Stakeholders' Perceptions Related to Technology Acceptance of *Reading Progress* in Microsoft Teams: A Case Study of a Trilingual Program at a Secondary School in Thailand

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ABSTRACT

This study was derived as part of collaborative projects between the Language Institute Thammasat University and Microsoft Thailand with an objective to empower English language educators and learners with innovative technologies. The aim of the study was to explore stakeholders' perceptions related to technology acceptance of *Reading Progress* in Microsoft Teams. By using one Trilingual Program at a Secondary School in Thailand as a case study, this study adopted a qualitative approach to investigate technology acceptance of 9 EFL students, 2 EFL teachers, and 1 program administrator in the studied program using focus group interview data. Grounded within Technology Acceptance Model (TAM), the findings revealed that all participants perceived *Reading Progress* as a computer-assisted pronunciation training (CAPT) tool, with the EFL teachers and program administrator also viewing *Reading Progress* as a teaching assistant tool for personalized teaching and learning. The perceived usefulness resulted from the participants' perceived ease of use of *Reading Progress*. However, familiarity with technology and perceived enjoyment also played a significant role in understanding technology acceptance in the studied EFL context. The study provided implications for future research in similar contexts including English language education and educational technology.

Keywords: technology acceptance, reading progress, CAPT, personalized teaching and learning

Introduction

The Covid-19 pandemic has transformed classroom teaching and learning in all disciplines at all levels. During lockdown, the use of technology became inevitable, and teachers and students had to adapt themselves to online teaching and learning. Now it has been a few years after the 2019 Covid outbreak and most schools and universities have returned to onsite teaching and learning, what we have evidenced is Post Covid-19 pandemic education where it "will not be a return to normal, but rather that it will be a new normal, which will be quite different from anything that we have known before" (Neuwirth et al., 2021, p. 143). For English language teaching and learning, we have evidenced the significant roles technology have had in facilitating teaching and learning e.g., school EFL teachers' adaption to Post-Covid 19 situation by blending onsite and online teaching and learning, synchronously and asynchronously (Fitrianingsih & Lestari, 2023) and university EFL lecturers' use of hybrid learning which involves 'synchronous teaching of students in the classroom and online simultaneously using an online platform' (Ulla & Perales, 2022. p. 91). While digital technology offers opportunities for learning or accessing learning resources beyond the traditional classroom context, adopting new technologies in educational contexts can be critical. Learners, teachers, and stakeholders' attitudes towards new technologies, also known as technology acceptance, involve various factors which can contribute to decisions regarding technology adoption (Granić, 2023).

This project is part of an initiative under the collaboration between the Language Institute Thammasat University (LITU) and Microsoft Thailand which aims to develop English language skills of EFL learners and teachers in Thailand through the adoption of Microsoft innovative technologies. Schools within the partnership networks of LITU and Microsoft Thailand participate in the LITU-Microsoft coaching scheme where schoolteachers will be coached and guided by LITU faculty and Microsoft coaches as they learn to use Microsoft educational tools for English language teaching. Since each school has its own unique context, their coaching process may vary. In this study, we investigate a trilingual program recently launched at a Thai private secondary school. The reason for selecting this school as our intrinsic case study is due to the school's policy in adopting Microsoft Teams as their blended learning platform as well as the school's requirements for students to possess a certain level of English language proficiency to successfully participate in the trilingual program where English is used as the medium of instruction for various subjects including mathematics, science, and English. While there are various language solutions Microsoft offers, in this study we mainly focus on the school's adoption of *Reading Progress*, a personalized learning digital tool in Microsoft Teams used to improve learners' reading fluency and comprehension. Grounded within the conceptual framework of Technology Acceptance Model (TAM), this study intends to answer the following research questions:

RQ1: What are the EFL students' perceptions related to technology acceptance of *Reading Progress* during its initial adoption in the studied trilingual program?

RQ2: What are the EFL teachers' perceptions related to technology acceptance of *Reading Progress* during its initial adoption in the studied trilingual program?

RQ3: What are the program administrator's perceptions related to technology acceptance of *Reading Progress* during its initial adoption in the studied trilingual program?

While a large number of studies employ a quantitative method to investigate technology acceptance, recent literature also demonstrates a qualitative approach as an alternative to understanding technology acceptance in the area of English language teaching and learning (e.g., Huang et al., 2019; Kampookaew, 2020). By employing a case study approach, we aim to explore the perceptions of program administrator, EFL teachers, and EFL students in terms of adopting Microsoft's *Reading Progress* in their school context. By employing qualitative data generated from focus group interviews, we hope to gain an insight into factors affecting the research participants' technology acceptance of *Reading Progress*. As *Reading Progress* was launched in mid-2021, there is still limited research within the scope of adopting the relatively new digital tool especially in the

context of Thailand and Thai schools. The results of study can contribute to the existing body of literature and provide useful implications for school administrators and practitioners when planning to integrate *Reading Progress* or similar digital tools in similar educational settings.
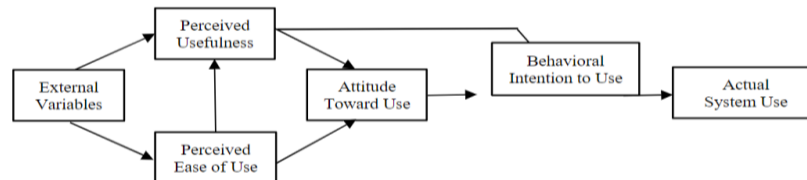
Literature Review

