A pilot study on the usage of multimodal texts to enhance learner engagement during online classes

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Abstract

The rapid advancement of technology has significantly impacted education, particularly in language classrooms where multimodal texts have become crucial. These technology-based texts facilitate diverse meaning-making methods, shifting literacy pedagogy from traditional to modern teaching approaches. Integrating technology into English as a Second Language (ESL) classrooms is essential for this transformation. This research aimed to assess the effectiveness of using various multimodal texts to enhance student engagement in virtual classrooms in Sri Lanka. Conducted as an action research project over a month, the study involved 35 grade 10 students from H/Thalawa Vidyalaya, employing quantitative and qualitative methods. The teaching sessions incorporated a range of multimodal texts suitable for the learners and the lesson goals, each featuring at least one multimodal text. These lessons aimed to teach aspects of the four language skills: grammar, and vocabulary. Tools like Google Classroom, presentation slides, videos, Padlet, Slido, Google Forms, and chat options via Zoom and WhatsApp were utilized. Quantitative data were collected through a Google Forms survey, while qualitative data were obtained from questionnaires and semi-structured interviews. Additionally, observations and student work reviews were used for data collection. The quantitative data were analyzed using SPSS, and the qualitative data were analyzed thematically. The study found that using learner-friendly and familiar multimodal texts significantly enhanced student engagement and fostered a positive attitude towards their use for various purposes in language learning. These findings highlight the importance and effectiveness of diverse multimodal texts in English classrooms, particularly in virtual settings, to boost student motivation, interest, and engagement.

Introduction

The dynamic nature of technology has significantly impacted human lives, particularly in the 21st century, where almost everything is technology-based. Education is also evolving by integrating technology into teaching and learning processes. During the COVID-19 pandemic, students were extensively exposed to mobile devices and the internet, allowing them to easily access vast knowledge (Ganapathy & Seetharam, 2016). The rapid technological and communication advancements of the 21st century is part of the Fourth Industrial Revolution (Industry 4.0) that transformed education. The learners today, known as the "millennials" or the "digital natives," frequently use multimedia and social media in contrast with many teachers, or the "digital immigrants," who struggle with new Information and Communication Technology (ICT) (Prensky, 2001). This shift requires teaching methods to evolve from traditional print-based approaches to digital communication (Kress, 2003).

Multimodal perspectives on literacy emphasize that meanings are created through various representational and communicative resources, not just language (Kress & van Leeuwen, 2001). Traditionally focused on print-based texts, education must now integrate multiple modes of meaning-making due to Industry 4.0 (Kress, 2009). Research shows that multimodal methods enhance learning (Sankey et al., 2010), aligning with the diverse learning styles of the students and improving performance. Jewitt (2008) argues against static grammar teaching, as it limits the ability of the students to contextualize knowledge and suggests that multimodal texts blur the distinctions between modes.

Based on social semiotics, multimodality explores communication through various modes beyond spoken and written language, such as technology, visuals, gestures, and gaze (Kress, 2009). This theory highlights that communication inherently involves multiple modes, combining different forms in any interaction. The rise of technology and social media has made multimodality particularly relevant to education today. Van Leeuwen (2015) views multimodality as a phenomenon, suggesting that all discourse involves multiple communication modes. For instance, spoken discourse includes language, intonation, gestures, and facial expressions, while written discourse combines language with typographic elements, illustrations, layout, and colour. Exploring these semiotic modes reveals underlying ideologies and implicit beliefs (Van Leeuwen, 2015).

The New London Group coined "multiliteracies" in 1996 to address diverse communication channels and increase learners' linguistic and cultural diversity (Cope & Kalantzis, 2015). They advocated for literacy education to move beyond rigid, formal, monolingual approaches, recognizing dynamic resources shaped by users for cultural purposes (New London Group, 1996). Walsh (2010) describes multimodal literacy as making meaning through multimedia and digital texts, encompassing oral and gestural modes and creating texts using various modes like images, words, sounds, and movements.

Cope and Kalantzis (2000) propose that knowledge and meaning are influenced by historical and social contexts, akin to 'designed' artefacts, consisting of the designed, designing, and redesigned

components. They stress the need for functional 'grammars' to explain patterns of meaning, especially with new technologies intertwining these modes further.

