

A Preliminary Study on Identifying the Level of Student Engagement in Blended Learning

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ABSTRACT

Blended learning is one of the learning methods used in any educational institution worldwide. It involves a combination of face-to-face learning and teaching with students using computer technology. Therefore, student engagement is essential to ensure the efficiency of blended learning. However, blended learning is found challenging where active collaboration between lecturers and students are highly needed to integrate learning. To overcome the issue, Polytechnic provides a Learning Management System known as the Curriculum Information Document Online System or known as CIDOS. CIDOS is a fully automated document management platform that manages the uploading, downloading, updating, and sharing digital content through a single integrated component. This study aims to determine the level of student engagement in blended learning at Polytechnic, Kota Kinabalu. A preliminary study with 125 students found that students are medium in the learning management system, which is CIDOS.

Key Words: blended learning, student engagement, digital, lecturer, teaching

1. INTRODUCTION

Technological advancement has impacted and changed the scenario of education worldwide. Studies on the relationship between technology and education are widely discussed, such as Selwyn (2012) study. In the past, learning only took place in the lecture room, and learning activities would stop when a class had ended. The advent of technology or the development of Information Technology has helped continuous learning where teaching and learning activities are no longer entirely in the classroom. A variety of innovations are being adopted in the teaching and learning environment, and one of them is the utilisation of technology through blended learning (Kintu *et al.*, 2017). Blended learning is not new. According to Zhonggen (2015), the 21st century has witnessed vast amounts of research into blended learning since the conception of online learning formed the possibility of blended learning in the early 1990s.

Blended learning is one of the learning methods used in any educational institution worldwide. It involves a combination of face-to-face learning and teaching with students and using computer technology to connect with students. Student engagement is essential to ensure blended learning for the maximum. Previous research has shown that blended learning can be an optimal learning environment to enhance student engagement and achievement. Blended learning has been an effective learning environment for increasing student involvement and accomplishment (Picciano *et al.*, 2014). Studies related to student engagement have been conducted in many studies (Trowler, 2010; Parsons & Taylor, 2011; Axelson & Flick, 2010; Alrajeh & Shindel, 2020). Student engagement is one of the things to consider in blended learning.

Student engagement is essential for learning, perseverance, achievement and experience (Gunuc & Kuzu, 2015). Growing student engagement is necessary for creating comprehensive learning courses (Manwaring *et al.*, 2017). According to Alrajeh and Shindel (2020), student engagement is defined as the inside and outside classroom practices that lead to measurable results. Many studies have found that blended learning is related to student engagement. This relationship has been discussed in the study of Holley dan Oliver (2010) and Vaughan (2014). According to Vaughan (2014), there is a greater emphasis on student engagement and blended learning approaches and student engagement concerns regarding success and retention rates for students in higher education. It should involve collaboration between

lecturers and students to integrate learning. The Polytechnic provides a Learning Management System that is used throughout the Polytechnic. It is known as the Curriculum Information Document Online System or known as CIDOS. CIDOS is a fully automated document management platform that manages the uploading, downloading, updating, and sharing digital content through a single integrated component (Ismail *et al.*, 2014). CIDOS is a platform where lecturers and students may share what they learn in class. Students can submit and receive assignments issued by lecturers. Test assessments can be completed simultaneously using CIDOS within a set time frame.

Many studies have found that traditional learning is no longer appropriate due to technology that enables learning to be delivered online. Traditional lectures will be modern, sustainable education and use advanced technology when the blended learning approach is implemented, and this blended learning approach can meet today's student's requirements (Bock *et al.*, 2018). Among the factors that influence the engagement of blended learning is the ease of use of an application. It raises the question of whether blended learning is interested in students. Before the Covid-19 spread, traditional face-to-face learning was implemented. Students could send assignments directly to the lecturer, but this situation changed after all students and lecturers had to sit in their respective residences. Follow the Standard Operating Procedure (SOP) and Movement control order to curb the spread of Covid-19. Therefore, online classes and learning management systems such as CIDOS are essential to continue learning and learning activities more smoothly. In this case, online learning is seen as effective in carrying out any learning activity.