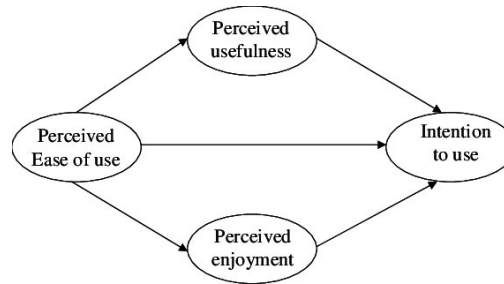### Technology Adoption and Technology Acceptance in ELT

Technology adoption is a term used to refer to the 'acceptance, integration, and embracement of new technology' (Granić, 2023). According to Rogers' (1962, 1995) diffusion of innovation model, technology adoption is part of individual's innovation decision process to 'adopt' or 'reject' an innovation. Quite often these innovation decisions are made by organizations rather than individuals, thus leading to complexity in adopting new technologies or innovations. Rogers (1962, 1995) on his work of diffusion of innovation theory proposed that there are five characteristics of innovations, i.e., relative advantage, compatibility, complexity, traceability, and observability, which can contribute to individuals' decision-making on adopting innovations or technologies. During the first stage of adoption, individuals or organizations must first accept these new technologies. In Davis et al.'s (1989) widely cited Technology Acceptance Model (or TAM), technology acceptance involves the two main variables of perceived usefulness and perceived ease of use accompanied by external variables, which consequently contribute to attitudes towards use, behavioral intention to use, and actual use (Figure 1).

Figure 1

Technology Acceptance Model (TAM)

After its inception in 1989, variables in TAM have been developed through empirical research. In educational contexts, factors such as self-efficacy, subjective norms, perceived enjoyment, social influence, perceived playfulness, anxiety, system quality, system accessibility, and facilitating conditions are also found to influence technology acceptance (Granić, 2023). Perceived enjoyment, in particular, is an important construct in TAM in educational contexts (Davis et al., 1992; Van der Heijden, 2004). Chesney's (2006) study employed Davis et al.'s (1992) and Van der Heijden's (2004) extended TAM including perceived enjoyment in the framework to explore the adoption of robotics. According to Chesney (2006), perceived ease of use can lead to perceived usefulness and perceived enjoyment, yet other factors affecting enjoyment must also be explored in other contexts (Figure 2). Chesney's (2006) recommendations provide an implication for further research in exploring factors related to perceived enjoyment which can increase technology acceptance.

Figure 2

Extended Technology Acceptance Model (TAM) (Chesney, 2006)

In the field of English language teaching (ELT), TAM related studies are mostly quantitative and based on TAM's construct of 'perceived ease of use' and 'perceived usefulness' (e.g., Mizher et al., 2022; Wang et al., 2022). Other TAM extended constructs have also been used in ELT-related quantitative studies including Chinese EFL students' perceived enjoyment, satisfaction and perceived learning performance (Zou et al., 2022) and Thai EFL university students' acceptance and perceived risk of cheating using an online application (Rofiah & Waluyo, 2020). More recently, TAM has been applied as a conceptual framework to explore users' attitudes and perceptions of new technologies through the lens of mixed method studies as well as qualitative studies. For example, AlDakhil and AlFadda (2021) employed a mixed-method approach to investigate Saudi EFL secondary students' perceptions regarding the use of a mobile application in language learning. The questionnaire items revolved around TAM's two core variables of usefulness and ease of use, and the semi-structured interview was used for exploring perceptions for in-depth analysis. Another TAM related mixed-method study by Hsieh et al. (2016) also sheds light on technology acceptance of Taiwanese EFL students who possessed different English language proficiency levels, in terms of using Line in flipped EFL oral training. For qualitative studies, Huang et al. (2019) adopted a qualitative approach in understanding Chinese university EFL teachers' attitudes and factors which influence their technology acceptance. By adopting semi-structured in-depth interviews, Huang et al. (2019) argued that TAM might not be fully applicable in non-western cultures such as China. Interview data could provide insights into certain culturally related factors which might have been neglected by the widely adopted TAM.

For the Thai EFL contexts, the application of qualitative approach to TAM is evident in current literature. Despite its limited number, one study by Kampookaew (2020) demonstrated findings of eight Thai EFL university teachers derived from semi-structured in-depth interviews revealing TAM factors contributing to their behavioral intentions to use technology. These factors were perceived usefulness, perceived ease of use, attitudes towards use, subjective norms, facilitating conditions, and familiarity with technology. The utilization of interview data provides an insight into these factors specific to the context of Thai EFL university teachers who work in the same institution. The results of the study confirmed the significance of social and institutional factors which are context-specific and suggest that these factors must be taken into account when exploring a specific case in educational contexts.

Reading Progress in Microsoft Teams for Education

Reading Progress is a free digital tool built into Microsoft Teams for Education launched in mid-2021. It is designed to support and track reading fluency of students. Teachers can create a *Reading Progress* assignment in Microsoft Teams based on students' different reading levels, text genres, number of attempts, and pronunciation sensitivity. Students see the *Reading Progress* assignment in their Microsoft Teams application and can practice reading the assigned texts, record their reading on camera, and submit the reading assignments to the teacher using any device which

has the Microsoft Teams application installed. In assessing students' work, *Reading Progress* is powered by AI technology and can estimate students' correct words, omissions, insertions, mispronunciations, repetitions, and self-corrections (Figure 3), as well as sum up correct words per minute, and the accuracy rate of students' reading. Teachers can simply review AI-powered estimations of student errors, overwrite the suggested errors, and manually categorize them by error type.