A text is considered multimodal when it integrates two or more semiotic systems: Linguistic: vocabulary, structure, and grammar of oral and written language; Visual: color, vectors, and viewpoint in still and moving images; Audio: volume, pitch, and rhythm of music and sound effects; Gestural: movement, facial expressions, and body language and Spatial: proximity, direction, position, and layout organization of objects in space. Multimodal texts can be print, physical, or digital. Hence, in the present study, the researcher used eight different multimodal texts as described in the methodology section. Research on multimodal pedagogy often utilizes the multiliteracies framework (Cope & Kalantzis, 2000; New London Group, 1996). Manan (2012) argues for a shift in literacy pedagogy to incorporate ICT into lessons, aligning with students' exposure to multimodal approaches (Kaur & Ganapathy, 2013).

Suhaimi (2004) found that teachers supported the multiliteracies approach for its effectiveness and suitability for various learner styles in Malaysian schools. Ganapathy's (2014) study in a local Chinese school showed positive student engagement and productive learning outcomes in English as a Second Language writing lessons using multiliteracies. Yang's (2018) research on a multimodal interactive oral English teaching model for Chinese learners highlighted its effectiveness but noted the challenges and continuous effort required from teachers. Huang's (2020) study during the epidemic in China showed that multimodal teaching increased adult learners' interest in English, promoted autonomous learning, and facilitated knowledge construction and internalization. However, in Sri Lanka, few studies have addressed multimodality, primarily focusing on multimodal discourse analysis.

In Sri Lanka, English language teaching in government schools is compulsory from Grade 3 and follows a prescribed curriculum, textbooks, and workbooks, with teachers rarely using additional learning materials (Gunawardhana, 2012). This practice may be due to limited time for the subject and pressure to complete the syllabus. Discussions with a school principal and two English language teachers revealed that they rely on a textbook-based teaching method. They also noted a significant decrease in learner engagement when transitioning from physical classrooms to online classes during the COVID-19 pandemic.

Online classes, however, have the potential to integrate various technology-based learning materials that can enhance student interest and engagement more effectively than physical classrooms. Technology-based multimodal text types were used globally in the varied English language teaching contexts. However, as shown in the information above, a gap exists in exploring the effectiveness of varied multimodal texts in enhancing student engagement in virtual classrooms in Sri Lanka. Therefore, this research study aimed to assess the effectiveness of incorporating varied multimodal text types for different lesson purposes to enhance learner engagement in virtual classrooms, applicable to schools, universities, and other higher education institutes in Sri Lanka. Hence, the study intends to answer the following two questions: In the context of English Language teaching in an Intermediate Educational Setting, how the use of multimodal text can enhance learners' engagement in the lessons and what are the learners' perceptions about the use of varied types of multimodal texts in the virtual ESL classroom?

Methodology

Ethical clearance

The researcher obtained informed consent from the school principal and students by sharing the e-consent via email prior to conducting the study. Formal ethical clearance for the study was not obtained from an ethical clearance committee since no personal information that identifies the participants from whom information was obtained were collected.

Study design

The study follows a mixed methods research design by collecting quantitative and qualitative data.

Study setting

Over a one-month period, an English language class was conducted for 2 hours per week via Zoom for the students of grade 10 at H/ Thalawa Navodya Maha Vidyalaya, Kariyamadiththa. Due to a limited Zoom package, breakout rooms for collaborative tasks were unavailable, so no collaborative tasks were included. Each session integrated various multimodal texts suitable for both learners and the lesson objectives, with each lesson focusing on at least one aspect of the four language skills, grammar, or vocabulary. Google Classroom, presentations, videos, Padlet, Slido, Kahoot, Google Forms, and chat options (Zoom and WhatsApp) were used in the lessons. Google Classroom provided an online learning environment, while PowerPoints and videos were used for lesson delivery. Padlet and chat options were utilized for writing tasks. Slido, Kahoot, and Google Forms were used for assessments through games, teaching both receptive and productive skills. During the sessions, the researcher and a mentor observed the class, took notes, and reviewed learner responses.

