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# Exploring Undergraduate Students' Experiences of using Online Discussion Forums in a Synchronous Virtual Learning Environment

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## ABSTRACT

The continuous technological development has transformed learning approaches in the higher education setting. Instructors and students are gradually adopting the blended-learning approach by using online discussion forums (e.g. BlackBoard) or social networking sites (e.g. Facebook groups) to engage students' participation in the course. In computer-mediated communication, the asynchronous vs. synchronous effects have prompted researchers to understand various factors that influence students to respond and engage in discussions held in the virtual environment. Furthermore, students' perception of autonomy and sense of belonging in the online community plays an important role in affecting their voluntary participation in the online discussion forums. Thus, this paper presents a qualitative view on the undergraduate students' perception of engaging in online discussion forums in a synchronous virtual learning environment. In addition, this paper also highlights the factors that influence students' positive and negative perceptions of participating in online discussion forums.

**Keywords:** Computer-mediated communication, synchronous, autonomy, in-group, Blackboard

## Introduction

The higher education learning environment has moved from traditional modes of classroom interaction to online discussion forums, or a mixed method of both in order to engage students' participation in the learning environment. The use of technology in the learning environment has become a need, especially for the current undergraduate student population who are born in the digital era. Thus, online discussion forum is one of the effective ways to engage students' participation in class.

Computer-mediated communication (CMC) enables individuals to convey message with more autonomy. In addition, CMC leads individuals to connect with another person online with comfort. Researchers (Ramirez, Zhang, McGrew, & Lin, 2007) have indicated that computer-mediated discussions can lead to improved relational communication amongst participants. The blended-learning approach is one that utilizes face-to-face and CMC to encourage learning amongst students. As such, online discussion forums that are used in the blended learning approach can be a useful tool to break the ice in a classroom environment. Besides using CMC as a platform to increase student participation, researchers (Beckett, Amaro-Jimenez, & Beckett, 2010; Dennen, 2005; Gao, 2014; Giesbers, Rienties, Tempelaar, & Gijssels, 2013) have identified positive effects of synchronous and

asynchronous communication toward students' online learning experience. Past research (Beckett, Amaro-Jimenez, & Beckett, 2010; Dennen, 2005; Gao, 2014) have mostly focused on the successful usage of asynchronous communication in enhancing students' online engagement. Further understanding on the effects of synchronous communication is necessary to improve the blended learning approaches in pedagogical practices within the higher education setting. Thus, this exploratory study seeks to understand students' experiences of engaging in online discussions in a synchronous virtual environment. The following research questions are answered through the data that was collected for this study:

- (1) What factors contribute to students' positive experiences of engaging in online discussion forums?
- (2) What factors contribute to students' negative experiences of engaging in online discussion forums?

## **Literature Review**

### ***The Use of Online Discussion Forums***

Instructors have used traditional modes of communication in classroom settings, in which students meet with the instructors on a face-to-face basis and are physically engaged in discussion activities. Dennen (2005) stated that student participation through discussion activities can cultivate successful learning environments. In the classroom setting, synchronous communication generally takes place through face-to-face discussion activities. Students are expected to respond and participate in impromptu or planned in-class discussions. Most of the time, students look to instructors to prompt the discussion forward.

Today, the use of technology (e.g. Blackboard) provides an alternative avenue for discussion activities to take place in the learning environment. Through computer-mediated communication (CMC), instructors may choose to participate in the online discussion forum or remain as the observer. The online environment also enhances students' participation, especially amongst introvert students. Researchers (Baxter & Haycock, 2014; Gao, 2014; Paulus & Phipps, 2008; Ramirez et al., 2007) suggested that student participation in courses will improve with the use of computer-mediated communication (CMC), especially when students are encouraged to engage in online discussions at given timeframe, with a given task.

Online discussion forums also enable instructors to gauge students' motivation to learn, as well as their sense of relatedness with other students in the same course. McBrien, Jones and Cheng (2009) found that students who participated less in face-to-face discussions in classrooms participated more in online discussions. Thus, online discussions can potentially cultivate the sense of belonging among students in order for them to provide feedback in the learning process.