Figure 3

Error Types Detected in Reading Progress

> **Error types include:**
> - **Omission:** a word in the passage that the student skipped
> - **Insertion:** a word not written in the passage that a student added
> - **Mispronunciation:** a word that was not pronounced clearly or correctly
> - **Repetition:** a word that a student reads more than once
> - **Self-correction:** a word or a phrase that a student reads again as he/she recognizes his/her mistake and corrects it

In addition to the AI-powered estimation tool in *Reading Progress,* Microsoft Teams also has a check-in feature, *Reflect*, which can be used by teachers to check in with students' emotions and feelings related to assignments or their study or even personal lives. Teachers can ask students a specific question via *Reflect*, and students will be able to choose their answer from over 50 emotional words provided by the *Reflect* app (Figure 4). According to Microsoft, *Reflect* can 'help students recognize and navigate their emotions by providing regular opportunities to share and be heard'. By using a *Reflect* tab, educators can receive feedback from students about their *Reading Progress* assignments or simply about how students are feeling during that specific day or week. This can help contribute to a healthy classroom community.

Since *Reading Progress* has only been recently launched, research regarding the use of Reading Progress is still limited. While it is still unclear whether the tool is developed for EFL or ESL learners, there is evidence that *Reading Progress* has been implemented in the context of Grade 4 pupils in the Philippines to improve reading fluency (Octavo & Vargas, 2022), as well as EFL learners in Indonesia to improve their speaking or their pronunciation featured in *Reading Progress* (Prasetya, 2022). It should be noted that at the time we conducted this research there was no reading comprehension feature in Reading Progress; therefore, research related to *Reading Progress* would be mostly concerned with reading fluency and pronunciation. This aspect of *Reading Progress* is also reflected in other studies which perceive *Reading Progress* as a tool primarily catered for computer-assisted pronunciation training (CAPT) for ELF learners (Hongnaphadol & Attanak, 2022; Molenda & Grabarczyk, 2022).

For the Thai EFL contexts, *Reading Progress* has only been investigated in terms of its application for CAPT in one experimental study (Hongnaphadol & Attanak, 2022). Due to its great potential to help improve EFL learners' reading fluency and reduce their pronunciation anxiety, empirical research regarding the implementation of *Reading Progress* in Thailand is much needed. Especially when initially adopted in diverse educational settings, technology adoption and technology acceptance can be taken into account as a conceptual framework in understanding not only Thai EFL students, but also Thai EFL teachers and other involved stakeholders in such specific settings.

Figure 4

Examples of Questions and Answers in Reflect

Methodology

Research Context

The research context of this study was a trilingual program which was part of the three study programs (i.e. Thai, program, international program, and trilingual program) offered at a Thai secondary school in Bangkok, Thailand. The trilingual program was launched in 2022 with an aim to offer subjects taught in English, Thai, and Mandarin Chinese to secondary students, and during its launch, the Covid-19 pandemic situation was still prominent. The whole school, including the trilingual program, had a policy to use Microsoft Teams as the main platform for remote teaching and learning. With Microsoft Teams Education licenses, teaching faculty and students could access various educational features and tools integrated into Microsoft Teams Education, including *Reading Progress*. However, it has only been recently that *Reading Progress* was implemented in the trilingual program. With the vision of the head of the program to utilize *Reading Progress* as a personalized language learning tool which students could use anytime anywhere, *Reading Progress* was implemented in the first cohort of grade 7 students at the end of academic year 2022.

The adoption of *Reading Progress* was part of a collaborative project between the trilingual program and LITU and Microsoft Thailand, where the program administrators and teachers were coached by LITU's ELT experts and Microsoft Thailand's master trainer. During the initial adoption, *Reading Progress* was implemented in 6 classes of grade 7 level (also known as Mathayom 1 or M1 in Thai) with a total number of 176 EFL students. Each class contained 27-30 mixed-ability students and they studied the 'Reading and Writing' subject with 2 non-Thai EFL teachers, 1 South African (with pseudonym of 'teacher SA') and 1 Ukrainian (with pseudonym of teacher UN), who reported students' learning progress to the Thai program administrator who is the head of the trilingual program (Table 1).

Table 1

Demographics of Students Based on CEFR Level

Class	Number of total students	English language Proficiency Level (based on CEFF level)					Subject teacher
		A1	A2	B1	B2	C1	
M1/1	30	5	13	8	4	-	UN
M1/2	29	3	13	7	6	-	SA
M1/3	29	3	14	7	4	1	UN
M1/4	27	3	10	9	4	1	SA
M1/5	30	4	10	11	4	1	SA
M1/6	30	2	11	12	5	-	SA

In implementing Reading Progress in the 'Reading and Writing' subject, students were pre-taught some of the vocabulary from the reading passage in the onsite classrooms and were given instructions on what they had to do in Microsoft Teams. Then students completed the reading assignments in Microsoft Teams' *Reading Progress* at home. The two assigned readings were part of the subject's formative assessment and were taken from the textbook used in the subject curriculum. The length for both readings was approximately 250 words. For each reading assignment, pronunciation sensitivity was set as 'low' to cater for students' initial use of *Reading Progress*. In terms of number of reading attempts, it was '3' for reading 1, but was increased to '5' due to students' request for more attempts (Table 2).

