

A Comparative Study of Foundation and Diploma Students' Perceptions of Course Networking as a Learning Management System

Hazetul Razman Othman^{1*}

¹ Unitar International University, Malaysia

*Corresponding Author: hazetul@unitar.my

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Abstract: Numerous higher education institutions have adopted online learning platforms due to technological advancements, which offer numerous benefits. These advantages include providing flexibility and convenience for all students, optimising space usage especially classroom space and potentially higher student achievement compared to traditional classes. This study examines how Course Networking (CN), a type of Learning Management System (LMS), influences the learning process of two groups of university students in a private university. The research aims to gather insights into students' experiences in order to identify which features of CN work effectively. The findings indicated that there is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived usefulness of the CN. However, no significant differences were observed between these 2 groups for perceived ease of use, behavioural intention and users' experience.

Keywords: Higher Education Institutions; Perceived Usefulness; Perceived Ease of Use; Behavioural Intention; Users' Experience

1. Introduction

Tertiary education qualification has always been a crucial component of guaranteeing one's success in securing a job, especially when the modern workforce is continuously changing. Historically, tertiary education was typically approached through the conventional method of Instructor-Led Training (ILT). It was constrained, though, in that it was difficult to monitor advancement and gauge success. Consequently, universities look for a more effective way to handle students' learning process. This is where the Learning Management System (LMS) is useful. Universities can host online courses on the LMS and monitor student progress from a single, central location. With the ability to monitor student progress and tailor instruction to each student's needs, it provides a complete response to the problems presented by ILT.

The development of the LMS has been one of the most important advances in tertiary education. A course leader can create, manage, and distribute training materials to students from a single location with the help of an LMS software platform. The LMS has evolved into a powerful tool over the course of several decades, undergoing significant changes in its history.

In the Malaysian context, the LMS is a mandatory requirement of the Malaysian Qualification Agency (MQA). However, the Higher Educational Institutions (HEIs) have the choice of which LMS application they would like to use in the teaching and learning process.

Research Question

This study looks at how Course Networking (CN), a form of LMS affected the learning process of university students in a private university. The study aimed to gather information on students' experiences to assess what functions in CN that when well and identify areas for improvement in CN. The following are the research questions:

- i. Is there any difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived usefulness of the CN.
- ii. Is there any difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived ease of use of the CN.
- iii. Is there any difference between undergraduate students with foundation and undergraduate students with diploma concerning behavioural intention of the CN.
- iv. Is there any difference between undergraduate students with foundation and undergraduate students with diploma concerning users' experience of the CN.

2. Literature Review

One of the most influential theories for assessing human behaviour is the theory of reasoned action by Fishbein and Ajzen (1975). This theory has been expanded to the Technology Acceptance Model (TAM) by Davis (1989). The behavioural intention of a person may also be ascertained using this approach, but it does so in relation to their adoption of new technology. Bag et al. (2022) claimed that the TAM model explains why students feel confident using technology to improve their learning outcomes.

Vatsa and Bhatnagar (2024) applied systems modelling to explore the usability of the online learning platform in the future compared to its usefulness during the pandemic era. They suggested that all stakeholders in an online learning platform must work together to upgrade it when needed to achieve the intended level of usability if the platform is to reach the last mile. If the obstacles are lessened, lecturers and students will continue to use online learning platforms (Almeida et al., 2020).

The study's findings of Sari and Oktaviani (2021) indicated that most students thought the online learning environment might be helpful to them in some way. They said that the platform's online activities were simple to follow and challenged them to work towards maintaining a balance between motivation and interest to complete the online learning process.

Up until the unexpected COVID-19 outbreak, most Malaysian universities operated under the traditional educational model. Maintaining the efficacy of teaching and learning via online platforms presents several issues for educators and learners when compelled to transition to online learning. For the first time, student-centred education - which emphasises the role of students in learning activities—is replacing lecturer-centred education as the style of instruction in all Malaysian higher education institutions. Thus, to guarantee the success of the digital revolution of education, it is imperative to have deeper understanding of how students view this enhanced learning approach.

Ong and Ibrahim (2024) investigated the impact of five variables on students' satisfaction with online learning environments and, consequently, on behavioural intention inclination to utilise these environments, particularly within the framework of Malaysia's higher education system. They found students' enjoyment of learning via online learning platforms is significantly enhanced by the content richness. It demonstrated how content richness in an online learning environment can help learners become more engaged and positively impact the learning process. The findings in Maslov et al. (2021) demonstrated how reliant on the learning platforms students are, especially those enrolled in programs where most of the courses are delivered online. The use of Moodle as an application of LMS was rated positively. Additionally, students' perceptions could be explored through qualitative research. However, they did not specify which elements should be investigated further if qualitative research is conducted.

