STUDENTS' ONLINE ENGAGEMENT AND USAGE OF DISCUSSION BOARDS ON BLACKBOARD: A STUDY FROM THE UAE

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ABSTRACT

Academic institutions need to enhance online and virtual learning strategies to ensure student engagement, satisfaction, and feedback in online classrooms. Providing online education has become the need of the hour because it enhances learning without regard for distance or the need to travel to school. The present study conducted a qualitative research design to explore students' online engagement in Blackboard's discussion forums. The study aimed to investigate students' perceived benefits of discussion forums and their views on improving their engagements in the discussion boards. In the current study17 students at a federal university in the United Arab Emirates (UAE) reflected on their engagement in a discussion forum using SWOT analysis. The thematic data analysis technique was used for the data analysis. This study revealed that students perceived the benefit of discussion forums in a number of areas, including by sharing their experiences, reflecting on other students' opinions and giving feedback, and improving students' satisfaction with the course. However, the results indicated that a more technological system could enhance students' engagement in discussion forums by improving the elearning infrastructures and students' needs.

Keywords: *Students' engagement, Blackboard forums, online education, SWOT analysis, phenomenology.*

INTRODUCTION

Over the last decade, scholars, educators, and policymakers have shown significant interest in the conceptualization and assessment of student engagement (Bond et al., 2020). Educators' professionalism and the university's positive environment seem to be directly influenced by this commitment (Lei et al., 2018). In contrast, the processes that lead to a student's level of engagement are still to be precisely defined, and the term engagement is employed in a variety of situations in diverse ways (Kahu & Nelson, 2018). Broader involvement in classroom instruction can keep students engaged during their school hours. Students' participation happens interactively inside a learning interface at the interplay of the pupils' attributes and context and the organization's policies and practices (Kahu et al., 2017).

In an attempt to improve the quality of education, student engagement has been an important topic (Mayhew et al., 2016). For teachers and academics, student involvement is becoming something of a mystery, with detailed conversations about its complexities and concerns regarding the scope and depth of conceptualization and implementation within academic evidence (Bond & Bedenlier, 2019). The rapid increase of social network sites and online educational settings has challenged the awareness and capacity to achieve student engagement. Furthermore, online, simultaneous, asynchronous, mixed, and hybrid teaching are replacing face-to-face engagement. The absence of contact with and inside conventional educational contexts does not diminish online students' need to connect with the subject,

teacher, and other classmates. Education is still a social experience (Groccia, 2018).

As teachers, it is essential to keep students engaged and provide them with the opportunity to learn 21st century skills and instructional technology competencies (Bond, 2020). For understanding how modern technology impacts student engagement, it is essential to look at how it affects student engagement (Henderson et al., 2017). With this growing emphasis on student involvement, modern technology has become an essential feature of higher education, permeating all facets of the student experience (Barak, 2018). A systematic review of studies on the topic is vital before actively engaging in discussion about increasing student involvement in the technological environment (Webb et al., 2017), although the literature demonstrates no assurance of meaningful student participation due to technological use (Sosa Neira et al., 2017).

Due to the current situation brought about by the COVID-19 pandemic, class interactions and student engagement in online classrooms are a significant challenge for teachers who have online classes (Chiu, 2021). There are many advantages to online educational schooling, especially for students who either live outside of the country or are too busy to attend classes in person. Many universities provide virtual learning programs with internet sites that prospective students can utilize for their studies. Nevertheless, digital and virtual learning courses often fall short when detailing the range of programs or the requirements imposed on student participants (Fazza & Mahgoub, 2021).

Blackboard is a Virtual Learning Environment/ Learning Management System (VLE/LMS) that allows teachers to be involved and communicate with learners online using discussion forums, blogging, publications, wikis, and conferencing (Hamill, 2020). Furthermore, when combined with an efficient and compelling modular framework, the VLE can increase cross-disciplinary education (Dobozy, 2017).

According to the literature, there is a pressing need to investigate students' perspectives on the effectiveness of Blackboard discussion rooms. As a result of the COVID-19 outbreak, which resulted in the closure of higher education institutions worldwide, most higher education institutions have turned to these discussion boards and related virtual administration systems. Following the global trend, United Arab Emirates (UAE) colleges have adopted the same concept for online learning. Considering the scenario, I performed this study to fill a gap in the literature by examining the level of student engagement and the use of Blackboard discussion forums at a federal university in the UAE.