### ***Asynchronous vs. Synchronous Online Discussions***

Student participation is affected by factors such as the synchronous or asynchronous nature of the online discussion forum. Researchers (Beckett, Amaro-Jimenez, & Beckett, 2010; Dennen, 2005; Gao, 2014) found that students perceived the asynchronous nature of CMC in online discussion forums as an important aspect in encouraging the active

participation of students in the virtual environment. Beckett et al. (2010) claimed that students who were shy felt more comfortable to engage in the academic discourse through CMC when they were given time to respond in the discussions. In addition, students also viewed online discussion forums as a positive aspect of their learning experience, as it allows for more time to build and establish rapport with other students in the course.

On the other hand, Giesbers, Rienties, Tempelaar, and Gijsselaers (2013) argued that a mixture of asynchronous and synchronous communication leads to an improved learning experience and student participation in online discussion forums. The researchers stated that synchronous communication supports the engagement of asynchronous communication. The given timeframe to respond to the online discussion forum is important to encourage students' participation, as asynchronous communication allows for delayed responses among students who participate in a given online discussion.

Thus, Giesbers et al. (2013) posited that synchronous communication enhances the sense of relatedness among students in the online discussion forum, as the online platform provides students opportunities to connect and interact directly with other students in a given task or topic. As such, students create an informal online community through synchronous communication when a given task is assigned according to a given timeframe. Therefore, the definition of synchronous communication for this study is defined as participants' involvement in the online discussion forum with an assigned task within a particular timeframe.

### ***Autonomy and Sense of Belonging***

Besides building rapport and establishing online communities through discussion forums, research (Beckett et al., 2010; Dijkers, Whiteside & Lewis, 2012; McBrien et al., 2009; Rovai, Wighting, & Liu, 2005; Liu, Magjuka, Bonk & Lee, 2007) indicated that students experience a sense of community and belonging through online discussion in the virtual learning environment. The sense of belonging increases social interaction in the online discussion forums, which also act as a virtual classroom (McBrien et al., 2009). Students engage in knowledge sharing in the online discussions, which enhances their learning experience and social interaction skills (Rovai et al., 2005).

Besides, the virtual setting also encourages students in online peer engagement (Willis, Davis & Chaplin, 2013). Feedback is another aspect in the online discussion that motivates students to engage in the online discussions (Meyer, 2007). According to Sloan (2015), the number of comments that students receive in online discussion forums affect students' motivation to participate in the online discussion.

Online discussion forums can also serve as a platform to empower students in voicing out their opinions. Perceived autonomy affects students' online engagement in discussion forums. Students who perceive higher levels of autonomy in online discussions experience higher levels of motivation in the online learning environment (Rienties, Tempelaar, Giesbers, Segers, & Gijsselaers, 2014). Autonomy is also a factor that influences students' potential for self-directed learning (McBrien et al., 2009). Self-directed learning is an important aspect in online distance learning. Students are more likely to engage in self-directed learning when they perceive higher levels of autonomy through online discourse with instructors and peers.

## Methodology

The research questions were addressed through a qualitative study of content analysis on students' reflection papers. Data collected for this study were 25 students' reflection papers about their experiences of using BlackBoard's discussion forum. The instructor briefed and provided guidance to students of a course (n=33) regarding their participation in the online discussion forum through Blackboard. A topic of discussion was given to students and they were asked to provide their opinion, as well as relate the course content to the topic of discussion. The online discussion forum was opened for two hours, in which students were expected to engage in the online discussion and provide feedback within the timeframe given. At the end of the online discussion, each student was instructed to write a reflective paper on the experience of participating in the online discussion and evaluate the positive and negative aspects of using Blackboard's online discussion forum as a platform for group discussion.

The data was analyzed using constant comparison technique (Glaser and Strauss, 1967, as cited in Rubrico & Hashim, 2014), which involved reading all the qualitative feedback in the reflection papers in order to gain an overview of the data. Upon reading the reflection papers, only 25 sets were able to be coded. The data was then coded by two researchers to produce an initial code list. The researchers coded repeating themes that emerged from the reflection papers and grouped them into categories.

## Results and Discussion

Three themes emerged from the data analysis, which are *sense of belonging, autonomy, and technical challenges*.

### ***Sense of belonging***

Results from the data revealed that students experienced a sense of belongingness and connectedness when they engaged in the online discussion. Students commented that they could '*connect and relate to others*' experiences in the feedback that they received from the online discussion topic. For example, one of the students mentioned in the reflection paper that she found out that she '*was not the only one who thought that way*'. Another student commented that '*we were able to share the thoughts and some feelings that were similar*'.

