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**AN INSTITUTIONAL INVESTIGATION ON SYNCHRONOUS AND ASYNCHRONOUS LEARNING ENVIRONMENTS OF TESL EDUCATION UNDERGRADUATE**

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**ABSTRACT**

*This article presents the findings of undergraduate student’s experiences within two distance learning environments. Specifically, this study explored the perceptions of students as they interacted with synchronous and asynchronous learning environments specific to Blend space and LMS. Participants included twenty TESL undergraduate students at private university in Selangor state who were completing a degree in Teaching English as A Second Language (henceforth TESL) education. Data collection methods included transcribed focus group interview and survey responses. Results suggest that students perceived benefits to both synchronous and synchronous learning environments. The study also discussed some specific learning activities and strategies which students identified as beneficial to their learning experiences.*

**Keywords:** *Synchronous Learning Environments, Asynchronous Learning Environments,*

*TESL Graduate Students, Blend space, Language Management System*

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**1. Introduction**

Synchronous and asynchronous learning confers some significant advantages to the online learning environments.

**2 Literature Review**

The related literatures encircle some of the often cited advantages and disadvantages of asynchronous and synchronous communication. The purpose is to outline that each of this synchronous and asynchronous learning contributes to the advantages to the online learning experience. Online learning can be presented in synchronous, asynchronous, or hybrid learning environments. Synchronous learning environments are those settings where learning is occurring in real time and might incorporate activities such as an instructor lecture, collaborative activities, and student questions. All students of the course are logged on at the same time each class meeting. Asynchronous environments are those settings where the students engage in activities that occur independently from the lecturer or other peers. Asynchronous environments might include a review of a pre-created learning module, threaded discussion boards, and/or conversations via email with the instructor or class peers. A hybrid course can take many forms. Some course meetings are synchronous, while other activities are completed independently or asynchronously. Regardless of the synchronicity of the course, the key factor for students from rural settings is that element of education being offered to students who are not near the traditional, brick and mortar type instruction

**2.1 Synchronous Learning**

In a study conducted by Asterhan and Schwarz (2010) pointed out that there is little discussion regarding how to effectively support learners in synchronous online learning environments. Asterhan and Schwarz conducted a study regarding online synchronous group discussions and effective moderation that relied on a communication tool that enabled participants to communicate through text and diagramming. Their study included 9th grade students and graduate students. Participants from both groups expected a good moderator to be active and keep the live discussions focused to help participants to stay on topic. Participants also reported that they did not necessarily desire the moderator to insert his or her expert opinion regarding the topic during the discussion. Asterhan and Schwarz concluded that the type of dialogue that the instructor facilitated and the degree to which students were engaged in synchronous collaborative discussion affected student-learning outcomes for both the 9th grade students and graduate students. They also concluded that the nature of discussion in asynchronous and synchronous online discussions was qualitatively different. Other studies have found that while engaged in synchronous learning when compared to asynchronous learning participants (a) find a stable means of communication, (b) tend to stay on task, (c) feel a larger sense of participation, and (d) tend to experience better task/course completion rates (Hrastinski, 2010).

Han (2013) examined the effects of instructor video casting on his/her students’ sense of connection to the instructor. Han found that in courses that included instructor video casting, compared to courses that did not use video casting, students were able to overcome the sense of being at a distance from the instructor. The use of video casting helped Han’s study participants to engage in meaningful interactions with the instructor and peers to minimize what Moore (2013) discussed as transactional distance. According to Moore transactional distance is a pedagogical concept that learners at a distance from their instructors and peers experience through their interactions with one another and defines the nature of their relationship. Participants may sense more or less transactional distance in an online course depending on the level of shared dialogue, the structures that the instructor puts in place, and the level of autonomy participants experience in a course.

Additionally, little research is available investigating the specific experiences and perceptions of students using Learning Management System (henceforth LMS) and Blendspace, a synchronous, virtual classroom environment with many features including audio, video, application sharing and content display online. The purpose of this research was to explore undergraduate student’s perceptions of synchronous and asynchronous learning environments who were enrolled in a course named PBFI Introduction to Linguistics operating within LMS and Blendspace.

The questions the researchers sought to answer included:

1. What are TESL undergraduates’ perceptions of synchronous learning environments specifically related to LMS and Blendspace has to offer?

2. What are TESL undergraduates’ perceptions of asynchronous learning environments within the Ecampus environment?

**2.2 Learning Management System**

LMS is able to conduct online teaching and learning as well as online assessments and discussions through its forum page. The LMS can actually simplify the process of compiling notes and learning materials since it is able to accept source codes (to be embedded in the portal) from various e-content development tools or Web 2.0 technologies such as YouTube, Presentme and Blendspace. This allows teaching staff the freedom to reuse and recycle teaching materials that are available free online without having to start from scratch. .All registered students at the KUIS, from the foundation year to the post graduate level, are able to log in the LMS. Based on the academic semesters, students will be able to view, use and participate in the courses that they are enrolled in during a particular semester, provided that the lecturers upload the materials. The LMS too can become a one stop centre for the students to access relevant announcements about their courses, to collect notes or simply to read their learning materials online.

**2.3 Blendspace**

Blendspace allow easily find, add and share online content (videos, images, PDFs, Google docs). Students comment or take notes alongside content whilst it also allows students to research assignments, web quests, make presentations. Apart from that students can use Blendspace to practice and demonstrate 21st century learner skills.Figure 2 below shows the interface of a Blendspace.