RESEARCH QUESTIONS

Based on the pieces of evidence and research gaps in literature, the current study developed the following research questions:

1. How do students perceive the benefits of discussion forums on Blackboard?
2. How can students' engagement in the Blackboard discussion forums be improved?

LITERATURE REVIEW

Online Learning

For online learning, the level of social engagement focused on the extent of online instruction during school time and varyied from no teacher-led instructional procedures to different levels of elearning assisted by the instructor (Famularsih, 2020). Barriers to online learning pertain to the limitations and problems instructors and learners face when using the latest technological tools and strategies. Modified practices resulting from the closure of the institution include instructional techniques, class participation, and evaluation (Lie et al., 2020).

Through web-based learning, instructors and learners must engage and communicate for pupils to learn new information (Yang et al., 2021). Inquiry initiatives backed by technologies can also promote pupils' behaviour, feelings, and cognitive modes to boost pupils' engagement in the learning process (Zhen et al., 2018). A good, meaningful, long-lasting psychological environment for learning is based on educational engagement. Learning interaction is a proper observational gauge for measuring education quality and predicting pupils' growth and development and is a significant predictor of academic success (Liu et al., 2018).

In anticipation of the decision to terminate face-to-face instruction, most institutions in many countries turned to online learning to meet the crisis. Technology such as the internet are being used to simplify the delivery of educational content. This is a new way of providing education known

as online learning (Rinekso & Muslim, 2020). As a result of recent technological advancements, institutions have been capable of conducting innovative education using web-based learning, either entirely or partially. Due to the COVID-19 pandemic, educational institutions were forced to adopt web-based learning on a large scale to remain viable (Adedoyin & Soykan, 2020). Online learning can be divided into three types of educational contexts: synchronous teaching, asynchronous teaching, and blended teaching (Goh & Sandars, 2020).

Online learning is becoming increasingly popular, and higher education institutions are looking for ways to serve their online students better (Rohman et al., 2020). Several higher education institutions provide degree programs online, which are transforming university education at a faster rate. Despite the potential for greater access to university, academic research shows that higher attrition rates connected with online education means it might need some improvement (Stone, 2019).

Over the past ten years, the evolution of individuals' lives from face-to-face engagement to digital engagement has become widespread. Society is more dependent on information and communications technology (ICT) in many parts of life, whether explicitly or implicitly. Dumford and Miller (2018) conducted a study to examine how attending online classes affects student involvement by drawing on statistics from the National Survey of Student Engagement, to see the usage of online education grow. Ordinary least squares regression models were used to assess the data and consider pertinent pupil and organizational variables. Attending online classes and learner involvement were found to have several significant correlations for both first-year and senior learners. Mathematical reasoning was more common among students who took more online classes than among those who took fewer. Additionally, students who took more online classes expressed a lower level of engagement and less experience in instructional strategies (Jacob & Sam, 2008).

Despite the many benefits of online education, there is one drawback: It is more challenging to engage students in meaningful dialogues due to specific constraints (Stevenson, 2021). Considering the several benefits of online teaching that were revealed during the COVID-19 pandemic, it is likely that the focus will remain on online teaching in the future. As a result, it is critical to learn how to improve and stimulate online discussion while increasing its effectiveness (Hopley, 2018).

The role of online learning became more significant after the COVID-19 pandemic (Dhawan, 2020). Many higher education institutions worldwide have suspended face-to-face classes due to mounting worries about COVID-19 and demands to restrict the spread of the infection. The pandemic has exposed new weaknesses in the global system of education. Educational institutions must be adaptive and adaptable when crises are confronted. Ali (2020) used a meta-analytic approach and available studies to understand the spirit of continuous learning during the pandemic. Ali revealed that elearning is becoming more common in colleges throughtout the world.

In the wake of the COVID-19 pandemic, countries and academic organizations around the globe are launching a variety of legislative approaches to continue teaching. When it comes to academics, there is debate regarding what should be taught, how much time instructors and learners must devote to it, and how this affects educational equity (Zhang et al., 2020). In this regard, Adnan and Anwar (2020) studied the opinions of learners in higher education about mandatory online university classes during the pandemic. The researchers obtained the opinions of university students for this study. Their research indicates that online education is not effective in developing nations, where many learners are incapable of accessing and using the internet due to technical and financial constraints. Several of the additional concerns raised by the learners in universities were the unavailability of face-to-face engagement with the teacher, their responsiveness, and a lack of typical classroom socialization.