Another student mentioned that she was able to 'feel the sense of belonging' through her interaction with other members in the online discussion forum. According to Beckett et al. (2010), communities of practice are formed when people share common goals and come together to learn from each other. In this study, students were assigned a specific topic to discuss in the online discussion forum. The students stated that they were able to 'share our opinion and information with each other', which established a community of practice and indicated the effectiveness of using online platforms to engage in knowledge sharing.

Besides, students also indicated their enjoyment in knowing their peers' experiences and feedback. The student felt that they could relate to their peers' comments and opinions. In addition, they also indicated that they noticed similarities upon discussing with their peers on a common topic. The following excerpts reflect the positive comments and experiences that students obtained from the online discussion forum:

*My experience of participating in the online discussion forum was very meaningful and brought much benefit to me...it was very interesting and I enjoyed reading other people's experiences and opinions...as often they were slightly different from my own perception towards the matter...*

*We interacted in the online group discussion and exchanged ideas with one another because every student has a different learning method...some learn quickly but other may be slower.*

*...everyone communicated and discussed the same topic, which some had the same ideas...*

*I was able to build a connection with my class community...*

*Through the online discussion, I could improve my understanding on the class lecture materials.*

As shown in the above excerpts, students gained positive experiences and connectedness with their peers when they were assigned and asked to discuss concurrently on a specific topic of discussion in the online discussion forum. Themelis (2014) stated that synchronicity can enhance the sense of togetherness in the CMC environment. The synchronous nature of this online discussion forum affected some students' motivation and perception of engaging in the discussion positively. Students were given two hours to provide their feedback and opinion about the given topic. One of the students commented: 'When everyone is required to comment on the posts within 2 hours, the positive experience is that everyone can relate to the common topic without having to feel left out in the conversation'.

However, the synchronous nature of the online discussion in this study also affected some students negatively. Some students felt that they were unable to keep up with the topic of discussion because they could not understand the topic discussed among their peers. For example, one of the students mentioned that her peers 'could not fully understand the question', which led to a breakdown in communication. The following excerpts reflect some of the negative experiences that students had with the synchronous nature of the online discussion in this study:

*She responded to my question. However, it was not the answer that I was looking for...although she agreed to my statement, I did not fully understand her answer...*

*I could not figure out...it caused confusion among the people who participated in the online discussion forum...it was difficult to initiate further discussion towards the postings.*

*It was difficult to understand their feelings because I have not gone through it myself.*

*...participants were too overwhelmed by the emotions...we did not discuss much about how theories can be applied...*

*I participated in the beginning but not the end...I could not comment when I cannot relate...*

Students felt that there was no mutual understanding on the topic of discussion, even though communication took place synchronously in the online discussion forum. Liu et al. (2007) stated that community building in the virtual environment requires careful planning and designing in order to foster an environment of information sharing and knowledge construction. In this online discussion forum, some students were not able to understand their peers' comments about the topic of discussion. Thus, there was a barrier in motivating them to participate further in the online discussion.

### **Autonomy**

In this study, students were motivated to engage in the online discussion because they felt empowered to voice out their opinions, as well as connect with their peers whom they have met but did not talk to in class. The online discussion forum served as a platform for them to comment on other people's opinions, provide their opinions without having to worry about repercussions from any parties, as well as approach their peers to ask questions without having to feel embarrassed physically. The following excerpts demonstrated students' positive experiences in engaging in the online discussion:

*With the online discussion forum, I am allowed to start a conversation with those classmate whom I have not talked to in class. It is a platform for me to know their thoughts and opinions, then further discuss about them...*

*Online discussion forum is effective in encouraging students to make a stand on a topic.*

*I can overcome my fear of providing opinion in front of many students...I am used to hiding in class and only listen to others.*

*The online discussion forum is a very good way to allow students to express their views and opinions. At the same time, we are able to learn new things too.*

*It (online discussion forum) is new and innovative, while offering more space and freedom for students to participate...*

*...offered me a chance to voice out my opinions and perspectives for different topics. I had a chance to tell others about my opinions, how and what I thought about the topic given.*

As reflected in the above excerpts, students were motivated to participate in the online discussion forum because they viewed the online platform as a useful tool to engage in discourse. In the blended learning approach, learner autonomy enhances the perception of independence amongst students (McBrien et al., 2009). Students in this study felt that they had an opportunity to provide feedback without being ridiculed. The online postings provided a unique opportunity for them to bring in their individual experiences into the discussion.

