hamid et al. (2015) indicated that students use online social networking technologies like LMS to enhance interaction with the other students and their lecturers. These enhanced interactions include better engagement with course content, peer learning, development of critical thinking, self-directed learning, self-monitoring of learning progress, interaction with lecturers, and creates an enjoyable and interactive learning environment. Lwoga and Komba (2015) pointed out that students recognise web-based LMS to be useful in increasing their effectiveness and productivity in their course work and accomplishing their course tasks quickly. Hence, students are likely to adopt a LMS with the perception that it will improve their learning performance.

METHODOLOGY

The descriptive research design was adopted for this study as it aims to explore and describe the perception of first semester students towards a LMS, identifying the most frequently used LMS features as well as their respond towards the LMS usage.

Respondents

The respondents for this research were first semester diploma students. A total of 32 respondents were randomly selected from this cohort. The diversity of this group is as follows:

Table 1: Majors and Number of Students

Majors	Number of Participants
Culinary Arts	5
Events Management	13
Hospitality Management	6
Tourism Management	8
Total	32

Research Instrument

The main instrument used to collect the data required for this research was a survey questionnaire. The questions were designed to probe the perceptions of students towards the usage of the features of the LMS, which is CN and to explore their usage behaviour. The questions were categorised into three parts: (a) perceptions towards CN, (b) frequency of utilisation of CN features, and (c) usage and experience with the CN.

Part A of the questionnaires consists of two close-ended questions and two open-ended questions which enquire the respondents' perception towards CN as well as whether they possess prior experience of using a similar LMS.

Respondents were requested to rank the CN features stipulated in Part B by indicating the top five most used features from all 13 features and the top three features which they are interested to learn more about.

In part C, respondents were asked to response to a 5-point Likert scale, ranging from 1 "Strongly Disagree" to 5 "Strongly Agree." The frequency and mean for each item was calculated by using the Statistical Package for the Social Sciences (SPSS) to determine how strongly the respondents agree or disagree with the statements regarding the usage of CN.

Research Procedure and Data Collection

The respondents were told to answer the questions honestly based on their own opinions and experience. They were also informed that their personal information would not be disclosed and that their responses would be used for research purposes only.

FINDINGS AND DISCUSSIONS

This section depicts the findings about the respondents' perception towards LMS, the ranking of the most frequently used and most interested LMS features according to the respondents, and their usage of the LMS.

1.   First-Semester Students' Perception towards Learning Management System

The respondents were asked whether they were first time users of a learning platform like CN and their responses are in Table 2.

Table 2: Experience in Using Learning Platforms

This is my first time using a learning platform like Course Networking (CN)		
	Frequency	Percentage (%)
Yes	29	90.6
No	3	9.4
Total	32	100.0

Based on Table 2, 29 out of 32 respondents (90.6%) indicated that they are first time users of a LMS platform when they were being introduced to CN. Only three respondents (9.4%) had experienced learning platforms other than the CN. These learning platforms are Xmum Moodle, VLE Frog and Chhs eclass.

Table 3: Ease of Using and Managing CN as a LMS

Is the CN easy to use and manage?		
	Frequency	Percentage (%)
Yes	25	78.1
No	7	21.9
Total	32	100.0

As depicted in Table 3, the majority of the respondents, which accounts for 25 out of 32 respondents (78.1%), had a positive perception towards the usability and manageability of the CN while the remaining seven respondents (21.9%) disagreed with the statement.

Table 4: Reasons for Positive Perceptions

If Yes, why?	
Reasons	Frequency
Ease of Use	10
All-in-one	1
Clearly Shown Features	2
Easy Access to Information	4
Informed clearly	5
Organised	1
User friendly	1
Easy to Find Everything	1
Advanced	1

Table 4 shows the reasons given by the respondents as they answered "Yes" during the previous question. Ten respondents specified that the ease of use made the CN easy to use and manage.

Table 5: Reasons for Negative Perceptions

If No, why not?	
Reasons	Frequency
Difficult to Access via Mobile Phone	1
Unfamiliar with Features	2
Troublesome	2
Complicated	1
Not convenient to use	1

While the remaining seven respondents disagreed with the statement, they also stated that the reasons which caused them to have negative perception towards the CN were due to their unfamiliarity with the features, difficulty in accessing via mobile phone as well as inconvenience and complexity in using the CN. The outcome is supported by Vipond's (2016) findings on mobile LMS functionality as difficulty in accessing via mobile device has resulted in a negative perception towards the CN.

2.   The Most Frequently Used and Most Interested LMS Features

The respondents identified the CN features that were most frequently used and the ones that they are interested in learning more about.