IMPORTANCE OF STUDENTS' ENGAGEMENT IN CLASSROOM DISCUSSIONS

Online education, face-to-face classes, and giant classrooms frequently employ asynchronous discussions. Through the use of asynchronism, instructors encourage critical thinking among students. When pupils are freed from time and space constraints, they are more likely to reflect (Ding et al., 2017). Students need to have the opportunity to participate in online discussions when they cannot attend class in person. **To** enjoy the benefits

of synchronized online discussions, learners must interact (Kopcha et al., 2016). The lack of participation in online asynchronous debates has been widely documented. Low online conversation participation is frequently linked to a lack of interest in online talks and superficial debates (Kim et al., 2015).

Online or hybrid education systems are not usually linked with student engagement. The practitioners and educational leaders can engage in learning in non-face-to-face situations by utilizing a variety of tactics like well-conceived talks, group activities, and creating a collaborating atmosphere that stimulates and promotes a community of learners (Dixon, 2014). Encouraging students to actively participate in conversations, tasks, and evaluations is impossible without including student engagement in every aspect of digital or hybrid coursework (Poll et al., 2014). Regardless of the content or the content distribution medium, student involvement is essential for effective education. As a result, it might be challenging to keep students engaged in online courses. The online course presents an interesting problem because there is no face-to-face interaction between instructor and learners. Students' involvement is a significant issue for online teachers, regardless of how long they've been educating individuals, according to a survey by Khan et al. (2017).

Innovative and learner-centered teaching methods have recently emerged in university education (Zainuddin & Halili, 2016). Inaction is a critical matter of traditional instruction, particularly in larger classes (Damsa et al., 2015). Important criticisms of lecture-style instruction are low student engagement and a setting that encourages a simple education system (Ding & Orey, 2018). According to Steen-Utheim and Foldnes (2018), any educational method that involves students in the learning process is what most people mean when talking about student engagement.

Increased student pleasure, increased willingness to learn, reduced isolation, and improved education quality in online courses can all be attributed to learner engagement. Martin and Bolliger (2018) surveyed students' perceptions of several online course engagement tactics using Moore's interaction theory. In the study, 125 students completed a 38-item survey on engagement tactics with their peers and instructors. Among the three main categories, student-to-teacher engagement tactics were the most popular. Student-to-student engagement strategies like icebreakers/introduction discussions and online collaboration tools were rated the most beneficial by students, while submitting routine announcements or email alerts and supplying a scoring rubric for all tasks were considered the most helpful by instructors in the student- teacher engagement strategy.

Blackboard and its Discussion Forum Feature

When a learner can use an LMS like Blackboard effectively, the pupil's impressions about online education are greatly influenced by their performance in using these applications (apps) (Dhawan, 2020). As a result, learners must be prepared to transition from conventional to online education. They should be informed of the necessity of Blackboard and other online education technologies as the only alternative to traditional instruction during times of crisis (Yen, 2020). LMS programs as an alternative for conventional teaching were impacted by the problems and worries induced by the rapid and significant change during the onset of the COVID-19 pandemic. Digital learning usage during the pandemic had its drawbacks. According to Affouneh et al. (2020), pupils dealt with numerous technical issues that cooled down or impeded their education.

Many students saw the Blackboard app as an additional resource rather than the sole means of learning during this emergency. Some of them saw an online discussion between educators and pupils as a threat. Almekhlafy (2020) revealed that learners' perspectives of Blackboard were influenced by the challenges and anxieties they encountered during the rapid and unexpected transition from face-to-face to web-based learning. Concerns included evaluation and impartiality, classroom setups, necessary technical expertise, online databases, and unpredictability.

An LMS is a robust platform for students and faculty to simultaneously communicate and collaborate on educational content (Alkhalaf, 2013). As a result, an LMS may be viewed as an enhanced internet-based software app for students and teachers. It enables different persons to engage via interactivity features including forums, document-sharing apps, and discussion threads (Adzharuddin & Ling, 2013). Elearning can revolutionize the learning process because of the quick advancement in information and communication technology. Many

organizations and academic institutions rely on an LMS such as Blackboard to provide and enhance learning. It is possible to study anywhere at any time with the help of Blackboard (Alhussain, 2017).

