

## **An Investigation into ESL Learners' Nature of Self-Regulated Learning in Out-of-Class Context: A Comparative Study**

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### **Abstract**

*The aim of the study was to investigate whether there were differences in the nature of use of technology for self-regulated language learning between learners from high and low proficiency levels. It employed the mixed-methods approach to understand the phenomenon. The quantitative findings indicate that there were no significant differences in the nature of use of technology between these learners. However, the qualitative findings reveal variance in the use of the Internet environments between the two groups of learners. The more proficient learners seemed to be able to regulate their learning experiences better than the low proficient group especially in terms of regulating emotions and social resources. Despite the variance in use, findings indicate that both groups' engagement with technology mainly involves incidental learning. Thus, it is recommended that teachers should foster dialogue and reflection on the out-of-class engagement with technologies so that learners can further benefit from it.*

**Keywords:** ESL; language learning; technology; self-regulated learning; mixed-methods approach; social theory; out-of-class learning; comparative study

### **1. Introduction**

The many advantages that are associated with the use of technology to support language learning have spurred interests among researchers to carry out studies in this area. These studies can generally be divided into two main strands. The first strand concerns those which investigated the benefits of individual technologies, how these technologies can be used to support in-class learning, how to design technology-supported language learning environments, and learners' views and reactions towards the use of technology in teaching and learning (Lai & Gu, 2011). To illustrate, some studies have shown L2 learners' writing skills improved when they engaged in Web 2.0 technologies such as wiki, social networking sites and blogs (Li & Zhu, 2013; Chen, 2013; Vurdien, 2013; Nafiseh Zarei & SupyanHussin, 2014). Other than improvements in language skills, especially writing; the use of technologies among ESL learners also leads to positive outcomes in terms of participation, sense of community, group interaction, joint engagement, intercultural awareness, identity construction, and autonomous learning (Parmaxi & Zaphiris, 2016). In short, the existing literature has provided insights into many issues concerning the use of technology and language learning (Benson, 2011; 2015; Chen, 2013; Sun & Yang, 2015; Chik, 2014; Kormos & Csizer, 2014). The second strand concerns studies that focus on the use of technologies for self-regulated learning (henceforth SRL) (Lai & Gu, 2011; Lai 2013), the learning strategies involved (Che Wan Ida Che Ibrahim, Prain & Collet, 2014), the influence of teachers on ESL learners' self-initiated use of the technologies for language learning (Lai, 2015), how to enhance autonomous use of technologies through learner training (Lai, Shum, & Tian, 2016), and the relationship between ESL learners' motivation and self-regulation (Su, Zheng, Liang & Tsai, 2018).

Lai and Gu (2011) in their study explored how ESL learners in a Hong Kong university used Web 2.0 technologies to regulate their out-of-class language learning. Using an online survey and semi-structured interviews as the research instruments, findings showed that the learners' nature of self-regulation could be divided into six categories: to regulate emotions and enhance the attraction of learning; to plan, evaluate, and monitor their learning progress (metacognitive); to enhance social connections with and seek help from native speakers and other peer learners around the world; to encourage oneself to persevere and commit to the learning goal; to seek and expand learning resources; and to enhance cultural understanding. Based on the above review of past studies, there seems to be a lack of research that compares the nature of the use of technology for self-regulated learning between high and low proficiency ESL learners in out-of-class context. Thus, the present study seeks to explore these two groups of learners' nature of engagement with technology to learn English in out-of-class context. Employing the mixed-methods approach, it addresses the following research questions:

- i. Is there any differences in the use of technology for self-regulated language learning between low and high proficiency ESL learners?
- ii. How do the two groups of learners use technology for self-regulated language learning?

## **2. Literature Review**

Engagement with the Internet plays a major part in the social and cultural lives of many youths. Findings from a survey on the use of the Internet in Malaysia shows that youth between the ages of 20-24 are the most active users; where they make up 22% of the total users in the country (Malaysian Communications and Multimedia Commission, 2017). In terms of education level, findings show that students at tertiary level are the second active users of the Internet (35.1%) and that the Internet provides platforms for this group of students as well as the educators to have online group discussion, conduct research and find references (MCMC, 2017). Recognizing the plethora of learning opportunities that the Internet offers to learners, and the fact that learners spend a lot of time engaging with various types of Internet environments, Sefton-Green (2004) suggests for a recognition of a wider education ecology where learning should not only be limited to formal or in-class setting. He stresses for the need to acknowledge young people's engagement with digital resources during their leisure time in out-of-class setting as valuable learning experiences.