Population and sample

The study population was grade 10 students from H/Thalawa Navodya Maha Vidyalaya, Kariyamadiththa. Randomly selected 35 students, 18 female and 17 male students whose first language is Sinhala, were taken as the study sample. Most students came from low to medium socioeconomic backgrounds, resulting in limited access to technology and little exposure to online teaching materials before the COVID-19 pandemic.

Data collection

The quantitative data were gathered through a survey distributed through Google Forms, which included four sections: background information, nature of the online interaction, types of learning materials used, and awareness of technology-based learning materials. To collect qualitative data, semi-structured focus group discussions with selected 10 learners were done for 25-35 minutes through Zoom. Questions posed in the focus group interviews were open-ended and semi-structured to allow participants to express their thoughts freely and openly. Further, five open-

ended questions were included in the survey and distributed to collect qualitative data. Moreover, the observations and reviewing of students' work were used as data collection methods to affirm the findings further.

Data analysis

The gathered quantitative data from questionnaires were analyzed using descriptive analysis of SPSS (Statistical Package for the Social Sciences). As the learners responded in their mother tongue before the qualitative data analysis, those responses were translated into English without changing their meaning. Later, the qualitative data were analyzed using thematic analysis.

Results

Findings from questionnaires

The data collected from the questionnaire were analyzed under two significant sections: students' background information and perceptions of the usage of multimodal text types during an online class. The questionnaire aimed to explore students' online interactions during the pandemic. As shown in Figure 1, most students reported spending 10-15 hours daily on mobile or laptop devices, with fewer using them for 5-10 hours or over 15 hours. The high usage indicates significant engagement with technology. As in Figure 2, students primarily use their devices to attend school and online tuition classes. However, their social media use surpasses their study-related activities, and 15 male students specifically reported spending time playing online games.
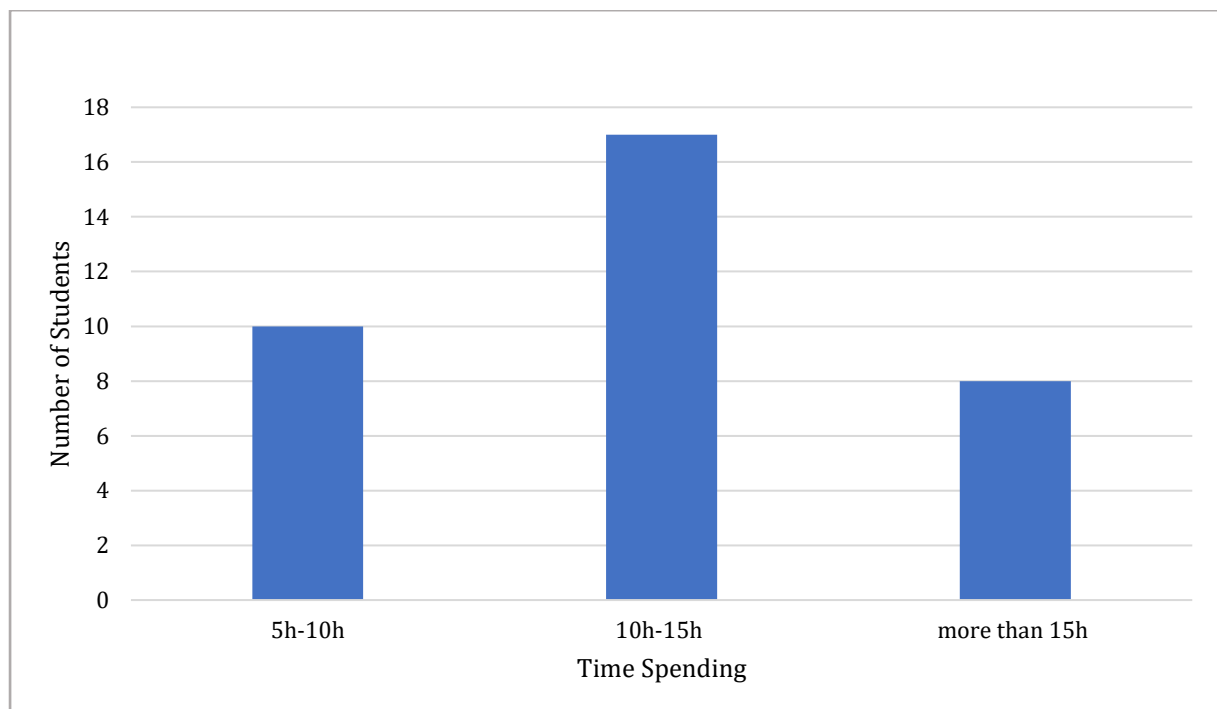