TEACHERS' ROLE IN ENCOURAGING QUALITY DISCUSSIONS

Teachers are the terminal implementers of any program and policy (Amjad et al., 2020). Therefore, their role in quality discussions is very critical. According to education systems worldwide, the quality of teaching is the most critical in-school component that influences learners' academic achievement (Gore et al., 2017). Questions concerning the effectiveness of education are rapidly being approached in two different ways, some of which have achieved enormous political support, such as the lack of convincing evidence for the professional development of educators. According to one viewpoint, instruction should only be open to the best and brightest (Wilson et al., 2015).

One of the most critical aspects of professional growth is a long-term relationship between instructors and learners in online forums. Teacher training emphasizes classroom learning, group discussions, and forums (Lantz-Andersson et al., 2018). Additionally, instructors tend to use self-directed research to expand their professional skills. As a result, successful education requires instructors to share their knowledge and experiences with students, mainly through online forums (Trust et al., 2016).

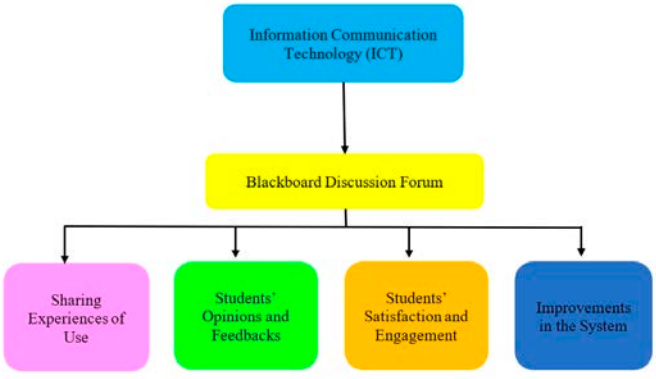
It can be challenging to keep focused on and motivated in online conversations in overcrowded classrooms (Ding, 2019). Using protocols can assist learners in interacting more efficiently, speeding up their study, and increasing the product's quality in online debates, among other benefits (Chen et al., 2017). Teachers and learners can develop a forum, discuss the core curriculum, and cocreate knowledge through online asynchronous dialogues. This is a critical aspect of online education (Maringe & Sing, 2014).

CONCEPTUAL FRAMEWORK

Over the years, many scholars have looked at elearning, but they perceived it differently. According to Arafat et al. (2019), elearning is the process of delivering learning, training, and educational programs via electronic means. The term electronic has been used to outline the use of internet and internet-enabled devices to relay educational information among instructors and learners. Arafat et al. (2019) added that elearning enables the transfer of knowledge and skills and the delivery of content to a large number of recipients. This outlines the flexibility exhibited by elearning, its cost saving capabilities, and the motivation to learn it has brought about. Afify (2018) defined elearning as a web-based or online learning process that is facilitated by ICT. An emphasis on this definition outlines the need for computers, internet, and ICT skills to facilitate elearning, because the use of the internet has connected the world in terms of business and communication. The same concept under the same technology has been utilized to link students and teachers in an online platform (i.e., Blackboard discussion forums) leading to a learning system that can be conducted from almost anywhere through the internet, except, for example in rural Indonesia (Afify, 2018). Therefore, Afify targeted Blackboard discussion forums and tested the behaviours of the students towards Blackboard discussion forums.

My study was guided by Bem's Perception Theory (BPT). According to the theory, learners gain an understanding of their minds by observing the conduct of others and the way they think in different situations (Bem, 1974/2017). Although Bem's theory appears to be anti-introspective, it asserts that humans infer their thinking from their conduct when inner signs are insufficient, imprecise, or unintelligible (Dico, 2018). Following BPT, I looked into the phenomenon by exploring students' perceptions regarding the effectiveness of discussion forums on Blackboard.Therefore, the study draws a conceptual model as seen below:

Figure 1. Conceptual Framework



RESEARCH METHODOLOGY

Research Type

The proposed research type is qualitative, based on the nature of the study that requires identifying the factors that help the students to be engaged in the Blackboard discussion forums at a federal university in the UAE. First, the qualitative approach helps to understand and resolve empirical questions referring to the investigation in contrast to measuring and validating the nature of quantitative research (Ferreira et al., 2020). Qualitative research was applied to address *how* and *why* questions to explore the possible impacts of Blackoard discussion forums on student satisfaction, engagement, and feedback. The study was conducted through semistructured interviews with students at the university. Qualitative research describes different experiences and impacts to establish additional knowledge. The researcher's perceptions and understanding play an imperative role in the development of knowledge based on the interviews (Abu-Alhaija, 2019). Therefore, a qualitative approach paves the way for the study to accept constructivist assumptions.