Table 2

Details of Reading Progress Assignments

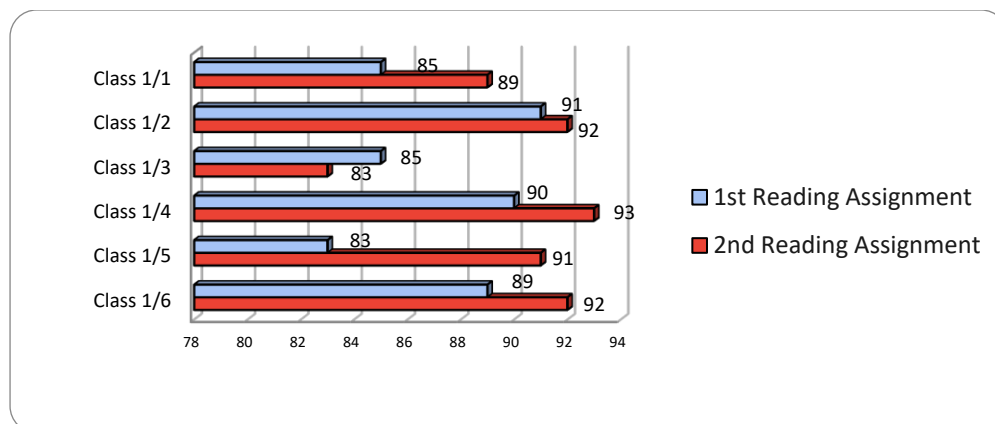| Assignment date and due date	Reading Passage	Genre	Pronunciation sensitivity	Number of attempts
17 Jan 2023 - 22 Jan 2023	Reading 1 'Practice' Unlock 2: Reading, Writing & Critical Thinking (Cambridge University Press)	Non-fiction	Low	3
27 Feb 2023 - 3 Mar 2023	Reading 2 'Surviving the Sea of Sand' Unlock 2: Reading, Writing & Critical Thinking (Cambridge University Press)	Non-fiction	Low	5

When assigning the readings, there were some incomplete assignments shown in reading 1 (possibly due to students' first trial of Reading Progress and due to some technical issues, such as voice cutout and screen cutout); however, for reading 2 all the students completed their reading assignments (Table 3).

Table 3

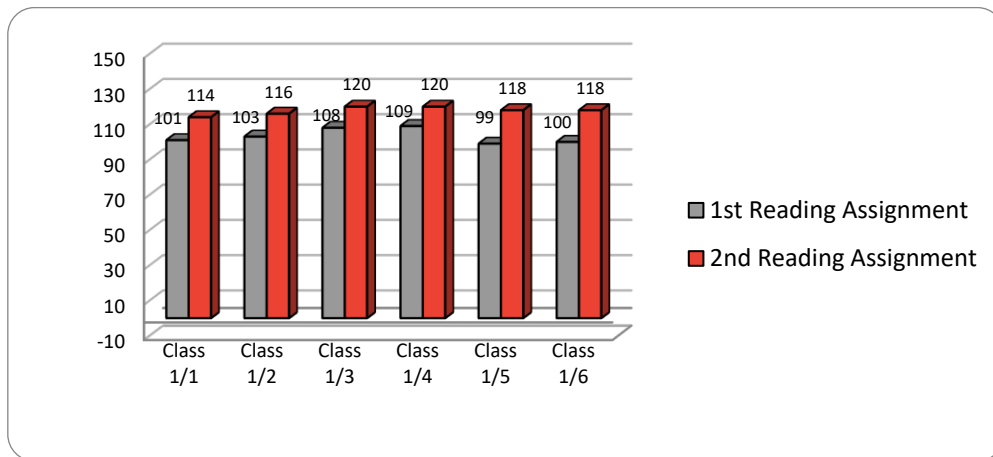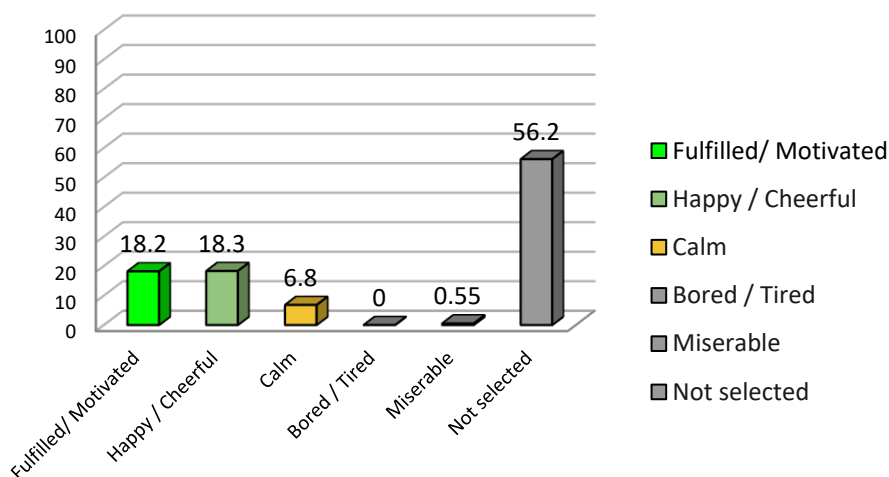*Completion of Reading Progress Assignments*

Class	Number of total students	Number of students who completed Reading 1	Number of students who completed Reading 2	Teacher
M1/1	30	22	30	UN
M1/2	29	29	29	SA
M1/3	29	27	29	UN
M1/4	27	27	27	SA
M1/5	30	30	30	SA
M1/6	30	30	30	SA

Based on submitted assignments, AI estimations of reading progress showed average accuracy rate (Figure 5) and average words per minute (figure 6) of each reading amongst all six classes. There appeared to be an improvement in all classes, except for M1/3 the average accuracy rate declined from 85 to 83 percent. In addition to these assignments, students were also asked to give their reflections on each reading using the *Reflect* tab. The questions were 1) How are you feeling about Reading 1: Practice? 2) How are you feeling about Reading 2: Surviving the Sea of the Sand? 69 out of 176 EFL students (39.20 percent) answered the questions in *Reflect*. It should be noted that the response rate in *Reflect* did not have any significant implications in adopting Microsoft Teams' *Reading Progress*, as responding to *Reflect* questions were optional for students who wished to communicate their feelings with the teachers. The summary of all *Reflect* responses (for both questions) can be seen in figure 7.