Research by Coman et al. (2020) suggests that students perceive online learning platform as an emergency measure rather than a true replacement for face-to-face instruction. Mohammad, and Kamran (2023) findings reveal no statistically significant differences in students' learning experiences using online platform and face-to-face instruction. Students have expressed positive feedback about online education, as shown by the statistical data and their responses to open-ended questions. Nonetheless, both researches did not indicate the ideal percentage of online and face-to-face instruction to ensure optimum learning effectiveness.

Nonetheless, few studies, if any, have been conducted on how the LMS system affect students' learning experiences, despite the abundance of literature on the advantages and disadvantages of e-learning instructional designs and administrative concerns (Siddiqui et al., 2020). Even if research in this field has made a substantial contribution, new perspectives and introspective insights are added by every study. The purpose this research is to understand how engaged and satisfied students are with the newly introduced CN system in their university.

3. Hypotheses Development

To achieve the study's objectives, the following hypotheses were developed for empirical testing:

- H01:** There is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived usefulness of the CN.
- H11:** There is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived usefulness of the CN.
- H02:** There is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived ease of use of the CN.
- H12:** There is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived ease of use of the CN.
- H03:** There is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning behavioural intention of the CN.
- H13:** There is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning behavioural intention of the CN.
- H04:** There is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning users' experience of the CN.
- H14:** There is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning users' experience of the CN.

4. Research Methodology

The researcher employed a quantitative approach to address the research objectives aimed at identifying and analysing the factors influencing users' experience of the CN. An online survey was conducted during the semester beginning in May 2025. The research adopted a non-probability sampling technique, specifically convenience sampling. 35 respondents participated in the online survey.

The online survey, adapted from Das and Mishra (2016), contains two main sections. The first section collects the respondents' demographic data, while the second section measures the research model constructs. The questions in the second section were structured using a five-point Likert scale.

5. Findings and Discussion

Table 1: Result of online survey

	Perceived Usefulness	Perceived Ease of Use	Behavioural Intention	Users' Experience
Mann-Whitney U	68.000	128.500	92.000	117.500
Z value	-2.302	-0.127	-1.443	-0.527
p-value	0.021	0.899	0.149	0.598

Since the p-value is less than 0.05, null hypothesis is rejected at 5% level with respect to perceived usefulness (p-value = 0.021). Hence, there is a significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived usefulness of the CN. Undergraduate students with foundation often focus on preparing students for university-level study with a general curriculum. These students might have a different approach to learning, study habits, and expectations from the CN compared to diploma students. On the other hand, undergraduate students with diploma typically have a more specialised, practical, and hands-on background. They might be more accustomed to applying knowledge directly to tasks or projects, which could influence how they perceive the usefulness of the CN.

Since the p-value is more than 0.05, the null hypothesis is accepted at 5% level with respect to perceived ease of use (p-value = 0.899). Hence, there is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning perceived ease of use of the CN. If the platform is consistent in its functionality, students from both backgrounds might have had similar experiences when using it. This consistency can reduce the likelihood of significant differences in perceived ease of use. Similarly, the tasks or activities required by the course might not differ significantly between both backgrounds, leading to similar interactions with the platform.

Since the p-value is more than 0.05, the null hypothesis is accepted at 5% level with respect to behavioural intention (p-value = 0.149). Hence, there is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning behavioural intention to use CN. Both group of students might share similar academic goals and expectations, such as succeeding in their courses, obtaining good grades, and preparing for future careers. If they perceive CN as equally helpful in achieving these goals, their behavioural intentions to use it might be similar.

Since the p-value is more than 0.05, the null hypothesis is accepted at 5% level with respect to users' experience (p-value = 0.598). Hence, there is no significant difference between undergraduate students with foundation and undergraduate students with diploma concerning users' experience. Both groups might have similar levels of exposure to technology and online learning platforms, leading to comparable user experiences. If they are equally familiar with digital tools, they are likely to have similar experiences when using the CN.

Limitations of the Study

Firstly, the study has a small number of participants, and therefore limits how far the results can be generalised to a larger population. Secondly, the research is limited to the business faculty in one university and therefore the findings may not apply to other universities. Thirdly, since convenience sampling is used, there is a risk of bias because participants are not randomly selected.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study.

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