In the TESOL domain, Benson (2011) a prominent figure in autonomy and out of class learning argues for a more focus to be placed on this particular setting and the affordances that it offers for language learning. He points out that teachers are aware of the fact that learners who only learn the language in the classroom do not progress as well as those who engage with the language outside the class and that "...setting for language learning beyond the classroom deserve much more attention in research than they have received hitherto" (Benson, 2011: 2). However, research in second language learning has mainly focused on in-class learning due to practical and logistical reasons (Richards, 2015). In the current scenario, one cannot deny the fact that the various internet environments provide more meaningful and authentic opportunities for language use than that which are available in the classroom due to the various limitations that are commonly found in second language classrooms (Richards, 2015).

In order for ESL learners to exploit language learning opportunities that are available from their daily encounter with these technologies, it is important that they are able to regulate their own learning process. Self-regulated learners, according to Ziegler (2014: 921) are "agents who control their own learning processes". Zimmerman (1986; 1989), a prominent figure in the area of SRL, defines it as self-directive and proactive processes which allow learners to transform their mental abilities into academic skills. He views self-regulated learners as those who are able to meta-cognitively, motivationally, and behaviourally control their own learning processes. In other words, this socio-cognitive view of SRL sees a self-regulated learner as the one who is able to plan and monitor his or her own performance, motivate him or herself to persevere and commit to the learning goals, and take appropriate actions to learn the language. As a result of developments in the understanding of SRL, current socio-cognitive perspectives of SRL as proposed by scholars like Dörnyei (2001) and Lai and Gu (2011) have evolved from a heavy focus on meta-cognition to a more multidimensional nature. Lai and Gu (2011) propose six aspects of SRL: to regulate emotions and enhance the attraction of learning; to plan, evaluate, and monitor their learning progress (metacognitive); to enhance social connections with and seek help from native speakers and other peer learners around the world; to encourage oneself to persevere and commit to the learning goal; to seek and expand learning resources; and to enhance cultural understanding.

To understand the high and low proficiency ESL learners' nature of SRL with technologies, the current study is framed within the social view of learning (Vygotsky, 1978; Lave & Wenger, 1991; Wenger, 1998); where the foci are on the mediated mind and the social nature of learning. According to Lantolf and Johnson (2007), our participation in a social activity is mediated by physical and symbolic artefacts. Some examples of physical artefacts are newspapers, computers, and books, while symbolic artefacts include language, technologies, and numbers. In the context of the present study, the various technologies are the symbolic artefacts that act as the mediators in the learning process. Next, Vygotsky (1978) regards the basic foundation of learning is that it is social in nature. Learning does not occur in the mind of the individual. He asserts that social interaction as the foundation for learning. This also means that learning takes place as learners engage in social activities in both in and out-of-class contexts. In this study, the learners engaged in out-of-class social activities that were afforded by the technologies. It is important to highlight that in this view of learning, learners are seen as agents who "actively engage in constructing the terms and conditions of their own learning (Lantolf & Pavlenko, 2001, 145). In the present study, learners are seen to be actively making decisions on the types of internet environments that they wish to engage with, as well as the manner of engagement.

### 3. Methods

In order to answer the research questions, the mixed-methods study was chosen as it enabled the researchers to gain complementary data from both the quantitative and the qualitative research tools to understand the issue being investigated. Employing the explanatory research design (Creswell, 2013) data collection for this study was carried out in two phases: Phase I concerned with the quantitative data collection while Phase II with the qualitative data collection.

Through purposive sampling (MacKey & Gass, 2015), 105 ESL learners from various teacher education programmes in a public university in Malaysia were involved in the quantitative phase. From the total number of participants, fifteen were identified for the qualitative phase. As this is a comparative study, the participants were selected from two proficiency levels: high and low. Using results from the Malaysian University English Language Test; MUET (Malaysian Examination Council, 1999) that the learners took as a university entrance requirement, learners who got Bands 1 and 2 were categorised as low proficient while those who obtained Band 4 as high proficient. The number of participants according to their levels of proficiency is illustrated in Table 1.