In tracking students' reading assignments and Reflect responses, the EFL teachers and the program administrator used the *Insights* app integrated into Microsoft Teams Education. With data spotlights and data visualizations, educators can monitor students' learning, analyze students' engagement, track students' learning progress, and plan for appropriate teaching and learning strategies for each specific context. For this study, it should be noted that data analytics in Microsoft Teams are not used for data triangulation purposes, but rather to provide the research context of the studied trilingual program. That is, in order to answer the research questions of stakeholders related to technology acceptance of *Reading Progress* during its initial adoption, we mainly employed qualitative data obtained from focus group interviews.

Figure 5

Students' Average Accuracy Rate (in Percentage)

Figure 6

Students' Average Word Per Minute

Figure 7

Summary of Reflect Responses (in Percentage)

Research Participants

To gain an insight into technology acceptance of *Reading Progress* during its initial adoption in the studied trilingual program, we included the stakeholders of 2 EFL teachers who taught the subject 'Reading and Writing', 9 EFL students, and one program administrator in the study. While we could include all the teachers and the program administrator who were responsible for the implementation of *Reading Progress* in grade 7 level, it was not feasible to collect qualitative data from all 176 students. Due to time constraints of the research project as well as students' availability, 10 students were selected to participate in the focus group. However, 1 student could not attend due to personal issues; therefore, only 9 students attended the focus group interview (Table 4).

Table 4

Student Participants Interviewed in the Study

Pseudonym	Class	Student's CEFR level
Student A	M1/2	A2
Student B	M1/2	A2
Student C	M1/2	B1
Student D	M1/3	B1
Student E	M1/4	A1
Student F	M1/4	A2
Student G	M1/5	B2
Student H	M1/6	B1
Student I	M1/6	B1

According to Krueger and Casey (2014), no more than 10 participants was an acceptable sample size to gain insights from focus group. In this study the selection criteria of focus group participants were based on their completion of *Reading Progress* assignments, their improvement in *Reading Progress,* their *Reflect* responses, as well as their English language proficiency (based on CEFR level) as well as academic performance (based on their grade point average or GPA). Each student was given a pseudonym for confidentiality and privacy purposes and their varied CEFR score can be seen in Table 4.

Research Instruments

In this study, we used semi-structured questions in focus group interviews to investigate the stakeholders' perceptions related to technology acceptance of *Reading Progress* during its initial adoption in the studied trilingual program. The interview questions were adapted from the interview protocols in AlDakhil and AlFadda's (2021) study of EFL learners' perceptions towards the use of one mobile phone application in language learning based on TAM and in Kampookaew's (2020) study of factors influencing Thai EFL Teachers' acceptance of technology. Table 5 illustrates examples of interview questions used in the focus group interviews with different stakeholders.

Table 5

Interview Questions

EFL teachers and program administrator	EFL students
How was your experience using *Reading Progress* with your students?	How was your experience using *Reading Progress* in Microsoft Teams?
Was *Reading Progress* a useful tool for you?	Did *Reading Progress* help you with your reading skills?
What were the strengths when you adopted *Reading Progress*? What were the weaknesses?	What did you enjoy most about Reading Progress? What did you enjoy least about Reading Progress?
On the scale of 1-10 how would you rate *Reading Progress*? Why?	On the scale of 1-10 how would you rate *Reading Progress*? Why?

Data Collection and Analysis

Prior to focus group interviews, research participants were given the participant information sheet and consent form to sign. For the student participants, since the students were under 18 years old, parents were also given the consent form to sign on behalf of their children who would take part in the study. Once consent had been given, the focus group interviews could then begin.

In this study, the focus group interviews were face-to-face interviews with two separate groups of 1) EFL teachers and program administrator and 2) EFL students. Each interview session lasted approximately 40-60 minutes. The interviews were conducted in English; however, the participants were also allowed to ask and answer questions in Thai. All the interviews were audio-recorded and transcribed using verbatim transcription.

For this study, we adopted thematic analysis (Braun & Clarke, 2006) to analyze the focus group interview data. In coding, we involved multiple investigators to engage in investigator triangulation (Denzin, 2006). For the credibility of findings, we also employed member checking in the data analysis process where the interpretation must be confirmed by the research participants.

Findings

Grounded in the focus group interview data, similar TAM related themes were found amongst the groups of EFL students and EFL teachers including perceived usefulness, perceived ease of use, perceived enjoyment, and familiarity with technology. For the program administrator, *Reading Progress* was primarily mentioned in terms of perceived usefulness and perceived ease of use. This was probably due to the role in implementing *Reading Progress* as a policy maker rather than a practitioner or a user.

