Adopting Synchronous Teaching Technologies in Online ELT Classrooms During the COVID-19 Pandemic at Technological Education Institutes

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Abstract— During the global pandemic, the entire education process has evolved significantly over the online platform by integrating technologies. Thus, the teaching/learning process has raised new challenges and opportunities. In the traditional classroom, the learning environment is much more effective due to the inherent synchronous method. However, the online teaching approaches are also enriched by adopting different synchronous approaches such as online teaching over video conferencing, use of instant messages during the class, and Zoom breakout rooms and Google Docs for online activities to deliver sessions same as a physical classroom. The research question is about approaches to adopt synchronous teaching methods effectively, which is based on the hypothesis, whether the technologies are effectively adopted to deliver the true experience of synchronous teaching for the learner. In methodology, the literature is the priority consideration to understand the present use of technologies, then a group of English lecturers from Sri Lanka Institutes of Advanced Technological Institute (SLIATE) selected based on the purposive sampling for a semi structured interview, and their shared experiences were recorded and then analysed based on thematic analysis. Secondly, to understand the learning experience via the online platform, the online structured questionnaire was delivered to the students at the same technological institute who learn English as a Second Language using different technologies, and those quantitative responses were analysed descriptively to understand their trends. The findings over the mixed method are incorporated to describe the scenarios in detail, then the recommendations are raised for effective implementation of synchronous approaches for online classroom assuring similar experience as in the physical classroom. The theoretical framework is the outcome of this study to assure a better teaching-learning process.

Keywords— English language teaching, synchronous technologies, online teaching approaches

I. INTRODUCTION

The ongoing global COVID-19 pandemic which started in early 2020 influenced the disruption of physical face to face classrooms at every level of education in most countries around the world (Bozkurt A et al., 2020), Due to the large scale of social restrictions of the governments to reduce the spreading of this pandemic, various institutions boost the teaching/learning process via online platform to reduce people's movement in education institutions. As per Talebian et al., (2014) to engage with the online class, any suitable platform should be utilized by both teachers and learners. And to promote learning activities, E-learning should be raised the use of information and technology (Zhou et al., 2020). So, numerous educational institutions adopt information and technology applications in virtual learning classrooms (Al-Mubireek, 2019). English language teachers in all disciplines had to tolerate the situation to find alternative modes of teaching to keep interacting with their learners' synchronous manner.

In the technological education system, Sri Lanka, the examples of the most popular applications functioning these days for teaching online are Zoom, Google Meet, Microsoft Teams, Google classroom, Google forms, Google documents, YouTube so on. Some of these applications are for live teaching sessions, some for homework and assignment submissions, creating quizzes, and creating interesting PowerPoints.

According to the idea of Verawardina et al. (2020), the E- learning class provides two alternative models, such as synchronous and asynchronous. Synchronous mode is a kind of virtual learning that

facilitates user to conduct whole learning activities through an online class. Conversely, asynchronous learning happens virtually through prepared resources, in the offline process without a real-time teacher. With the technological advancements at present, teachers are eager to applying different synchronous features for their online sessions through video-conference software as Peachey (2017). However, teaching synchronously via online platform has become an additional challenge for teachers since it requires specific skills including the facility to teach and communicate content across a screen, occupy educators with two- dimensional images, keep interaction with students in the digital classroom and attend for students' emotional needs across the distance by maintaining an intellectual relationship and troubleshoot technical errors (Rehn et al., 2018). At the same time the use of multimodal actions such as facial expressions, gestures, eye contact etc. to maintain the interaction between teacher and students in the physical classrooms, can function differently in a synchronous virtual classroom since it depends on the access and the position of cameras and participants screen size and the technological knowledge of both teacher and the learner to use other different aspects such as the use of instant messages during the class and Zoom breakout rooms and Google documents for online activities. The present study is an investigation of the efficacy of adopting technologies in online synchronous English Language Teaching (ELT) classroom at the technological education system during the pandemic situation.

As per the understanding of the literature and the infrastructure facilities available at SLIATE, this research focuses on approaches to adopt synchronous teaching methods effectively in ELT classroom during COVID-19 pandemic situation, which is based on the hypothesis of the study *"*whether the technologies are effectively adopted to deliver the true experience of synchronous teaching for the learner"? The present study is limited on the SLIATE as a part of technological education system to investigate Zoom platform and freely available Google platform despite many other technologies are available to use for

synchronous teaching implementation.