In the scope of this study, a new Learning Management System was introduced at the Malaysian Polytechnic around 2018. Therefore, blended learning application such as CIDOS is still in the introductory stage and new at the Polytechnic level. Nevertheless, the use of CIDOS is encouraged among lecturers and students. This scenario raises the question of the extent to which the use of CIDOS among Polytechnic students when its use is not mandatory among students. This study is essential to see the extent of students' ability to engage in blended learning. Apart from this, various factors need to be studied that prevent blended learning from being conducted at the Polytechnic. Among the factors that hinder blended learning is blended learning that uses internet coverage in Sabah, thus restricting the optimal use of blended learning (New Straits Times, 2021). Some students are less economically capable, resulting in not being able to follow blended learning well. Blended learning requires students to provide mobile data or a smooth internet network before starting the class. When other states are ready to migrate from 4G, figures suggest that 52% of students in Sabah lack internet access, causing them to miss online classes under the Movement Control Order (MCO) (Sinar Harian, 2020). In addition, the student's residence is far from the interior, which makes it difficult for them to get internet access to follow blended learning effectively.

Based on the above discussion, it is challenging to identify actions that need to be taken to enhance student engagement in blended learning. In addition to the COVID-19 pandemic that worries many parties, this situation forces students and lecturers not to face to hold learning sessions. It is, therefore, necessary to study the levels and factors influencing student engagement in blended learning. This study is essential because student engagement is often considered a good predictor of student learning and development (Burch *et al.*, 2015).

2. RELATED WORKS

Its fundamental underlying idea is that students must be meaningfully engaged in learning activities through interaction with others and worthwhile tasks (Kearsley & Shneiderman, 1998). Student engagement is defined as practices that occur inside and outside the classroom and result in measurable outcomes. According to (Trowler, 2010), student engagement is defined as students' willingness and effort to participate successfully in school activities that lead to positive results. Behavioural, cognitive, and emotional engagement are the three types of student engagement. Behavioural engagement refers to a student's attention, completed work, engagement in learning opportunities, and pleasant behaviour (Wimpenny & Savin-Baden, 2013). Feelings of connection to information that students find intriguing and delightful are examples of emotional engagement.

According to Kahu (2013), there are six elements: the socio-cultural context, the structural and psycho-social influences; engagement; and the proximal and distal consequences, and the framework has the student at its centre. The inclusion of the three elements of engagement (cognitive, emotional, and behavioural) as advised by Fredericks *et al.* (2004) complete review demonstrates the psychological perspective. The different facets to the dimensions are also acknowledged; for example, affect is recognised as enthusiasm for the topic and belonging to the institution. A key strength of envisioning engagement in this way is that it acknowledges the lived reality of the individual while not reducing engagement to just that. This goes some way to addressing (Zyngier, 2008) concern that a narrow definition of engagement can lead to the impression that 'if the student is engaged then the teacher is

responsible, but if the student is disengaged then the problem is with the student'. However, to highlight that student engagement is more than just an internal static state, this individual experience is embedded within the socio-cultural context and shown as influenced by characteristics of both the student and the institution.

Student engagement is a commitment or investment in learning activities. It can be known as a meta concept that encompasses behaviour, cognition and emotion (Sedláček & Šedřova, 2020). Student engagement refers to what students do to improve their learning experience. Various research has been undertaken in the curriculum, training system and technologies that promote a learning platform focused on the student experience (Al-Tameemi & Xue, 2019). Student engagement in higher education is associated with grades, persistence and lecture completion (Manwaring *et al.*, 2017). Student engagement can be seen through behaviour, cognitive or affective, throughout the network of student learning communities. It is influenced by structure and interior, complex relationship interactions, teaching activities and learning environment (Bond *et al.*, 2020). Educators observe this student engagement continuously because it has a positive relationship with in-depth learning and educational outcomes (Northey *et al.*, 2015).

3. METHODOLOGY

This study using quantitative in the form of an online survey. The method of data collection is to use a random sampling technique for 125 samples. The instrument used to collect the data was a questionnaire with items shown in Table 1 adapted from Syed Najmudin *et al.* (2009). Then, this study uses Statistical Package for the Social Sciences (SPSS) Software to conduct descriptive analysis.

Table 1: Study Items

Item Code	Item
C1	I spend more time in the CIDOS for the purpose of taking notes or sending exercises.
C2	I can definitely understand what is being taught in CIDOS.
C3	I am confident that I can learn and succeed in class using CIDOS.
C4	I am comfortable communicating online and discussing through CIDOS with other instructors or students.
C5	I listen/read the information in CIDOS carefully.