EFL Students' Perceptions Towards *Reading Progress* During its Initial Adoption

When asked about their experience using *Reading Progress*, students expressed mostly positive views towards using and adopting *Reading Progress*. Their rated score for the application ranged from 8 to 10 (out of 10) and the reason for not giving a full score was mainly related to some technological issues some students had when using the application, for instance, 'voice cutout' (student C) and 'screen cutout' (student F).

In terms of 'perceived usefulness', the EFL students in the studied trilingual program perceived *Reading Progress* as a useful tool to help them with their pronunciation, or computer-assisted pronunciation training (CAPT) (Hongnaphadol & Attanak, 2022; Molenda & Grabarczyk, 2022), and it was evidenced in students of all English language proficiency levels. For example, one A2[1] student stated, 'some sentence that I don't know how to read or like don't know…[the app] can read [to] me and I can read it correctly' (student A). On the other hand, one B2 student also mentioned 'when I pronounce something wrong, it will correct me .. letting me read again and again until I get it right' (student G), while the other B1 student said that he could speak 'more clearly' and 'better' (student D). Students' perceptions of Reading Progress as CAPT tool could be derived from their progress, as also evidenced in improved average accuracy rate and average words per minute in *Reading Progress's* AI-powered data analysis.

Another core variable related to TAM, 'perceived ease of use', also became prominent in the focus group interview data. Students seemed to compare reading passages in *Reading Progress* with the traditional method of reading books and concluded that it was 'easier' than reading books (e.g., student C, student D, student G, student I) as seen in the following statements:

> When, like, I was reading in the book, I need to, like, use my finger to scroll through everything I read while reading. But, like, in in this application it just like it's tell me where to read and it says go by itself, so it's easier. (Student C)

> I can read the text really clearly and plus when it moves by itself, it's really good technology and I like how we can improve the reading two times. (Student A)

Despite some of the technological issues such as voice cutout or screen cutout as some students mentioned earlier, in general students were willing to continue using *Reading Progress* due to text size, moving texts, and the ability to allow as many attempts as learners need.

Another theme emerging from the interview data was 'perceived enjoyment'. However, it appears that students' perceived enjoyment was intertwined with the other factors of ease of use and familiarity with technology. As students pointed out:

> I feel pretty nice using it ... For me, I hate reading books. It's boring. This one is like technology, it scrolls by itself. It corrects me by itself and you and for the teachers, it's going to be easier, easier than I go to read for you. (Student G)

> I don't really love reading, but, like, this app makes me love reading. I'm giving it 10 out of 10. (Student I)

> It's easier to read in the program than the book because it's more fun. (Student D)

It can be seen that when students are familiar with technology and feel that it is easy to use, they can enjoy using technology. Reading Progress, in this context, can motivate students who do not like reading books to be more willing to read using *Reading Progress* as a motivational tool.

Additionally, 'perceived enjoyment' of the interviewed students also derived from the content they read. It became apparent that to enjoy a digital reading tool such as *Reading Progress*, the content itself has a significant role in students' enjoyment regardless of their English language proficiency level. As one A2 student participant said:

> I think what motivates me is the content that we are reading, like, I like the first one Surviving the Sea of Sand because it's kind of like a survival movie or survival book that we're reading, so it's very fun to read the things that we like. But sometimes, like, when we get the content that we, like, don't like or boring, it motivates me less than the first one.
> (Student A)

The enjoyment derived from interesting content was also confirmed by other students as evidenced in the following statements:

> I like the content one because the content is really fun to read and we get back some knowledge. And it's not boring at all. (Student H)

> For me, I want to read a lot of books about, like, Harry Potter or some kind of fiction like that. It was very fun for me. (Student C)

As can be seen, not only does technology itself contribute to the EFL students' technology acceptance but the content integrated into technology also plays a significant role in technology acceptance.

EFL Teachers' Perceptions Towards *Reading Progress* During its Initial Adoption

For the 2 EFL teachers in this study, their 'perceived usefulness' of adopting Microsoft Teams appeared to be from the perspective of teachers who needed tools to help them with their teaching. Both EFL teachers' perceptions seemed to be in conjunction with their students, that is, *Reading Progress* acted as a very useful CAPT tool for students. For teachers it provides 'convenience' and 'access' (teacher SA) to 'implement [the] individual approach with each student' (teacher UN). Moreover, teachers felt that they could use the *Reflect* tab to check in with students and how they were feeling during the period of assignments. For example, teacher UN told us about his experience with *Reflect*:

> I mean, I asked her what happened….and she said Oh Teacher, everything's OK. I just answered I was sad because at that time I had issues with my friend. I asked her everything's OK now? She said, yeah no problem. What does it mean? It means that sometimes our students are a bit shy to share their feelings with teachers because, well,

they're just kids or teenagers. It's not easy, but then if we can establish communication with our students directly, for example through Microsoft Teams and *Reflect* feature, it might be easier for them to express their emotions.

In addition, the focus group interview data with the teachers also showed that *Reading Progress* helped students to be familiar with new technologies and apply them to their real lives. As teacher UN stated:

This is the most important thing because I also want my students in the long term to be familiar with new technologies that they can use, not just for studying or learning something new, but also for adopting these different methods that they can use in their future job or at the university.

For teachers, *Reading Progress* was seen to help reduce teachers' workload and thus save time. As teacher SA stated:

Definitely the ease of the workload in terms of being able to monitor students' reading abilities in a subject called Reading and Writing….Saving you time, giving me an overall image of the class and an individual image as well.