This paper streamlines with 5 sections; section II describes the methodology and research design focusing the approaches of this research. Then, section III is allocated for results and discussion analysing the primary data collected via interviews

and questionnaire. In section IV, the recommendation is made with the theoretical framework to consider for synchronous technologies for adopting for online ELT classes. Finally, section V concludes the research in the SLIATE and focuses the future work as well.

II. METHODOLOGY AND RSEARCH DESIGN

The study is defined first focusing on the synchronous ELT classroom and the research design is introduced based on the methodology. Two research tools were utilised for the study namely interviews and questionnaire for the data collection. Creswell, (2020) has mentioned this type of design which uses different approaches to examine the equal matter is called a triangulation mixed-method design. In addition, applying multiple approaches in a research design would also deliver a clear picture and address many different features of phenomena. (Silverman, 2000)

A. Methodology

Semi-structured interviews were chosen for interviewing process due to the easiness of purposive samples and space to generate questions. So, five ELT lecturers in the technological educational stream were interviewed and recorded the data with their consent then all the recordings were converted to text scripts for analysing qualitative data via thematic analysis. Secondly, a structured questionnaire was shared among 150 students in ELT classrooms via Google forms by considering the students' responses upon their interest. next, all the quantitative data was analysed using the descriptive approach.
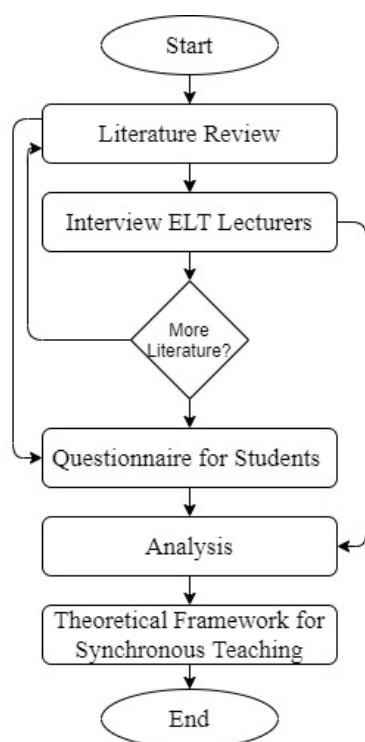
B. Research Design

Figure 1: Research Design

As per the methodology, Figure 1 illustrates the flowchart of the research design. The outcome of the research is to introduce a theoretical framework for synchronous teaching.

III. RESULTS AND DISCUSSION

This study uses a mixed-mode technique that uses both quantitative and qualitative questions to get both lecturers' and students 'perspective information regarding online teaching and learning experience by adopting the synchronous teaching methods in ELT classrooms. The quantitative information was acquired using Likert-scale questions developed to obtain the students' online learning experience. As per the data, the following findings can be listed down as follows.

A. Technological competencies of stakeholders

Walsh (2013) expressed that teacher, perceive interaction as a prominent aspect to have an effective synchronous online classroom. To make the environment comfortable for both students and teachers their technological competencies should be at least at a satisfactory level. The data analysis reveals that the level of technological knowledge is above satisfied level among both the lecturers and the students to manage with online sessions. However, the technical knowledge of the lecturers is not adequate for synchronously delivering the online sessions. The following statements of the ELT lecturers illustrate the situation very clearly.

"I do not have much knowledge in Technology. It is in average level to deliver lectures via, but I prefer to learn these technologies" (ELT Lecturer 2)

This is common among most lecturers since they are not having an elementary knowledge of using technology. They used to practice in a traditional classroom with conventional methods for teaching scenario. So that by adopting different technologies to have a real-time learning experience is a real challenge for most of the lecturers who teach English as a second language. However, they have an actual interest to learn and practice the new technologies to enhance their quality of teaching. This is common among most lecturers since they are not having an elementary knowledge of using technology. They used to practice in a traditional classroom with conventional methods for teaching scenario. So that by adopting different technologies to have a real-time learning experience is a real challenge for most of the lecturers who teach English as a second language. However, they have an actual interest to learn and practice the new technologies to enhance their quality of teaching.

"To a certain extent, I think I am capable to handle the online sessions via Zoom" (ELT Lecturer 5)

As per the statement of the fifth interviewee, it can clearly understand that although the lecturers having some knowledge of practicing technologies, the present knowledge is not sufficient so far to improve the quality of teaching via different online platforms. They should learn about modern technology to deliver an interactional environment in the online ELT classrooms.