**Table 1 Research participants for each research phase and their proficiency levels**

	Low Proficiency		High Proficiency	Total
	Band 1	Band 2	Band 4	
Quantitative Phase	N= 0	N= 47	N= 58	105
Qualitative Phase	N= 0	N= 8	N= 7	15

#### 2.1 Phase I: Quantitative Data

For the quantitative data, the instrument used was an adapted questionnaire designed by Lai and Gu (2011). Section A of the questionnaire asked for demographic information, and Section B were questions on the nature of engagement with technologies for SRL (Lai & Gu, 2011). The paper-based questionnaire was piloted on 32 learners. The Cronach's Alpha was an excellent value of 0.932. The questionnaires were then distributed to the participants and the survey took place for duration of two weeks. Data were analysed using the Independent sample T-test to examine the mean differences between the two groups' nature of engagement with technologies for SRL.

#### 2.2 Phase II: Qualitative Data

Data for the qualitative study came from two sources: the open-ended section of the questionnaire and the semi-structured interviews which were guided by questions that probed deeper into the nature of SRL learning, focusing on the 5 categories (Lai & Gu, 2011). For the interview, the participants were given the options to have individual or group interviews, and each session took about fifteen to twenty minutes. Data analysis for this study involved both the inductive and deductive processes (Hyde, 2000). It began with the inductive process. Both data were analysed simultaneously. All interviews were transcribed verbatim. The responses were read and carefully re-read then coded using open coding techniques (Creswell, 2013).

The deductive process began with the identification of segments from the responses of the open-ended questionnaire and the interview transcription that were responsive to the 5 categories of SRL. In order to ensure the credibility of the findings, an external colleague (Creswell, 2013) was appointed for a debriefing process as advocated by Lincoln and Guba (1985). In this study, the purpose of peer debriefing was to verify whether an expert would be in agreement with the researchers' coding process. An expert in qualitative research was asked to code ten responses from the open-ended section of the questionnaire and three interview transcripts. She was then asked to review the coding process conducted in this study for comparison. The coding conducted by the expert corresponded to that of the researchers, this enhanced the credibility of the study findings.

#### 4. Findings

##### 4.1 Quantitative Data

Based on the five aspects of self-regulation as demonstrated in Table 2, the ESL learners reported positive engagement with the use of technology for resource regulation, affection regulation, and metacognitive regulation. However, their responses to the use of technology for goal commitment and social connection regulation were quite low (see Table 2).

**Table 2 The Use of technology among ESL learners to regulate their learning experience**

Aspects of self-regulation	Mean	Standard deviation
Goal commitment regulation	12.9	1.7
Resource regulation	25.3	3.0
Affection regulation	24.6	3.4
Metacognitive regulation	23.0	3.4
Social connection regulation	6.7	1.9

As shown in Table 3, there were no significant differences ( $p > 0.05$ ) between the low and high proficiency ESL learners' engagement with technologies for SRL. For the goal commitment regulation, the result shows that the F-value is 0.69 with the significant value of 0.79. The same result is found for resource regulation with the F value of 0.001 and the significant value of 0.96. Similar results are shown for affection regulation (F-value = 1.52, p-value = 0.22); metacognitive regulation (F-value = 0.32, p-value = 0.57); and social connection regulation (F-value = 0.18, p-value = 0.67). Thus, it could be concluded that both the high and the low proficient groups seemed equivalent in their engagement with technologies for SRL.

**Table 3 the differences between low and high proficiency ESL learners' nature of engagement with technologies for SRL**

ESL learners	Mean	F-value	Significance
<i>Goal commitment regulation</i>			
Low proficiency	12.68	0.69	0.79
High proficiency	13.15		
<i>Resource regulation</i>			
Low proficiency	25.13	0.001	0.96
High proficiency	25.56		
<i>Affection regulation</i>			
Low proficiency	24.40	1.52	0.22
High proficiency	24.84		
<i>Metacognitive regulation</i>			
Low proficiency	23.14	0.32	0.57
High proficiency	22.94		
<i>Social connection regulation</i>			
Low proficiency	6.89	0.18	0.67
High proficiency	6.61		

## 4.2 Qualitative Data

### 4.2.1 Category 1: Affection Regulation

This category refers to instances where learners described how they used technologies to regulate their emotions in the process of learning the language. From the high proficiency group, one learner (L49) talked about how she used the blog to regulate her emotion. For her, blogging was similar to diary writing where she would write about her “experience and useful knowledge” and that it was a relaxing activity. She added another benefit of blogging was that it also enabled her to read other bloggers’ writings which she said could help improve her writing skills and general knowledge. For her, this was a relaxing activity.