**3. Methodology**

Grounded theory was used to investigate KUIS undergraduate perceptions of synchronous and asynchronous learning environments. When using grounded theory, the researchers generate an explanation of a process, action, or interaction determined by the views of participants (Creswell, 2007); and seeks to describe what is observed through a systematic analysis of data (Patton, 2002).

**3.1 Participants**

A convenience sample of students in an KUIS undergraduate program was used. Students enrolled within a specific course, Typical and Atypical Development, from rural settings were invited to participate. Because the purpose of qualitative research is not generalization, “but rather to produce evidence based on the exploration of specific contexts and particular individuals,” 20 students participated in this research.

**3.2 Setting**

This study embedded both synchronous and asynchronous teaching tools. Students participated in both synchronous and asynchronous environments.

**3.3 Data Collection**

Open ended surveys as well as transcriptions of the focus group interview and synchronous meetings were used to triangulate data.

**3.4 Survey**

The authors created a survey using google doc, an online survey tool. Participants were provided a link to the survey and were asked to complete it after the course ended. The purpose of the survey was to gain a deeper understanding of student experiences with the learning mode. It included five open-ended questions: please describe at least two aspects you enjoyed most about asynchronous environments, please describe at least two aspects you enjoyed most about synchronous environments, please describe at least two aspects you disliked most about asynchronous environments, and please share what environment (asynchronous or synchronous) you feel you learned the most and why.

**3.5 Data Analysis**

Data from the transcriptions and open-ended portion of the survey were downloaded into an excel spreadsheet as the iterations identified in Figure 1 (Miles & Huberman, 1994). Several strategies were used when analyzing qualitative data to maintain research quality and rigor.

**3.6 Coding**

The responses disclosed by the participants are clustered into four themes:

Social Presence - Positive Aspects of Synchronous Environments

b) Assignments - Negative Aspects of Synchronous Environments

c) Flexibility Positive Aspects for Asynchronous

d) Technology Negative Aspects of Asynchronous Environments

**4. Findings and Discussions**

**4.1** The findings / excerpts of the study are clustered into four themes:

1. Social presence (positive aspects of asynchronous environments)
2. Assignments - (negative aspects of synchronous environments)
3. Flexibility (positive aspects for asynchronous environments)
4. Technology (negative aspects of asynchronous environments)

**Theme 1: Social presence in the asynchronous environment was exemplified by exchanges regarding the online forum.**

Some excerpts clustered into this theme are described as follows:

I enjoyed the discussion questions in the online forum(P2)

I enjoyed reading the information in posts from classmates that share different professional and personal backgrounds (P4)

I really liked the discussion boards and reading everyone's opinions. It opened my mind a bit and gave me a different view (P5)

Although students were not having a face to face discussion, participants suggested social presence was established among students and with the lecturer within the asynchronous environment through a common distance-learning tool, the online forum.

**Theme 2: Assignments (negative aspects of synchronous environments)**

Assignments were one sub-theme that arose which students disliked regarding asynchronous environments. 18 participants discussed assignment materials, format of assignments, and type of assignments.

Directions for assignments were sometimes outdated and confusing (P11)

As a side note I have to say I find this orientation model, at this point after having the first session, a waste of time. This would have been great for new comers if it was emailed to us to complete prior to the first class (P14)

**Theme 3 : Flexibility (positive aspects for asynchronous environments)**

17 participants illustrated flexibility in their responses to the survey when they discussed working at their own pace and on their own time, having time to process information, and producing higher quality work due to flexible time windows.

I enjoyed that I could complete assignments in my own time. I also enjoyed that I could work ahead.

…working at my own pace, and not having to change my schedule around live class times

I like that I can work on school work while sitting at a soccer practice or dance practice. I have also completed several assignments

 **Theme 4 : Technology**

Three participants responded to the survey by identifying technology as an aspect they disliked within the asynchronous environment. Six discussion posts also composed technology data. Technology was illustrated through the software within the University Program, service provider of online services, tool bars, and inconsistency with Internet services.

Software incompatibility to university online program. Sometimes my service provider was not reliable and made for better planning on my part (P16)

Working online was trying when it was not working properly(P17)

I agree and I too have had many frustrations thus far with the whole university experience in general. I have noticed though that it is very difficult to maneuver between the tool bars. You always have to go back and go into whichever you want then go back to wherever you were previously (P18)

It was clear from student responses that technology was an aspect that if not working properly had the potential to lead to student frustration

**4.2 Discussion**

Results suggest students differ between their preferences for an asynchronous or synchronous learning environment and what each of these environments has to offer when using tools such as LMS (elearning) and blendspace. . These findings support the current literature by suggesting KUIS undergraduate students perceive benefits to a range of synchronous and asynchronous learning tools, and add to the literature are suggested in the literature (Balkin, Guthrie & McCracken, 2010; Liu, Liu, Lee, & Magjuka, 2010;Tee & Karney, 2010). Furthermore, these findings provide student perspectives of collaborative opportunities with their peers which is an additional practice that shows promise in enhancing student outcomes (Balkin et al., 2005; Tee & Karney, 2010). Students highlighted proponents of synchronous and asynchronous learning environments that provided a positive learning experience. Using qualitative methodology, a richer description of the students’ experiences and involvement in both methods of instructional delivery was identified.

**5. Conclusions**

Although not the purpose of this article, the sample size of 20 is small which makes it quite challenging to generalize these findings to a larger population. Further, the participants were from one cohort. It is important to remember the purpose of qualitative research is to gain a deeper understanding of experiences, and therefore generalization is not the purpose of this

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