B. Infrastructure for online delivery

The lecturers are provided official Zoom accounts via LEARN, and those accounts are not charged for data as the sessions are hosted over whitelisted LEARN servers. As a result, students are motivated to attend the sessions despites there are many challenges for them to attend.

1) Connectivity of the Internet: as per the findings of the survey, 78.1% of the students have connectivity to the Internet. It is a good sign for delivering the online classes with strong participation of students. However, there are some comments on the survey from students' side by complaining the insufficient coverage problems at all. Due to the connectivity issues, some students are struggled to engage the lecturer in the session actively.
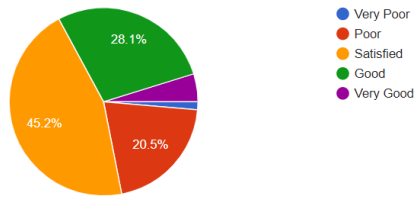
Figure 2: Accessibility to the Internet

Figure 3: Use of Devices

2) Devices to connect online lectures: the device is an essential element for connectivity with the classes and all the students have either a mobile phone or laptop for attending classes. The following statement is quoted from the interview which talks about the several matters to connect online.

"Many students have the issue with the device to connect with the classes". (ELT Lecturer 1)

Owing to the poor internet connectivity to attend the lectures is a major concern of students some are from very rural areas. On the other hand, most of the students do not have a laptop /desktop/tab device to join with the ongoing online lectures due to different economic status in their families. Many students are using mobile phones to connect with the lectures as their parents' affordability for purchasing a device.

Since the majority is connecting to the lecture via mobile phones, they are having limited contribution for the online session rather than using a laptop especially when they are engaging with writing activities, doing collaborative activities with the inability of sharing the screen with the teacher or group members. So, it increases distress to the online synchronous classrooms (OSC). The following extract of an interviewee can be considered as proof of the fact.

"While doing some essay type questions in the classroom, in the discussion time it is really hard for them to share their screen with the class since most of them are using the mobile phone to join with the lecture". (ELT Lecturer 3)

Despite the use of mobile phone and tab fulfil the minimum requirement for connecting with the lecturer, it is adequate to accommodate the synchronous teaching approaches effectively due to the inherent limitation to interact with those devices. The following graph has illustrated the devices, use for joining online sessions.
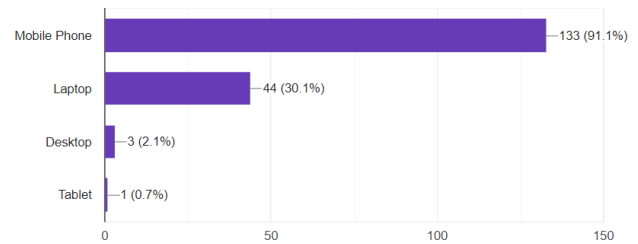
C. Interaction during the online lecture

For language learning in the OSC, the interaction among the teacher and students is utterly important. The teacher can be reached to the students via speaking, video conferencing and instant messages through the chat box. Whereas, due to the lack of physical proximity and poor connectivity facilitating and utilising the interaction has become an immersive challenge in ELT Synchronous classrooms.

1) The students' interaction: When comparing the three approaches in figure 4, most of the students speak up in the lecture and using instant messages to maintain the interaction with the teacher during the online session rather than having the video conferencing. Through the purposive sample, a considerable amount (40%+) is never video conferencing during the lecture sessions. It is confirmed by considering the following quote of an interviewee.

"It is difficult to have face to face interaction via video conferencing in most of the times since students rarely contribute due to different issues" (ELT Lecturer 4)

Some reasons such as students' connectivity problems, technical problems with the device and lack of physical preparedness for attending the lecture sessions can be caused for the absence of video conferences.

The students' frequency of Speaking up with the lecturer by unmuting themselves is another issue for the lecturers while they are conducting online sessions since most of the times students are not properly contributing to the tasks. Most of the students keep silent at all during the lectures and selected a few students are incorporating with the lecturer. It is mentioned in the following extract.

"They rarely talk. I have to repeat the same questions many times and only a few students are dominated to provide the answer." (ELT Lecturer 1)

This condition is not a good sign while considering the efficacy of OSC since video and audio conferencing are doing a great job in OSC. As the next aspect exchanging instant messages via zoom chat box has become the alternative option for students to connect with their lecture to deal with their subjective matters, answer questions during the lecture if they are unable to speak up. Through the interviews of purposive sampling, most lecturers had a positive comment of their students' contribution to the lecture via messaging box. For instance, the following extract can be quoted out.