Table 6: Most Used Features and Features to be Learned

CN Features	Top five CN Features used this semester	Other CN features that you would like to learn more
Syllabus	30	3
Posts	27	3
Polls	4	11
Events	19	12
Global Posts	13	6
Quizzes	7	10
CN Dropbox	5	10
Gradebook	1	14
Groups	11	8
Badges	3	10
Email	24	5
Class Cast	5	7
Chats	11	7

According to Table 6, the top CN feature used in this semester is Syllabus (30 respondents). This is followed by Posts (27 respondents), which is the second most used feature, Email (24 respondents) as the third most used feature, Events (19 respondents) as the fourth most used feature and Global Posts (13 respondents) as the fifth most used CN feature. The least used feature according to the respondents is Gradebook as only one respondent selected it.

The features that the majority of the respondents were interested to learn more are Gradebook (14 respondents), Events (12 Respondents) and Polls (11 respondents). The respondents showed the least interest to learn more about Syllabus and Posts features as they have the least total frequency of three. The respondents also showed considerable interest to learn more about CN's Dropbox (10 respondents), Quizzes (10 respondents), Badges (10 respondents) and Groups (8 respondents).

3.   First Semester Students' Behaviour and Experience in Using the LMS

The final part of this study asked the respondents on what will they do with the CN for their classes and about their personal experience with the CN.

Table 7: Percentage and Mean for Items under 'My Classes' Category

My Classes						
	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Mean
All my lecturers use CN.	0%	0%	0%	43.8%	56.3%	4.56
My lecturers post their materials in advance, i.e. Before the class starts.	3.1%	6.3%	37.5%	40.6%	12.5%	3.53
My lecturers use CN to email us as a class.	3.1%	12.5%	34.4%	34.4%	15.6%	3.47
My lecturers use poll to gather opinions.	9.4%	21.9%	53.1%	12.5%	3.1%	2.78
My lecturers use post to discuss assignments.	3.1%	15.6%	34.4%	34.4%	12.5%	3.38
My lecturers use anar seeds.	12.5%	12.5%	50.0%	21.9%	3.1%	2.91
My lecturers use event to coordinate activities.	3.1%	28.1%	37.5%	28.1%	3.1%	3.00

Based on Table 7, the highest mean value of 4.56 is held by 'All my lecturers use CN.' This means on average the respondents agree to the statement. The second highest mean value of 3.53 is held by 'My lecturers post their materials in advance, i.e. before the class starts.' Meanwhile, the item which scored the lowest mean value of 2.78 is 'My lecturers use poll to gather opinions.'

Table 8: Percentage and Mean for Items under 'My Personal Experience' Category

My Personal Experience						
	Strongly Disagree	Disagree	Neither	Agree	Strongly Agree	Mean
I use CN to communicate and collaborate with my classmates.	18.8%	31.3%	21.9%	21.9%	6.3%	2.66
I use CN to download class materials	0%	0%	6.3%	43.8%	50.0%	4.44
I use CN to communicate with lecturers about assignments.	6.3%	3.1%	53.1%	25.0%	12.5%	3.34
I can improve my CN skills by attending training sessions.	9.4%	18.8%	31.3%	25.0%	15.6%	3.19
I need a CN handbook for reference.	9.4%	9.4%	40.6%	28.1%	12.5%	3.25
I often use the Mobile app to access CN.	6.3%	12.5%	18.8%	34.4%	28.1%	3.66
I use CN to obtain updates from the university.	0%	3.1%	15.6%	62.5%	18.8%	3.97
I use CN to manage my assignments.	0%	6.3%	18.8%	46.9%	28.1%	3.97
I use CN to follow up on announcements by lecturers.	0%	0%	12.5%	46.9%	40.6%	4.28

Based on Table 8, the highest mean value of 4.44 is held by 'I use CN to download class materials.' The second highest mean value of 4.28 is held by 'I use CN to follow up on announcements by lecturers.' The item which scored the lowest mean value of 2.66 is 'I use CN to communicate and collaborate with my classmates.'

CONCLUSION

The purpose of this research is to explore first semester students' perceptions and usage of an institution of higher learning's LMS, the (CN). It could be concluded that majority of the students had positive perceptions towards the CN with the prominent reason of the ease in using the system. The most used feature on the CN was "Syllabus" which generally serves as a repository for learning materials. On the other hand, the least used feature was "Gradebook" which is also the most interested feature that the students wanted to know more about. Students showed the least interest to learn about "Syllabus" and "Posts" as they are generally familiar with these two features due to the high frequency of usage. Most of the students strongly agreed that their lecturers were using the CN to connect with them. Students also generally agreed that they used the CN to obtain learning materials and follow up on announcements from the lecturers.

Recommendation

Due to the exploratory nature of this research, the number of sample adopted is insufficient to be representative of the whole population. Hence, it is recommended that further research be conducted by adopting a larger sample size in order to generate statistically significant results which are more accurate and more generalizable. Apart from that, it is also recommended that future research examines similar topic based on perspectives of both educators and learners in order to obtain a more comprehensive understanding on a LMS in the context of a higher learning institution. Furthermore, qualitative research could be performed on a similar topic in the future to investigate the relationship between factors (i.e. accessibility, effectiveness in completing task, and etc.) and the perceived usefulness and/or perceived ease of use of the LMS.

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