Research Paradigm

A constructivist worldview guides my study. This paradigm claims that experiences take the shape of social constructs that are localized and particular. The subject matter of the individuals and organizations possessing the interpretations relies on style and content (Samy & Robertson, 2017). I explored the students' perceptions of Blackboard discussion forums and their engagement in online forums. I used a phenomenology research design that allows the researcher to initiate detailed exploration, describe the phenomenon, rely on conclusions around the focused outcome of the study, and analyze data without the support of quantitative measurement through data collected. This study design usually includes in-depth surveys and observations without recommended measures (Odusanya & Bankole, 2020).

A follow-up survey was also sent to students during finals week, asking if they still wanted to participate in the research. I used a discussion forum to publish questions and watch student responses throughout the semester. Students conducted a strength, weakness, opportunity, and threat (SWOT) analysis at the end of the semester based on the feedback they received from their peers.

Participants

A total of 17 students took part in the study. All the participants in the study were female university students between the ages of 19 and 23. I conducted 17 interviews with the students, as several studies recommended this number for qualitative research (Francis et al., 2010; Guest et al., 2006; Namey et al., 2016). All studies recommended that six to 12 interviews are enough for a study to reach the saturation of the findings. My study particularly focused on a purposeful sampling approach because it aimed to explore the university students' perceptions of using Blackboard discussion forums for education purposes. Therefore, the purposeful sampling technique was the most suitable for this qualitative study.

TOOL

The present study used the SWOT framework to collect data from students. Four questions were formulated reflecting each construct of SWOT. The questions were as follows:

Strengths: What did you like most about your engagement in the discussion forum on Blackboard?

Weaknesses: What did you like least about your engagement in the discussion forum on Blackboard?

Opportunities: How can the discussion forum on Blackboard be used effectively to increase your engagement in a course?

Threats: What platforms or websites other than the discussion forum on Blackboard can enhance your engagement in a course?

I distributed the questions using Google Forms. It was entirely up to the participants to participate in the research.

INTERVIEW PROTOCOL

To answer both research questions, **I** used thematic analysis. Table 1 shows the questions used to investigate each research question.

QUALITATIVE DATA ANALYSIS

This portion of the study outlines the details of interview recording and data transcription, using the appropriate computer software for data analysis, data coding, theme explanation, and applying software techniques. This study design assumes

Table 1. Interview Questions

1.How do students perceive the benefits of discussion forums on Blackboard?	What did you like most about your engagement in the discussion forum on Blackboard? What did you like least about your engagement in the discussion forum on Blackboard?
2.How can students' engagement in Blackboard discussion forums be improved?	How can the discussion forum on Blackboard be used effectively to increase your engagement in a course? What platforms or websites other than the discussion forum on Blackboard can enhance your engagement in a course?

that language reflects reality and focused on what individuals think and say. The study adopted a flexible coding and theme creation methodology (Terry et al., 2017). Interview questions should often guide themes (Braun & Clarke, 2013) and the current study used a similar approach based on existing theories and literature. Further, the questions should help determine the primary themes. To eliminate subjective bias and improve analysis, coding and final theme creation were done independently of interview structure. Inductive code development means starting with data. Braun and Clarke's (2013) 6 Steps of Qualitative Analysis were used. Below are the steps and relevant information:

1. **Familiarization with the data:** The first phase entails immersing and intimately familiarizing yourself with the data by having read and reread it.

2. **Coding:** The next phase entails creating short labels (coding) that indicate key aspects of the data that could be useful in answering research questions. It entails coding the full dataset and then combining all of the codes as well as all pertinent data extracts for further analysis.

3. **Generating initial themes:** This phase entails studying the codes and gathered data to come up with early themes. It then entails gathering facts pertinent to each possible theme to establish how the researcher can engage with it and assess its viability.

4. **Reviewing themes:** In this phase, the potential themes are compared to the dataset to see if they make a persuasive story about the data and address the research questions. Themes are usually improved in this phase, which may include splitting, combining, or discarding them. In this approach, themes are described as a set of shared meanings supported by a discipline or idea.