"Students usually place messages in Chat Box with regards to their connectivity issues, to make an excuse for some matters and other than students raise problems regards to the lesson." (ELT Lecturer 3)

When students are communicating via chat box in online lectures, sometimes it is a kind of disturbance for the lecturers as they must pay attention very often to the chat box. However, on the students' side, the message box has become a relatively good option rather than others to create a real-time classroom. Finally, audio, video and instant messages can be considered as the most significant aspects to have productive OSC.
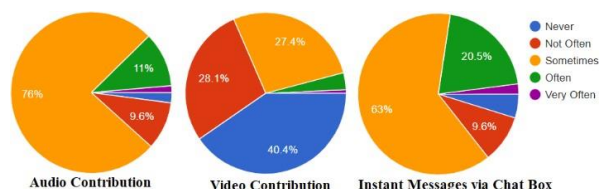

Figure 4: Students' interaction during the lecture

2) Collaborative activities: Collaborative activities are the most important approaches to engage, improve, and direct student learning. in SOC. Via Zoom Breakout Rooms and Google Docs facilitate a stage for collaborative activities. In the purposive sample data, students are having satisfactory level for both approaches in SOC meanwhile, few lecturers' perceptions on technology for collaborative work can be discussed as follows.

"I don't use it regularly, but I have used it once at the beginning of my Zoom classes. I used it to provide an opportunity to have a group discussion, but students' contribution was not at a satisfactory level. In my experience, it was not so productive and thereafter I didn't use it rather asking direct questions from the

students and get responses directly to keep the interaction with them." (ELT Lecturer 4)

Due to the less active participation in the task, the above lecturer has discouraged working with the Zoom breakout room. However, considering the students' perception via the questionnaire they are having good interest to do group activities via zoom. Although the lecturer applies this technique to the collaborative activities during the session, several issues can be occurred due to the students' connectivity problem. One of the interviewees is revealing the circumstance as follows.

"In Zoom Breakout Rooms, due to the students' poor connectivity, they leave from the group very often and rejoin. once they come to the main session since they cannot remember their exact group, I have to assign them different groups in many more times. Once this happens frequently it is very difficult cope up with the task" (ELT Lecturer 5)

This is a common scenario for most of the lecturers are facing while doing the collaborative work online using Zoom Breakout Rooms. Once conducting a session for a large number of students more than 100 this condition happens very frequently and due to this the expected productivity of students to the task is comparatively decreased since they come to the main session, they are not ready to present the task.

Google doc is another instrument for collaborative works online. Students can work together collaboratively since the tool Google docs come from the ability to share, edit and work collaboratively in one virtual workspace. In other words, using Google docs documents, presentations, folders can be created and shared by multiple users at once. The collected data is revealed that students are applying the Google doc tool at a satisfactory level and few amounts never use Google docs for collaborative works in the online classrooms.

Conversely, as per the sampling data, the lecturers' awareness of the Google doc is comparatively poor since their inadequate competency about technology. It can be cleared by Referring following example.

"I have never tried with Google docs during the classroom for group activities as I have a lack of knowledge on it." (ELT Lecturer 2)

Despite, students are familiar with Google docs due to the poor awareness of the lecturers, it is not productively used during the classroom. Figure 5 is illustrated the use of collaborative approaches in the SOC.
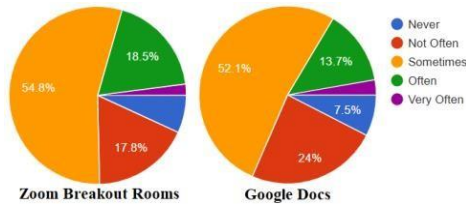
Figure 5: Use of collaborative approaches in the SOC

3)   Physical classroom vs Online classroom: In a comparison of physical classrooms with online classroom, the study reveals that both students and the lecturers are eager to have the traditional classroom rather than the online aspect. As per figure 6, it can be seen as a percentage more than 66% of students have shown their interest in responding to the options on good and very good rather than participating in online classes via the Zoom platform. In the meantime, a few more utterances grasped from the interviews of lecturers can be quoted as follows.

"It is difficult to monitor students' behaviours while the session is going on. No eye contact with the students" (ELT Lecturer 2)

In the conventional classroom, the lecturer can observe the students work and monitor their behaviours. Both parties can make the interactive environment using eye contact, and via verbal and non-verbal communication. Whereas, in the virtual classroom, the student-lecturer intellectual relationship is hardly found at all.