However, this teacher also said that there can also be a downside of using AI to assess students' work in relation to time saving:

I would say that I did need to go in and look at, listen to a few myself, to see, to check the AI myself .. and then you know it's where it becomes time consuming and it's like I said, nothing's perfect…. it takes time and it's fine because it saves time too. (Teacher SA)

From the interview data, both teachers viewed Reading Progress as useful but there were mixed feelings concerning 'ease of use'. They were 'excited' but also 'skeptical' (Teacher SA), or 'a bit surprised but also confused' (Teacher UN). Although it was their first time adopting *Reading Progress* and first year using Microsoft Teams, both teachers had had prior experience using other digital teaching and learning platforms. While it could be 'a bit of adjustment' due to the new 'interface' (Teacher UN), but being 'not afraid' to try and 'use' (Teacher SA) technology resulted in their ability to use the app. Both teachers mentioned that their students seemed to have few issues with doing their *Reading Progress* assignments. While teacher SA provided a 5-minute demonstration for the students, teacher UN simply announced the assignment 'on purpose' on the ground that he wanted to test out his students' ability to try out and use this technology. While not all students in teacher UN returned their first reading assignment, for the second assignment the submission rate was 100 percent. As Teacher UN discussed:

All of them, they were able to just open Microsoft Teams, go to reading assignments tab, and that was pretty minimalistic and simple for them to understand. Just start recording. The only thing that they asked me, Teacher do we need a video, and I said up to you. But I don't need the video, I just need your voice and if there're problems they can learn.

From the interview data, it could be said that students found it much easier to adopt the new technological tool when compared with the teachers who were willing to try but with some cautions in adopting technology.

Despite the combination of feelings the EFL teachers had towards adopting Reading Progress, however, there seemed to be little or no struggle during their initial adoption. In fact, interview data showed 'perceived enjoyment' especially for teacher UN who loved technology and had taught computer-related subjects before at school. As he stated:

> And in terms of Microsoft Teams, which is a great piece of software, I'm really
> enjoying using it. I've been comparing it to Football Manager. It doesn't mean that's a
> game, but it means that I really enjoy interacting with this software. (Teacher UN)

It became rather clear that 'perceived enjoyment' arose from personal interest, and in this context, it was personal interest and 'familiarity with technology'. Teacher UN compared *Reading Progress* with his favorite computer game called Football Manager, demonstrating his familiarity with technology in general. When he adopted a new technology, it was likely that he would be able to accept it more easily than those who were generally unfamiliar with technologies.

Trilingual Program Administrator's Perceptions Towards *Reading Progress* During its Initial Adoption

According to the focus group interview data, the program administrator, similar to the EFL teachers perceived the 'usefulness' of Reading Progress, yet she was concerned in terms of implementing it with grade 7 students who were the first cohort of students in the studied trilingual program. When asked if the app was useful, she responded 'Yes, because I can answer to, you know, to the school director that we have something to help our students who are struggling with the English skills.' She also added, 'it's good for our school to have something to help our students, to enhance their [reading] proficiency'. The fact that each student's learning was 'digitalized' and 'personalized' in *Reading Progress* could also facilitate administrators' better understanding of mixed-ability students at individual class, and grade levels.

As a program administrator, it was expected that her perceptions regarding the initial adoption of Reading Progress would be primarily related to students' learning progress and academic achievement. At the policy level, she must be able to demonstrate the usefulness of this new technology not only to her peers but also to the school director and parents. Nonetheless, the program administrator also expressed her concern about students' initially adopting *Reading Progress* as seen in the following statement:

> I've got one concern because we only have one year of student. Then only some of
> them they used Microsoft Teams before when they were in Prathom six.
> So I was kind of worried how they're going to deal with the difficulties of this
> technology. How are they gonna deal with this AI thing? So I was kind of concerned
> about that and because they are so young in my view in that time. Are they going to be
> responsible enough to do the assignments we assign to them? Because they need to
> work on their own without the parents … and without the teacher who controls the
> students.

This 'perceived ease of use' from the perspective of program administrator is rather interesting in that she was unsure whether students could truly become autonomous learners and deal with their assignments in *Reading Progress*. Her perception was in contrast with the teachers who had mixed feelings and the students who rarely saw difficulties in using the application.

Discussion and Implications

Perceived Usefulness, Perceived Ease of Use, and Familiarity with Technology
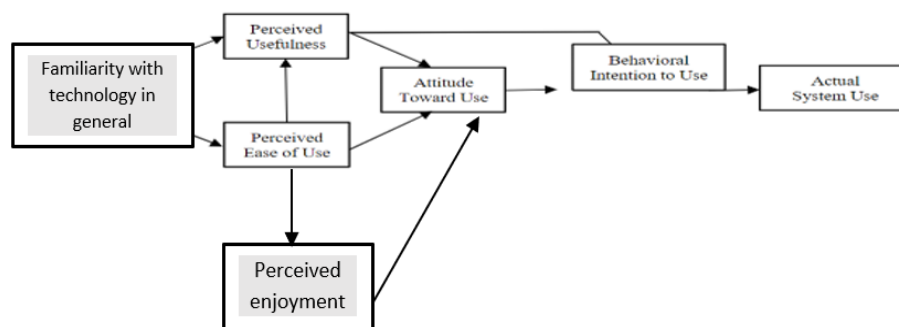
From the findings, it became clear that the EFL students, EFL teachers, and the program administrator agreed on the 'usefulness' of *Reading Progress* as a 'CAPT' tool (Hongnaphadol & Attanak, 2022; Molenda & Grabarczyk, 2022). However, each group of stakeholders' perceptions of usefulness also differed, depending on their roles in technology adoption. For teachers, *Reading Progress* was seen as a teaching assistant tool or 'instructional interactive tool' (Octavo & Vargas, 2022) which helped them to monitor their students' reading progress in a more personalized manner. Due to the AI technology integrated in the app, personalized teaching and learning has

become feasible despite the number of students and the amount of time teachers have in preparing lessons, monitoring students' work, giving feedback, and reporting it to the program administrator. The facilitative features *Reading Progress* provides also meet the needs of the program administrator in that teachers could work more productively, efficiently, and effectively. Given that teachers are able to use technology, i.e., find it easy to use, they will be able to embrace the usefulness of the *Reading Progress* application.