Furthermore, online postings enhance students' learning experiences because they are also contributing to other people's postings (Gaudry-Hudson & Yalda, 2008). According to Jang et al. (2010), the amount of autonomy leads to increasing levels of online engagement. Students commented that the online postings in the discussion allowed them 'to think and view things critically'. Another student mentioned that mutual respect was maintained in the online discussion forum, which resulted in everyone participating actively by responding to one another's postings. Thus, the perception of having autonomy in online

discussion forums can lead to improved learning capabilities among students (Rienties et al., 2014).

### **Technical Challenges**

Some of the students felt that technical challenge was a major reason that hindered their motivation to participate in the online discussion forum. In addition, the discussion forum was set in a limited time, in which students had to post their comments as well as reply to their peers' comment. In Blackboard's discussion forum for this study, students were limited to function of responding through new postings without being able to comment through the thread function. In addition, students found it challenging to adopt the format of having to constantly refresh the discussion page to view new postings. The following are examples of comments that were found in the students' reflection papers:

*The negative experience of using this online discussion forum's format is that it is not convenient. We had to refresh the page manually to see if there were any new postings or replies. If the online discussion forum is able to update new replies automatically, like how it exists in social networking sites or apps, it would have been better.*

*The two-hour discussion forum was not enough...I think we could have commented more and shared our opinions further. The layout of the forum was very confusing and it was very difficult for me to read back my postings.*

*The Blackboard discussion forum was not a suitable platform for an online discussion because it was not user-friendly...the posts were not collated...*

*I had to keep on refreshing the page to read new posts and replies...it was hard to focus and overwhelming...it somehow limits our responses in a short timeframe because we had to keep refreshing the page.*

*...my friends had to go through the clutter of the discussion page. It was cluttered because the discussion page was not designed to specifically fit into computer screens that were small...it was difficult to navigate.*

*It was chaotic because I did not know if someone had replied to my post until I refreshed the page...I had to scroll the page to check on my postings and other people's comments.*

Students' comments on the technical challenge of navigating through Blackboard's discussion page was demotivating. As indicated in students' reflection papers, more time is required for students to be familiar with the online environment before engaging in the online discussion. Such technical challenges can affect the depth and quality of their discussions (McBrien et al., 2009). Researchers (Liu et al, 2007) also noted that the prerequisite of engaging online learning platforms is to have a 'glitch-free' environment. Students will be able to learn more effectively when technical challenges are overcome.

Time was also a factor in affecting students' online engagement in the discussion forum because students had limited time to navigate through the discussion forum page and fully engage in the online discussion. Students noted that more time would have been beneficial. For example, one of the students stated:

*The discussion forum's system was complex and confusing...this is our first time using the system for discussion. We had to refresh our page and go back to the main page to look*



*for past postings. This is very time consuming...this online discussion is only given two hours...we were pressed for time.*

According to McBrien et al. (2009), students' learning comes to a halt when the technical issues arise. Phelan (2012) also noted that high volumes of online exchanges in postings can become a barrier in students' online learning engagement. As such, synchronous learning environments need to ensure adequate time and sufficient technical support to ease students' frustration. Furthermore, technical problems can also reduce students' sense of autonomy, which will impact their learning progress.



## Conclusion

In understanding students' experiences of engaging in online discussion forums in a synchronous virtual learning environment, this exploratory study revealed that students are more likely to engage in online discussion forums when they feel a sense of belonging and autonomy towards the learning community. The sense of belonging exist when students perceive the online discussion forum as a safe platform to provide their opinion and comment on their peers' opinions. Moreover, the feedback that students obtain from their peers spur the online discussion forward. Comments from the reflection papers also indicated that the timeframe given for the specific topic of discussion was inadequate due to the lack of familiarity and need to adapt to the virtual environment. Students will be able to build a closer rapport with other online participants if the online discussion forum was extended to a longer period of time.

Students feel a greater sense of autonomy and competence when they are able to overcome the technical challenges that are present in the virtual learning environment. The findings of this study implies that the lack of face-to-face interaction does not affect students' interaction and participation in the virtual learning environment. However, future studies can examine the timeframe and tasks given to students when they engage in online discussion forums to further understand students' challenges in navigating in a new virtual environment.

This study has its limitation in terms of examining other aspects of student participation in online discussion forums. Further research should be conducted to better understand the effects of synchronous communication in students' online participation through discussion forums. Examining the different designs and layouts of online discussion forums can lead to improved student participation, engagement and interaction in the learning process.

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