As per the extract of one of the interviewees,

"Unlike the physical classrooms, the background disturbances usually occur in the online classroom" (ELT Lecturer 3)

When the participants' microphones are in unmute mode background disturbances can happen during the lecture. Sometimes this condition is interrupted by the attention of the lecturer and the audience. If the lecturer could ask all the students to mute themselves and unmute them where they want to talk can be taken to overcome such disturbances.

In online mode, lack of visual feedback is a common challenge for the lecturers. When the lecturers are delivering the lectures in the physical classroom, depending on students' visual feedback they are capable to adopt different methods to make the session more interactive. Whereas in the online mode the interaction is based on the students'

responses. Most of the time getting students' response is also a challenge. Through the following exact

"Although the activities are the same in both modes, we cannot get a realistic outcome in online mode since there is no measurement to know whether the students engage the activities genuinely" (ELT Lecturer 5)

while there are several difficulties in online methods, both methods can be applied to achieve the same goal. Whereas According to the data shown in figure 6, the majority is willing to engage with the physical classroom rather than attending to the online mode.
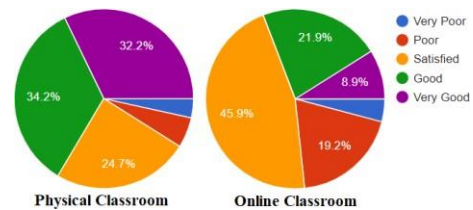

Figure 6: Students 'ranking of physical mode vs online mode

IV.   RECOMMENDATION

As per the collected data and related analysis, in the Figure 7, the theoretical framework has been introduced to incorporate synchronous teaching during the online class representing SLIATE as one of the main technological education systems across the country.
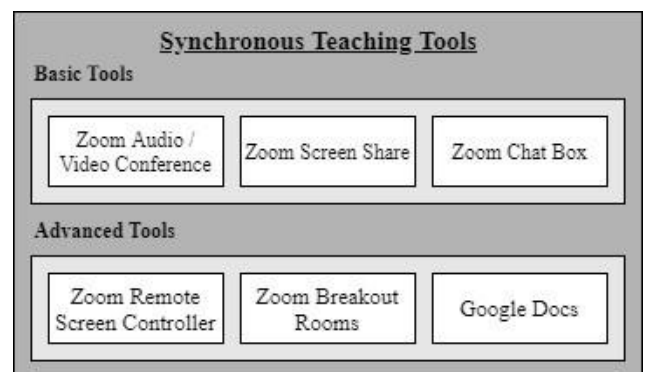

Figure 7: Theoretical Framework

In the framework, the advanced synchronous tools are not commonly used during the online class at present due to the poor understanding of the importance of collaboration by the lecturers. As a result, the true synchronous teaching / learning

process of the physical classroom cannot be accommodated in the online classroom.

Further, it is observed that the use of technology is not adequate among ELT lecturers to deliver online classes synchronously, instead, they manage to conduct the sessions by using basic tools as required, and it fulfills the requirement of online teaching as well. However, it is essential to conduct training and awareness sessions for all the lecturers to provide some knowledge about the use of advanced tools, available at present for SLIATE staff. Nevertheless, students should also be educated on those advanced tools, and the lecturers should be the responsible persons for delivering the required knowledge for students. Moreover, it is essential to consider those involved in the evaluation process. Eventually, lecturers should utilise the available synchronous technologies for their online classrooms to facilitate students similar experiences as in the physical classroom.

V.   CONCLUSION

This paper attempts to investigate the efficiency of online teaching by adopting synchronous technologies to ELT classrooms. Throughout the paper, it is described and discussed the utilization of video conferencing, audio conferencing and Instant message via chat box, Zoom Breakout Rooms and Google Docs among the Advanced Technological institutes to create online synchronous ELT learning environments. These technologies can connect lecturers and learners in a different context by providing the flexibility that cannot expect through conventional classrooms. The present study has revealed that teachers need to have technological competencies in the fair stage, and they have to improve their competencies to conduct a synchronous learning environment rather than being traditional. By considering all the analysed data via thematic approach and descriptive approach, the efficacy can be seen a satisfactory level of OSC by utilizing available technologies appropriately.

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ABBREVIATIONS AND SPECIFIC SYMBOLS

SLIATE – Sri Lanka Institute of Advanced Technological Education

ELT – English Language Teaching OSC – Online Synchronous Classroom

this research upon their requirement to find out the ways for improving online classroom teaching in synchronous manner.

AUTHOR BIOGRAPHY

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