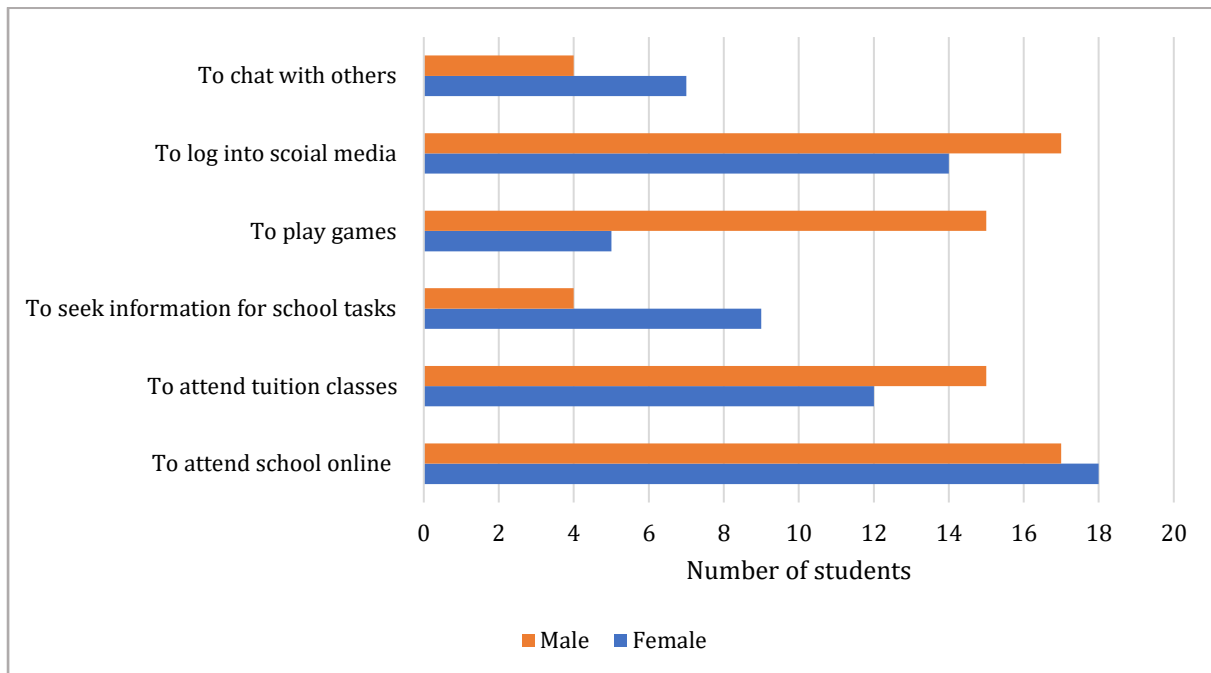**Figure 1.** The amount of time spent with mobile phones by the students