The survey measured participant's level of student engagement with a 5-point Likert scales. After the data collection process is complete, data extract from the questionnaire will be entered into SPSS software to produce a result for the respondent.

Section A consist of the background of the respondent background. This section uses three questions, which differ in the semester, gender and internet resources. Meanwhile, section B consists of Student engagement in CIDOS. This section contains 5 question items based on Table 1, where the answer choices are 'Never', 'Ever', 'Not sure', 'Frequently' and 'Very Often'.

After the data is obtained, the data will be studied based on the mean score. Level measurement is based on the study of Syed Najmuddin *et al.* (2009) which each mean score has its interpretation as in Table 2.

Table 2: Level Determination Based on Mean Score

Score min	Interpretation
1.00– 1.99	Weak
2.00– 2.99	Low
3.00– 3.99	Medium
4.00– 5.00	High

4. RESULT & DISCUSSION

In general, this study found that all items were in the medium level except one item in the low level. Table 3 shows the results of each c1 until c5. There are five examined objects. The maximum mean value is 3.288 (item C5), followed by 3.024 (item C4), then 3.016 (item C3) and 3.0088 (item C3), respectively (item C2). The lowest value, meanwhile, is item C1 (2.944).

Table 3: Analysis Result

Item Code	Item	Standard deviation	Score min	Level
C1	I spend more time in the CIDOS for the purpose of taking notes or sending exercises.	1.03	2.94	Low
C2	I can definitely understand what is being taught in CIDOS.	0.95	3.01	Medium
C3	I am confident that I can learn and succeed in class using CIDOS.	0.83	3.02	Medium
C4	I am comfortable communicating online and discussing through CIDOS with other instructors or students.	1.05	3.02	Medium
C5	I listen/read the information in CIDOS carefully.	1.15	3.29	Medium

Table 3 shows the mean score of student engagement using CIDOS in Kota Kinabalu Polytechnic students. The item that obtained the highest mean score value was item c5 (mean score 3.29); students listened/read the information in CIDOS carefully. Followed by item c3 (mean score 3.02); students with confidence that they can learn and succeed in class using CIDOS and item c4 (mean score 3.02); students are comfortable communicating online and discussing through CIDOS with instructors or other students. On average, students' level of involvement using CIDOS is at 3.06, indicating that students engagement in blended learning are medium. The difference item analysis based on min shown in Figure 1.

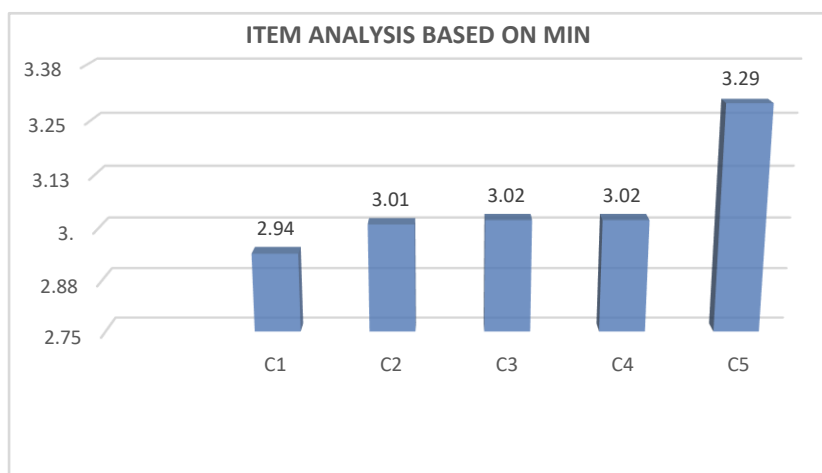


Figure 1: Item Analysis Based on Min

5. CONCLUSION

This study conducted a preliminary survey to assess student engagement in blended learning in higher education, Polytechnic, Kota Kinabalu. The results demonstrate that students are no longer actively interested due to the shift in their learning style from face-to-face instruction in the classroom to a blended learning method. Therefore, students, lecturers, and institutions need to optimise their role to enhance engagement during teaching activities thus, raising the effectiveness and quality of blended learning. There is a need to determine the determining factors involved in student engagement in blended learning to guide students and lecturers in further increasing student engagement in blended learning.

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