5. **Defining and naming themes:** This phase entails doing a thorough examination of each subject, determining its scope and focus, and creating its "story." It also entails coming up with a descriptive name for each subject.

6. **Writing up:** In this phase, the researcher weaves the analytic narratives and data extraction togetherand interprets the analysis in light of previous literature.

ETHICAL CONSIDERATION

I made it clear to students that their involvement in the project was entirely optional and they could opt out at any time. Due to the following factors, there were no known dangers or discomforts linked with this study:

1. Taking part in the initiative did not interfere with teaching or learning.
2. There were no additional risks associated with participating in the trial.
3. The study did not identify any individuals, and the findings were only published as a whole or in aggregate.

The study would also not violate the rules that impact student behaviour and participation in online conversations if students sign the consent form at the end of the course.

RESULTS AND DISCUSSIONS

After collecting data by distributed survey using Google Forms, they were analyzed using thematic data analysis. Students' responses were transcribed using SWOT analysis. I interpreted responses under specific themes. The names are kept anonymous and the respondents are mentioned using "P" when they are being quoted verbatim.

RQ1: How do students perceive the benefits of discussion forums on Blackboard?

Theme #1: Sharing Experiences

Among the 17 participants, most of the students believed that Blackboard discussion forums helped them share their experiences and thoughts. They took advantage of this forum and there was

interactive evidence of this. In reply to the interview question, respondent P1 reported that:

> *The discussion was open to any ideas and it was easy to write because we were reflecting our own experiences. Course members should be involved in the serious conversations that occur in the classroom setting, and with the added benefit of communications through Blackboard Learning. Respondents are not required to get into the same geographical region or local time, so you can use your time to examine your comments before sending them properly.*

While P2 declared that:

> *Blackboard discussion forum, in conjunction with Globalization and technology advancements, provides a virtual learning environment for students can gain knowledge and communicate with one another online.*

P4 reported that:

> *Being exposed to different opinions and perspectives and thoughts. Blackboard discussion forum enables the transfer of knowledge and skills, and the delivery of content to a large number of recipients. This outlines the flexibility exhibited by elearning, cost saving capabilities, and the motivation to learn it has impacted.*

Respondent P5 said:

> *Discussion forum is very useful and beneficial where it helps us to end up having a good and advanced piece of work. Adding to that, it also helps us to learn from other students and know their point of view.*

Supporting this argument, P10 replied:

> *We can share ideas and discuss them, and see others' perspective. Also, how can a paragraph have so many opinions. Ultimately, Blackboard discussion arguments imply that learning entails more than a mere transfer of knowledge from educators to learners.*

These responses indicate the strengths of the Blackboard discussion forum that students mentioned. Most participants believed that this platform helps them share their views with other respondents. The study by Alhussain (2017) had similar findings, where it was argued that by using discussion forums effective student learning is possible anywhere in the world. Blackboard discussion forums show students to be active and self-determined individuals with the capabilities to learn new knowledge and process information. The most interesting aspect of this platform is that it explores the challenges learners are likely to face when using technology compared to traditional learning methods. For this purpose, students develop high levels of metacognition as they gain higher levels of cognitive strategies.

Theme #2: Reflections on Opinion and Feedback

While answering the first question, students believed that their forum helped them reflect on the opinions and feedback shared by their classmates. A significant number of students showed a positive attitude and felt comfortable sharing their opinions and feedback. In this regard, P3 reported "giving feedback to each other as well as learning from each other's ideas."

In support of the above argument, P17 also answered on a similar note, stating students "all get the chance to share their ideas and opinion easily. Effective course content empowered with visuals or videos on the blackboard discussion platform. Effective feedback."

To add to this, most of the students were in agreement that this elearning tool promoted interaction, engagement, and collaboration among users.

P9 was also in favour of providing evidence that: "We usually express an opinions. By reflecting on the experiences, we conduct effective brainstorming sessions with staff and continuously collect opinions from students."

It was also noted that students feel the Blackboard discussion forum helps them in replying to their fellow students' questions. P11 responded:

That I could reply to my classmates' ideas but we don't engage in unilateral decision-making processes, but they take into consideration of the users' opinions to develop a user-friendly platform (i.e., Blackboard discussion forum).