Figure 2. Students' purposes for using a mobile phone or a computer

Regarding the type of learning material used besides textbooks in school, 20 students have responded that they have not been taught using varied teaching materials. However, five students responded "yes" and were taught using a movie clip in grade 9. Most students are unaware of technology-based learning materials, as shown in Figure 3. Only eight students know their existence, and one respondent commented, "In our tuition class, *sir uses Kahoot online game*".
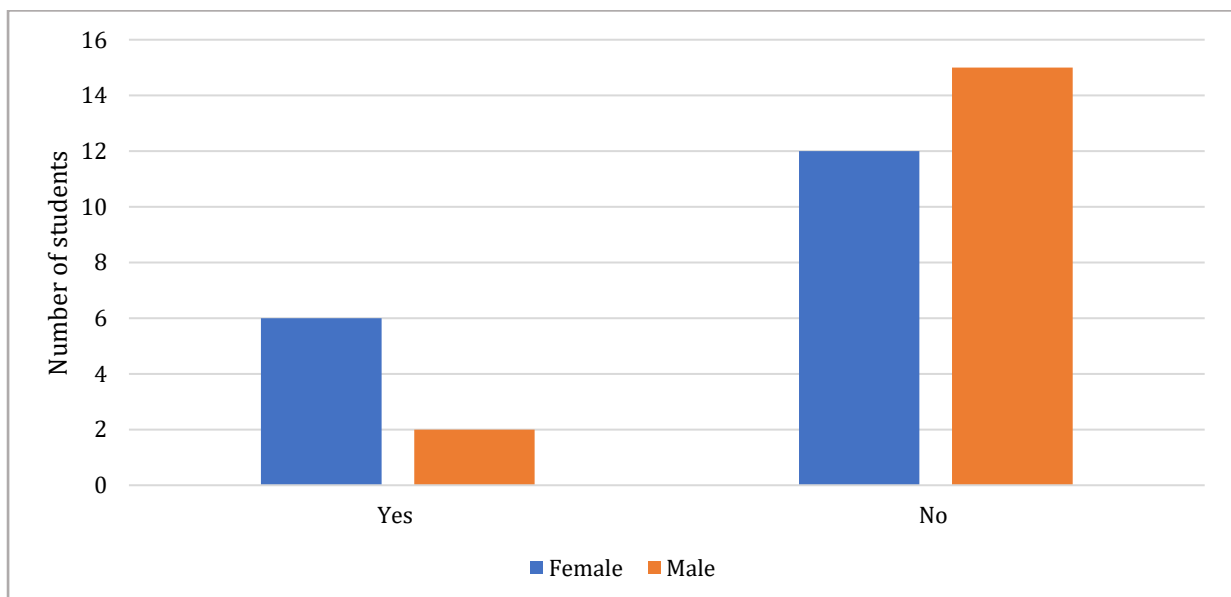

Figure 3. Awareness of the students regarding the technology-based material

The students' preferences for learning styles vary. It was found that 30 students like to learn through visuals, 22 preferred linguistic methods, 18 preferred audio methods, 12 preferred gestural methods and only 4 preferred spatial methods.

Students' engagement and perception about the usage of multimodal text types during an online class

The second part of the questionnaire collected information on students' engagement and perceptions of multimodal text types in online classes. When asked about their satisfaction with textbook-based teaching, 33 students expressed dissatisfaction, while only 2 were satisfied. Students were also asked about their views on the multimodal text types used in lessons. PowerPoint and videos were used for lesson delivery, with 18 students preferring PowerPoint and 17 preferring videos. Padlet and chat options were utilized for writing tasks, with most students favoring chat options and only 3 preferring Padlet. For assessments, Slido was preferred by 18 students, while 17 liked Google Forms. Additionally, 21 students liked Google Classroom, with some comments on its convenience for accessing uploaded lessons at any time. However, 14 students, particularly those with limited ICT knowledge, found it difficult to access. According to Singh et al. (2020), Google Classroom helps teachers create an online classroom space to teach and manage documents for student assignments. Its use during this study benefited both the researcher and the students.