Two learners admitted that even though they were quite proficient in the language, they somehow felt intimidated when it came to speaking in the target language. To help overcome the fear in speaking, one of them said that he practised using the language by interacting via online conferencing. He said, “*By using this web technology, I speak in English with others. I would not feel panic when I’m speaking in English*” (L57). Another learner who was a Mathematics major felt that speaking was a challenging skill to master due to lack of confidence. He said that participating in this technology supported activity helped him “*to gain confidence during speaking*” (L66).

Several learners wrote about using technologies to make learning English more fun. They chose to learn English by watching YouTube videos as the videos were enjoyable and this helped regulate their emotions while learning the language. A learner said “*I search for any video regarding English language in Youtube. Through video, it is more fun as I am a visual person*” (L53). Another learner (L83) was attracted to learn by watching YouTube videos as she felt that the verbal explanation that was illustrated with various images was clearer and fun.

Other than YouTube videos, some learners also wrote about using online exercises and quizzes. They found this internet environment fun and entertaining. A learner even pointed out the fact that some online quizzes were interactive thus it was a better way to learn the language rather than doing exercises in books. She succinctly explained: “*Through online exercises and quizzes, we can learn English effectively. Some exercises and quizzes are fun and entertaining. By doing English exercises and quizzes will boost up our emotion, happiness. When we do stuffs in the state of happiness, we will learn and improve effectively*” (L70).

Unlike a number of the high proficiency learners who talked about the various ways how they regulated their emotions through engagements with technologies, there were only three learners (L11, L35, L40) from the low proficiency group that mentioned the use of technologies to regulate emotions. These learners talked about engagement with YouTube, online social networking and discussion board, and how these technologies helped them to further increase their interest and helped them to be more confident in using the language.

The above findings indicate that learners from both groups autonomously used various technologies to regulate their emotions in learning the target language. Yet, more varied use is obvious among the high proficiency learners. Instead of engaging with the social media and the social networking sites, they also used other platforms such as blogs and online exercises to regulate their emotions for language learning.

### 4.2.2 Category 2: Social Connection Regulation

This category refers to the learners using technologies to connect with others as part of their language learning process. Two learners (L55, L68) from the high proficiency group wrote about using an online discussion board and online messaging as the media to get help in learning the language from other English language learners. One learner mentioned about seeking help with learning writing and grammar, while another about learning the spelling of English words. One of them explained: “*I can chat with my friend on Whatsapp by using English. If I have a misspelled word, my friend would correct me. This is how I learn through online messaging*” (L68). Instead of seeking help from other language learners, a learner stated that she sought help from native speakers of English as a way to regulate learning through the use of technology. “*I used this platform to ask about questions that I do not understand. Here I can find answer from other users that some of them are the native speakers of English language*” (L90). One student used an online forum as a platform to discuss some topics of interest, and this at the same time enabled him to enhance his social connection worldwide.

From the low proficiency group, two learners stated that they used technologies such as online messaging and discussion to obtain assistance from other language learners. One learner talked about having a group where they communicated via WhatsApp. She explained: “*The participants are from students from many universities and of course we have one person that take responsibility to teach us*” (L14).

Another learner also mentioned about her participation in online discussion and that some “*understanding friends who are proficient in the language*” (L21) sometimes helped her with the language.

Duke (2010) maintains that web-based learning provides opportunities for learners to receive feedback from others. In relation to the social view of learning, that underpins this study, learning is seen to be social in nature. This means learning takes place as one interacts (in verbal or written forms) with each other. Findings from the present study indicate that learners from both levels of proficiency regulated their learning by engaging with technologies that provide opportunities for them to interact with others, and consequently learned the language from these experiences.