The analysis revealed that the respondents were

keen to reflect on fellow students' tasks, as P12 replied:

I can share my work with my classmates. I can see their work and get new information. In my opinion, the greatest strength of discussion platform is the convenience of being able to attend and review anywhere. However, the weakness that students could face does not have the means to use discussion platform.

This indicates that students were not only taking advantage of the Blackboard discussion forums but also reflecting upon each other's opinions and feedback. In the SWOT analysis, to explore potential weaknesses of the Blackboard discussion forums, the respondents were asked the second question of their interview: "What did you like least about your engagement in the discussion forum on Blackboard?" While answering this question, participants of the study shared their views on the limitations or weaknesses of the Blackboard discussion forum under the following themes.

Theme #3: Usage Problems

Even though an online discussion group is the most recent approach to education, this is already a popular platform, even though it presents obstacles for both tutors and learners. While teachers must put in extensive effort and time to build the training, students must equip themselves with technical experience to decipher the course content and succeed in the tasks. Around half of the respondents were of the view that the Blackboard discussion forum had different usage weaknesses, as P1 reported: "we had access only to 2 students, I could not view other student's ideas."

This student felt that an annoying aspect was not having the facility to interact with other students. It was also revealed that students found it difficult to add or change their task after submission, as P12 said: "If I made a mistake or forgot to write something on discussion board I cannot change or add to it. I have to create another one."

P15 reported that:

> *Students' learning experiences are transformed from conventional teaching and face-to-face teacher instruction to computer-based training in a virtual classroom. The unwillingness to adopt prevents them from adapting to online learning in common (adaptability problem).*

P3, P4, and P13 also reported the same views:

> *It is not uncommon for learners to be completely willing and sometimes even excited to use their novel eLearning-based teaching atmosphere (i.e., discussion forum), only to be halted in their footsteps by a technical issue. Technical difficulties are one of the most frequently encountered obstacles by learners. Not to be confused with the rare technical issue here and there. Instead, we are referring to bigger concerns, such as those that arise due to utilising the incorrect elearning platform.*

This finding resembles the findings of Dhawan (2020), who argued that learners must be trained to use these discussion forums.

Theme #4: User Satisfaction

After analysing data, it was discovered that the majority of the students were happy with Blackboard discussion forum efficiency. While replying to the above question, P4 answered: "I am delighted and good about discussion forum because it helps us learn and benefit from the lesson content or even a certain topic."

P16 argued that:

> *The online Blackboard discussion platform requires installation, and its feasibility is dependent on the level of student learning satisfaction. Commonly used elearning tools include laptops, elibraries, web-enabled handsets, and hypermedia.*

P8 argued that they like many things about it, and P9 reported that:

> *I like everything about it, especially the topics. The preliminary preconceptions about the Blackboard discussion experience of using technology, taking into account the ease, usefulness, satisfaction provided, strength, and the interpretation of a reasonable and sensible price.*

Furthermore, a significant number of students replied to the above question with "nothing," which shows their confidence in this system. Almekhlafi (2020) also showed similar concerns regarding necessary technical expertise for system usage.

RQ2: How can students' engagement in the Blackboard discussion forum be improved?

To gather students' responses to the second research question, the students were asked the third question of the distributed survey: "How can the discussion forum on Blackboard be used effectively to increase your engagement in a course?" Here, I wanted to discover the possible opportunities to explore how the system can improve students' engagement in the Blackboard discussion forum. The following themes emerged from the students' responses.

Theme #5: System Improvements

It is very critical that students show their concerns for forum improvements. As per analysis, it is clear that students can interact with just one other student at a time. Therefore, P2 answered: "Give me an opportunity to share my experiences with my peers."

Students also wished to add more topics or views to improve student engagements. In this regard, P6, P8, and P13 claimed that the university should focus on educational resources to engage the students in elearning:

> *When it comes to presenting a larger viewpoint, educational institutions should provide educational resources and other forms of multimedia applications so that the students can easily approach the contents. The information you can deliver to your students includes books, scientific journals, audiovisual, and online teaching objects for discussion groups.*

P4 replied that improvements can be made "by updating ideas and adding new discussions to write each few weeks."