As shown in Figure 4, the findings revealed that most students preferred Slido, followed by Google Forms, with an equal number liking PowerPoint and videos. Only one student favored Padlet. Muthmainnah's (2019) study indicates that Slido enhances student engagement by allowing interactive quizzes, questions, and peer comments. Google Forms, as a free, user-friendly tool, improves participation, learning engagement, and evaluation, and simplifies grading (Nguyen et al., 2018). Thus, incorporating user-friendly materials into lessons can lead to higher student participation, as shown in the study.
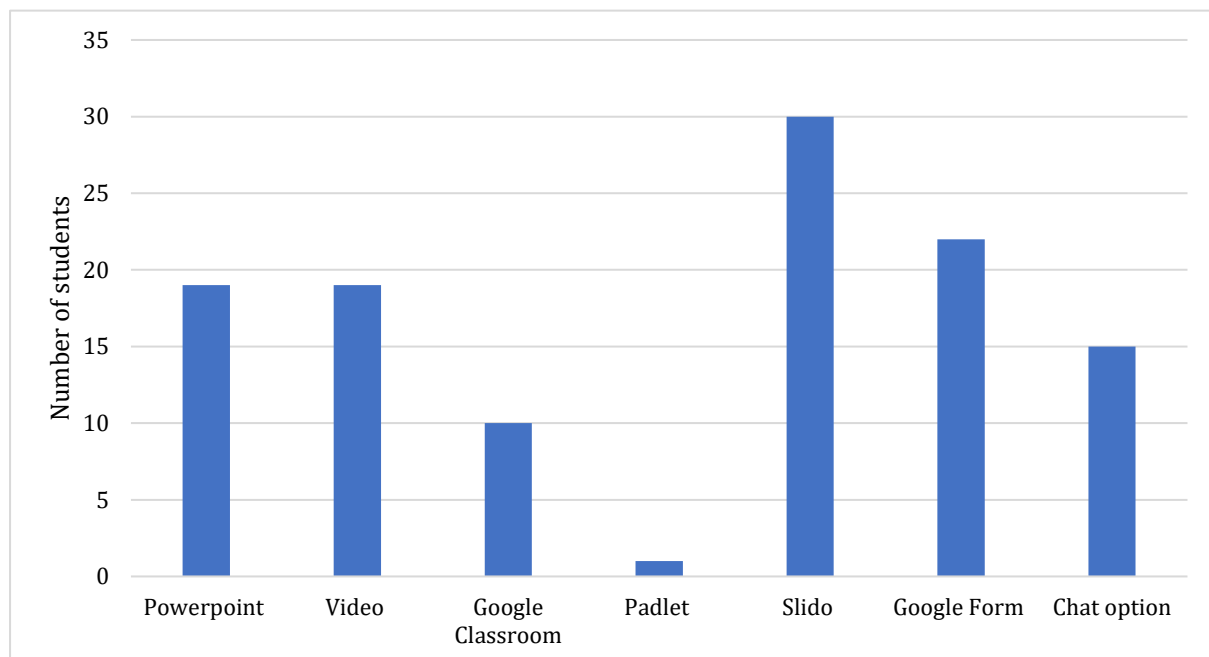

Figure 4. Favorite multimodal text used

Table 1: How multimodal texts help in learner engagement

Criteria	Frequency	Percent
helps me to engage/be active in the activities	34	17.9
is easily accessible	23	12.1
is user friendly	25	13.2
has no confusion when using	12	6.3
motivates me	17	8.9
is a new experience	27	14.2
simplifies the complex lesson	6	3.2
helps to improve language skills	16	8.4
makes the class interesting	30	15.8

Through the next question, the reasons why the students prefer certain materials were identified. According to data reported in Table 1, 34 students have mentioned that the use of multimodal text types helped them to engage and be active in the classroom activities while 30 students claimed that those materials made the class interesting. 27 students responded that those materials provided them with a new learning experience, while 25 students responded that these materials were user-friendly.

According to the learners' responses, as shown in Table 2, all the students agreed that those materials matched with their learning styles.

Table 2. Matching with Learner Style

Criteria	Frequency	Percentage (%)
Yes	35	18.4
No	0	0

Any implementation has to encounter challenges. Thus, a question was posted to identify the challenges the learners have encountered while they interact with those materials. As shown in Table 3, all the students had network issues. 21 students responded that it was a new experience for them. An equal number of students have responded to the lack of technological facilities and taking time to be familiar with those materials as other challenges. 12 students have considered the difficulties in access and lack of ICT knowledge as challenges.

All the students have responded that teaching and learning with varied materials are their most favored methods rather than only textbook-based learning, and all of them have recommended the use of multimodal text types in the language classroom.

Table 3: Challenges of using multimodal texts

	Frequency	Percent
Network issues	35	18.4
Lack of technological facilities	15	7.9
Access issues to login to sites	12	6.3
Totally new experience	21	11.1
Lack of ICT knowledge	12	6.3
Took much time to familiarize with materials	15	7.9

Findings from observations, focus group discussions and review of the student's work

These qualitative data were analyzed using thematic analysis, themes such as lack of exposure and difficulties, student willingness and comfort level, learner engagement, and recommendations were identified. These themes can be elaborated as follows.