#### 4.2.3 Category 3: Goal Commitment Regulation

This category refers to learners who participated in technological activities as a way to persevere and commit to learning goals. From the high proficiency group, a learner (L85) wrote about writing her own blog and reading other writers’ blogs as a way to learn English. She noted that each writer had his or her own unique writing style and that reading their writings helped her to maintain her interest in learning the language. A TESL student felt that technologies provided useful learning opportunities that might help him in achieving his learning goal i.e. to become more proficient in English as this was important for his future career. He explained: “*I need to improve myself in English. So, if I cannot meet my friends, I will just chat with them through Whatsapp. And of course, I try my best to write in English. Sometimes I am afraid of making grammar mistakes. But, if I make mistakes, my friends will help me to correct them*” (L50).

Only one low proficiency learner wrote about how her engagement with the technology motivated her to learn English. She wrote: “*I feel fascinated when seeing people using high vocabulary of English for their status. It somehow motivates me and yes I have been using English for my status update*” (L27).

Findings indicate that the high proficiency learners seemed to be more able to use the technologies to regulate their goal commitment. A possible reason is that they were future English teachers; thus they were more committed to achieving their goal that is to be proficient in the target language. Yet, only one learner from the proficiency group mentioned about maintaining her goal. This could be due to the fact that she was a non-TESL major, thus the need to be proficient in the language was not as high as the TESL students.

#### 4.2.4 Category

#### **4: Resource Regulation**

This category refers to the learners using technology to seek and expand their learning resources. The high proficiency learners mentioned seeking resources to learn grammar, pronunciation, vocabulary, and for ideas to write in English. Educational videos on YouTube and online exercises were utilised as resources to learn grammar. To learn pronunciation, a learner (L88) talked about using Forvo: an online pronunciation dictionary. Two learners talked about blogging as a way to learn about writing. One of them said:

“*As writing is subjective, it is very interesting to read on how other minds work and how they play with words*” (L60). Another one explained: “*I write my own posts so I get to practice my writing. I read other peoples’ post and learn from their own unique style of writing. I see how other writers structure their sentences*” (L78).

One learner talked about playing online games and how he benefited from this engagement. He said: “*most online gamers use English language to communicate with each other and most of them are from different country such as from United Kingdom, Japan and Russia. From this technology, I learn to communicate with gamers around the world and at the same time I improve my speaking and listening skills in English language*” (L103).

Two learners talked about expanding their English learning resources by surfing the public websites. A learner pointed out: “*I would be more driven to read public websites that use correct English. Public websites with harder words or more complicated sentences will push me to google for definitions and meaning and sometimes it leads to searching for how certain phrases are used*” (L63). Another one talked about engaging with Wikis: “*one wiki article may often lead to another because of the hyperlinks throughout, causing me to read more than I had expected to*” (L69).

Similarly, several learners from the low proficiency group also mentioned using technologies to seek for resources to learn vocabulary and pronunciation. A learner stated:

*“Facebook always provides me with the opportunities to learn English as most of the videos there are in English. When I watched the video, I will learn new words and phrases that I have never heard before”* (L19).

Another learner (L16) said she used the public websites to check for spelling and meaning of words. A learner (L36) wrote about using technology as a resource to practise writing in English.

Findings show that generally learners from both groups were able to use various technologies as the resources to learn vocabulary and pronunciation. These two are common areas of interest for those learning a second language as mentioned by Lasagabaster and Doiz (2016) where the participants in their study, who were ESL learners at tertiary level, ranked vocabulary and pronunciation as the most important aspects of language learning.

#### 4.2.5 Category 5: Meta-Cognitive Regulation

This refers to instances where learners mentioned how they planned and monitored their learning process through the use of technologies. Despite the positive result shown in the quantitative data, the qualitative data reveals otherwise with only one proficient learner who wrote about it in the open-ended questionnaire. He claimed: *“After learning about certain topic in English, I usually will search exercises online to improve my understanding. I also use it to recall what I had learnt previously”* (L73).

The lack of meta-cognitive regulation reflects learners from both groups mainly engaged in incidental learning as they participated in the various online activities afforded in the various Internet environments.

### 5. Discussion

The present study sought to find out whether there are any differences in the engagement with technology for SRL between high and low proficiency ESL learners. The mixed methods approach was used to understand the situation. Findings from the quantitative data show that there were no statistically significant differences between the low and the high proficiency learners' autonomous use of the various technologies to learn English. Findings from the qualitative data revealed a more detailed picture thus enabled the researchers to gain a more nuanced understanding of the issue being investigated.