In this regard, P8 also argued:

> *Students who use online Blackboard discussion practices are more likely to think creatively and create connections between course information and activities. Go beyond simply publishing prescribed readings or fixed educational slideshows and truly be there in your online class, assisting students in focusing their attention on the most crucial aspects of their learning experience. So, in this way, the student engagement would be enhanced.*

It is a clear indication that for enhancing students' engagement in discussion forums, students need more innovative ideas and topics to be added on Blackboard so that the maximum number of students can benefit from these online discussions. In addition, one student said:

> *It affects our learning process where we have the ability and chance to have a quick responds which gives us the opportunity to improve our work as well as have a positive view on what we receive from feedback.*

Theme #6: Creativity and Technology Commitments

After the data analysis, it was also revealed that many students were convinced that student engagement could also be enhanced by adding value to personal commitments. In this regard, P11 reported that:

> *Compared to traditional face-to-face learning, the benefit of e in terms of time, proximity, and resources are becoming increasingly apparent. The classmates' understanding has been transformed from face-to-face learning to elearning through various discussion platforms, increasing the students' commitment to online discussion towards elearning (commitment).*

P9 emphasized that:

> *Online discussion via Blackboard is a new educational concept that uses internet technologies to ensure digital content to students and teachers while also providing a learner-oriented environment for them. It is becoming increasingly popular. The development of existing learning opinions and the formation of a learning society is encouraged by elearning. Resultantly, elearning enhances our creativity level (Creativity).*

P12 also paved the way by providing evidence that:

> *Students who have questions can type them there. So, the students how know the answers can help them. Also, the instructor can write questions there and give the students tasks to do and answer the questions.*

If the teacher engages more in discussions or by providing questions for students to answer, it

might also enhance students' engagement in this discussion forum. P7 also reported that: "By writing everything that I did in my day at school, said what I did in details."

This response signifies the personal contribution for enhancing students' engagement in Blackboard discussion forums. Kim et al. (2015) also showed that students' low participation is linked with personality traits.

Theme #7: Other Applications

An overwhelming majority of the students showed their concerns and discussed other platforms that can be preferably used over the Blackboard discussion forums. P1 felt that: "WhatsApp, I think it was the best way to interact and share ideas as well as monthly Zoom meetings."

P1, P5, and P10 mentioned Facebook and Twitter:

> *When we use Facebook and Twitter as the eLearning platforms, our classmates will be able to engage in discussion, pose questions, exchange experiences, and explore different information with others. With evidence to suggest that social interaction improves learning and productivity. Facebook and twitter are the amazing platforms for fostering cooperation and elearning.*

P5 provided the same argument:

> *I would say Padlet is also beneficial and useful platform where we can share thoughts and answers and it stays for long to reread it again to memorize and remember it as well.*

It shows that students are also aware of other platforms. The students indicated other apps like WhatsApp, Google Docs, Google Classroom, Zoom, Telegram, presentations, Nearpod, Kahoot, quizzes, and Padlet should preferably be used instead of Blackboard discussion forums. At the same time, a few individuals said that they were happy with this forum and had no other preferred platform.

CONCLUSION

This study was conducted to explore students' perceptions of how student engagement can be enhanced in discussion forums. After a thematic analysis of the data, the study concludes that students' engagement in discussion forums can be enhanced by sharing their experiences. Students' reflection on fellow students' opinions and feedback also enhanced students' engagement. The study found that educational practitioners should enhance engagement by providing a high concentration of content and interaction on the platform so that students feel it is convenient to join and share ideas. This engagement can also be enhanced by improving user satisfaction and reducing usage problems. The study concluded that system improvements and personal characteristics could also enhance students' engagement rates in discussion forums.

The study recommended that students receive sufficient training and avoid other potentially problematic apps in online classes. The Blackboard discussion platform requires installation, and its feasibility depends on the level of student learning satisfaction and engagement where they provide feedback on other students' opinions and feedback. Students commonly use elearning tools that include laptops, elibraries, web-enabled handsets, and hypermedia. The cost for buying laptops and other internet-enabled devices, and the periodic cost for internet, has made education cheaper. Students who rely heavily on Blackboard discussion tend to work and learn simultaneously, and they pay fewer school fees while making a living. In institutions that adopt Blackboard discussion sessions, the related IT requirements have brought myriads of challenges that have stalled the efficiency of elearning in the creation of learner satisfaction.

This study was conducted on a small sample of students. Future studies with larger numbers of students participating would yield a better understanding of how effectively instructors can engage students in discussions online, and a generalization from that can be made. In addition, future researchers can conduct this study during several semesters to see any progression.

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