Lack of exposure and difficulties

One theme that was identified through the focused group discussion is their lack of exposure and the difficulties they encountered.

Interviewee 2: *"at school, we were taught by using textbooks. However, this teacher didn't use textbooks much in the class and instead used various materials. Those materials are new to me and accessing Padlet and Google Classroom was difficult for me as I don't have a good quality phone".*

Interviewee 6: *"our class teacher only use the textbook, pass papers and whiteboard in the online class. But new teacher used many new materials which we have never heard".*

Interviewee 10: *"I and my brother use the same phone to join the classes because of that sometimes I missed the activities"*

Through these responses, it is found that the learners have less exposure to this kind of multimodal text, and they are encountering difficulties in terms of technical facilities.

The student's willingness and comfort level

In the quantitative data analysis also, it is found that the learners are willing to learn through the varied multiple text types. This is further affirmed by the qualitative data analysis. Most of the interviewees responded that they are willing to learn through these multimodal text types.

Interviewee 3: *"I really enjoyed and like those materials"*
Interviewee 5: *"I hope our teacher too will use these materials in the class"*

However, considering the comfort zone with these materials the learners had issues. One of the interviewees mentioned, "I felt uncomfortable when I used them for the first time. But when I used it, I got to know how I need to work with them". Another respondent stated that "creating a Google account and accessing Google Classroom was difficult for me as I don't have ICT knowledge".

However, interviewee 6 commented that with the teacher's step-by-step guidance, he was able to get access to those materials. "I felt uncomfortable with those materials on the first day as they all were new for me. But the teacher helped me a lot to get access. After that it was easy for me". Ganapathy and Seetharam's (2016) study also found that with the teacher's assistance, the learners feel comfortable using the varied types of technological tools in their lessons.

Learner engagement

The learners' willingness to engage in the tasks was visible during the observations and the review of the learners' tasks, especially for the Slido and Google form-based activities. However, the learner's involvement with the Padlet-based writing activities was very low as only one or two were involved in the assigned tasks. Yet, writing tasks through the chat options had more satisfactory learner engagement than Padlet usage.

Recommendations

The interviewees have given some recommendations to follow when using these materials in the classroom.

Interviewee 9: *"If the teacher can give us a detailed introduction while the teacher doing how to set up everything before the class it would be good for us to reduce the access issues"*

Interviewee 8: *"Teacher could give us more time to respond to the games that we have done"*

Elaborating on the comment by interviewee 8, this is because the learners were given only 15 seconds to respond while playing Slido and Google form-based activities. As observed, some of the students found it difficult to receive the question on time due to network issues, and because of that, they got less time to go through the questions and respond

Discussion

As the overall findings, it is found that though the learners spend considerable time being online daily to attend school and tuition online classes, their usage for searching for educational information is limited. Moreover, they were not aware of the technology-based learning materials, and their exposure to varied teaching and learning materials was limited. Furthermore, qualitative data analysis found that though they were willing to use those multimodal texts and engage in activities, they had challenges using them as well.

The first research question of this study is "How can the use of multimodal text enhance learners' engagement in the lessons?" Through both quantitative and qualitative data analysis, it is found that the use of varied multimodal text types in their online English language classroom can have both positive and negative effects on their engagement with the lesson.

This study claims the use of learner-friendly and familiar multimodal text types could enhance learner engagement highly. The quantitative findings and the findings from the focused group discussion, observations and review of the learners' tasks confirmed that the learners are mostly interested in and had good engagement with Slido, Google Form, chat options, presentations and videos which are very learner-friendly and easy to access. This finding is in line with the findings of Ganapathy and Seetharam's (2016) study in which he claimed that the Multi-Modal Approach (MMA) promotes learner engagement in the teaching and learning process of ESL as the students appear to be positive-minded and motivated to learn with the use of MMA resources and materials in the class. According to Walsh (2010), students were highly participative in the tasks provided when given a multi-modal task to work on and this was observed through the research implementation process.