Bailly, in his comments on out of class learning states that success may differ for each learner and that: *“...successful out-of-class learning depends on learners fulfilling at least three necessary conditions, or success factors: motivation, learning resources and learning skills”* (2011:208).

In relation to this, two important observations can be made. First, in the present study, learners from both groups had access to various technological resources to learn English. However, an obvious difference is in terms of their motivation to learn the language and how the different levels of motivation affect their manner of engagement with technologies for language learning. Noraini Zulkepli (2012) in her study shows how ESL learners coordinated their efforts to learn the language with their membership in various communities. For example, a learner in her study who wished to be a member of proficient speakers of English engaged in the opportunities that would enable her to practise speaking the target language. Similarly, the TESL students in this study seemed to be more motivated and put more efforts to learn English because they were aspired to become members of ESL teachers who were proficient in the language. Yet, learners from the low proficiency group who were non-ESL majors seemed to be less motivated to learn the language as it was not important in their future practices as teachers. This resulted in them not putting in much effort to learn the language as compared to the proficient learners.

Findings indicate that several learners from both proficiency levels mentioned how their engagement in the technological activities enabled them to obtain support and guidance from peers and family members, who were more proficient and knowledgeable, to learn the target language. Palfreyman (2011) suggests that peers provide learners with social resources for learning in terms of information, support, feedback and models of learning or performance. In the context of the present study, while the low proficient learners connected with other second language learners, the proficient learners; however, expanded their social networks by connecting with native speakers of English. With such social connection, these learners received models of performance in the target language. This gives rise to the importance of learning from significant others. Situating this concept within several language learning theories such as language socialization, social cognitive and the ecological approach to learning (Talmy & Duff, 2011) stress the importance of learning from significant others. These significant others could be teachers, peers and family members who are more proficient users of the language. They provide assistance so that *“novice/newcomers reach their potential”* (Talmy & Duff, 2011, 110). Findings in this study show the various Internet environments provide affordances for such learning to take place.

Méndez López and Peña Aguilar(2012) states that feelings and emotions emerge from learners' evaluations of a particular learning environment. Findings in this study show that learners from both the high and low proficiency groups acknowledged that they used the various Internet environments to regulate their emotions while learning the language. However, the high proficiency learners seemed to be able to take more advantage from their engagement with the technologies. Griffiths (2013;2015) states that more successful learners employ various strategies to learn the language, one of them is that they are able to manage their emotions to make learning more meaningful. Findings indicate that the proficient learners were more versatile in their abilities to regulate emotions so that they would benefit from the learning experiences.

Zimmerman(1986; 1989), a prominent figure in the area of self-regulated learning, states that learners are seen as self-regulated if they are able to met cognitively, motivationally, and behaviorally control their own learning process. In order words, a self-regulated learner is the one who is able to plan and monitor his or her own performance, motivates herself to persevere and commit to the learning goals, and takes appropriate actions to learn the language. Findings reveal that the ESL learners involved in this study used technology during their leisure activities to regulate different aspects of their language learning experience. However, both groups seemed to lack the ability for meta-cognitive self-regulation; thus, resulting in them engaging mainly in incidental learning. Teng (2016) in her study on vocabulary learning through reading concludes that words that are learned from incidental learning are not retained.

Not undermining the value of incidental learning, it could be argued that there is still a need for purposeful learning to take place. A way to achieve this is by teaching the learners how to be reflective as they engage with the various Internet environments. Being able to reflect on one's action critically can lead to better learning. Teachers can conduct in-class activities that help foster dialogue and reflection among the learners. For example, they can have a session at the beginning of the class where learners share the stories about their engagement with the Internet environments. The teachers can play the role as facilitators and ask probing questions that will help learners to reflect on matters such as understanding and learning of certain aspects of the language, how certain technologies might be beneficial and others might not be so beneficial for their learning, and the social consequences that might emerge from using a particular technology.

## 6. Conclusion

To conclude, statistical findings from this study indicate that there is no significant difference in the nature of SRL learning for the two groups of learners. Though qualitative data show there are variances in their actual use of technologies for SRL, both groups seemed to engage in incidental learning most of the time. This implies the importance of equipping learners with metacognitive knowledge on how to enhance language learning from their out-of-class engagement with the technologies. Future research can be done on this area. This study was conducted on ESL learners at tertiary level, future research can also be done on different student populations.

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