TAM's core variable of 'perceived ease of use' was an important theme discussed in the focus groups. The findings in this study confirm that 'perceived ease of use' contributes to 'perceived usefulness' as widely discussed in TAM (Davis et al., 1989). In the studied context, it was found that the one primary factor leading to the research participants' perceived ease of use was their 'familiarity with technology' in general (Figure 8). All the participants were not new to technology and willing to try a new technology. Although students seemed to be able to just simply click and try regardless of prior training, teachers and program administrator might require more training assistance. According to Kampookaew (2020, p. 64), teachers' lack of familiarity with technology could be one of 'deterring factors of their technology acceptance'. As familiarity with technology can contribute to teachers' confidence and positive attitudes towards adopting new technologies, policy makers must clearly inform teachers of technology policy and provide training and workshops as well as IT infrastructures during adopting and integrating new technologies (Kampookaew, 2020).

Figure 8

Extended TAM Based on the Studied Trilingual Program

Perceived Enjoyment: An Extended TAM Construct in the Studied Trilingual Program

Apart from familiarity with technology, perceived ease of use, and perceived usefulness, 'perceived enjoyment' was a significant theme emerging from the interview data (Figure 8). The EFL students in the study compared reading passages assigned in *Reading Progress* with reading traditional books. Because the app allows students to enlarge texts, read moving texts, practice reading with the *Reading Coach* feature, students who were already not afraid to use technology, felt that they received personalized guidance, and it became a 'fun' activity which they could enjoy while practicing their reading. For the EFL teachers, on the other hand, enjoyment arose from personal interest in technology. For teacher UN, especially, his passion for technology, undoubtedly led to technology acceptance. This factor of personal interest in technology was also evidenced in a few students where they said that this digital app was 'nice' and 'fun'.

According to Chesney (2006), perceived enjoyment can be influenced by many factors depending on various contexts. In the context of our study, personal interest was one important factor which influenced users' perceived enjoyment. The reading content was no less important than users' passion for or familiarity with technology. When reading the content they were interested in, students explicitly mentioned how they enjoyed reading. This aspect of personalized

content provides a useful implication for teachers and program administrator in relation to curating content for students' enjoyment in learning. Although schools are required to follow a certain school curriculum with certain specific subject content, the ability of *Reading Progress* to personalize the reading content and to allow students to practice outside class offers an immense opportunity for teaching and learning in EFL school contexts.

Conclusion

This case study investigates the perceptions of EFL students, EFL teachers, and program administrator at one trilingual program at a Thai secondary school in terms of their technology acceptance of a Microsoft Teams tool of *Reading Progress*. Through the qualitative approach, the study employs focus group interviews to explore the stakeholders' perceptions related to TAM factors. Themes of perceived usefulness and perceived ease of use emerged in all the interview data. In terms of perceived usefulness, *Reading Progress* was generally perceived as a CAPT tool, with it also being a teaching assistant tool for teachers to personalize and monitor student learning. This usefulness was derived from the participants' ability to use the app due to Microsoft's user-friendly interface design as well as participants' familiarity with technology in general. Despite the ease of use and familiarity with technology, software training or equipping users with related skills and knowledge should not be neglected. For the studied context, we fortunately evidenced only few technical issues; however, this might not be the case for other contexts. When users perceive that technology is difficult to use and become unfamiliar with it, it is highly unlikely that they will decide *not to* adopt the technology.

Being familiar with technology and perceiving technology as something easy and accessible could in fact lead to enjoyment in using technology. In the EFL context, students can turn their dislikes of reading into likes for reading due to their passion or interest in technology. Accompanied by personalized content, reading can become a fun, enjoyable experience for these students. Factors influencing perceived enjoyment are thus crucial for not only teachers but also program or school administrator to consider when planning their program or school curriculums, many of which can adopt innovative technologies allowing personalized teaching and learning to cater for personalized needs.

To our knowledge, this study is one of the very few case studies which looks into the perceptions of Thai school stakeholders towards adopting new innovative technologies through the lens of TAM. While this paper helps to shed light on TAM related factors in the studied context, more empirical research is needed, whether in Thai or non-Thai school contexts, or higher education contexts. The implementation and adoption of technologies, we propose, can be informed by research. We hope that this research will act as a springboard for discussion and research within the English language education, educational technology, and related fields. As technology continues to develop in the ever-changing world, all the related stakeholders will become part of this technological development. Whether as a school administrator, a practitioner, a teacher, a researcher, or a learner, his/her view can help us to implement what is best for this ever-changing, increasingly complex world of education.

Acknowledgements

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Endnotes

[1] In the paper, we identified students' English language proficiency level based on the CEFR framework, due to the school's policy in using CEFR to identify students' English language skills.

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