However, the use of Padlet in the writing task had the least learner engagement in contrast to the use of the chat option which is more familiar to the learners. The finding related to the use of Padlet is in contrast with Defilippi et al (2020) research study. In that study, they found that the use of Padlet in writing tasks can improve the learners' collaborative engagement in writing. On the other hand, the use of chat options through Zoom and WhatsApp had good learner engagement in their writing tasks. This finding follows the findings of Fattah's (2015) study in which he stated that the use of WhatsApp technology and chat options can enhance students' active participation in ESL lessons, providing learners with an opportunity "for practicing the language for free, more personal and comprehensive relationship between students and teachers, a chance for students not to be more sociable only but to learn better, and an opportunity for students to relate their opinions to those of others" (p 126). Hence, this study claims that the use of learner-friendly and familiar learning materials would facilitate higher learner engagement in the tasks.

The second research question of this study is "What are the learners' perceptions about the use of varied types of multimodal texts in the virtual ESL classroom?" Thus, students' perceptions of their learning experiences using the varied multimodal text types in their online ESL classroom were examined both quantitatively and qualitatively through questionnaires and semi-structured focus group interview sessions.

This study claims that the learners have a positive attitude towards the use of various multimodal text types for different purposes in the language classroom, especially in the online class context. According to the data analysis, they claimed that they prefer the chat option to Padlet-based activities for writing tasks. An equal number of students like PowerPoint and video as the methods of lesson delivery and Slido and Google form as the assessment methods. Most of the students liked Google Classroom as a learning class that they can access at any time and have a

collection of all the learning materials in one place. Thus, overall, they had a positive attitude towards its usage in the classroom.

Through findings, it is found that all the learners are willing to study through those types of varied multimodal materials and they have recommended its usage as a good experience they had along with suggestions to consider for further implementations as discussed in the findings section. Similarly, it is found in a study that students prefer to learn through MMA materials rather than textbooks and handouts which are too time-consuming and boring (Ganapathy &Seetharam, 2016).

Conclusion

The study's results suggest that incorporating various multimodal text types in English language teaching can increase learner engagement and foster positive attitudes towards their use in lessons. These findings hold implications for ESL classrooms, highlighting the importance of user-friendly materials that are easily accessible to learners. Teachers must possess adequate knowledge to effectively utilize these materials, making lessons more engaging. Additionally, time management is crucial when integrating multimodal approaches into the classroom. Teachers could experiment with different multimodal text types to gauge their effectiveness in enhancing specific language skills.

The present study has several limitations. Firstly, the data collection period was restricted to one month, with limited time allocated for the English language class. Extending the data collection period could yield more generalizable findings. Additionally, the study was conducted only in one class from grade 10 at a government school with limited facilities, involving only 35 students. Consequently, the findings cannot be generalized to the grade 10 ESL learners in Sri Lanka.

The study suggests that future research should explore the effectiveness of incorporating diverse multimodal texts, particularly in virtual ESL classes, moving beyond traditional text-based teaching methods. It also recommends investigating how different types of multimodal texts impact the development of language skills. Additionally, increasing the sample size in future studies is advised to ensure more generalizable findings.

Based on the research and its findings, it can be concluded that the utilization of diverse types of multimodal texts in the language classroom for various purposes effectively enhances learner engagement, particularly when these materials are easily accessible and user-friendly. Learners demonstrate a high willingness to engage with such teaching and learning materials, exhibiting a positive attitude toward their usage. When students receive comprehensible input through the materials utilized, they feel secure and motivated to engage in learning both inside and outside the classroom. Therefore, the incorporation of diverse multimodal texts in ESL teaching, especially in online contexts, significantly enhances students' intrinsic motivation and engagement in the learning process. Moreover, identifying ways to address the limitations of this study could guide future research in this field. Despite its limitations, the present study is expected to raise awareness among teachers regarding the value and effectiveness of using varied multimodal text types in their English classrooms, particularly during virtual classes. This

approach serves as a strategy to enhance learner motivation, interest, and engagement with the lesson content.

Conflicts of Interest

The author confirms that she has no conflict of interest.

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