*International Journal of Learning, Teaching and Educational Research*
*Vol. 24, No. 12, pp. 241-267, December 2025*
*https://doi.org/10.26803/ijlter.24.12.11*
*Received Sept 19, 2025; Revised Oct 27, 2025; Accepted Nov 2, 2025*

# Enhancing English Listening and Speaking through Microlearning: Insights on Thai Learners' Growth Mindset in Higher Education

**Phohnthip Smithsarakarn**
Faculty of Humanities, Srinakharinwirot University,
Bangkok, Thailand

**Pitchada Prasittichok**
Behavioral Science Research Institute, Srinakharinwirot University,
Bangkok, Thailand

**Abstract.** For decades, the limited communicative competence of Thai learners has been a recurring concern in English language education, particularly in the areas of listening and speaking, where traditional classroom methods often struggle to produce tangible, long-term fluency. This study proposes that English instructors in higher education can meaningfully integrate microlearning as a practical alternative to conventional teaching. Conducted over a four-week period through a mixed-method design, this research employed purposive and snowball sampling to recruit Thai undergraduates majoring in English, using pre- and post-tests delivered via AI-assured assessments, supplemented by growth mindset questionnaires and qualitative interviews. The analysis revealed that microlearning notably strengthened students' listening proficiency and fostered a more resilient growth mindset, while improvements in speaking performance, though present, did not yet reach the benchmark of international proficiency. Nevertheless, the inclusion of AI-based feedback proved valuable, offering clear, immediate, and constructive input that encouraged learners to refine their communicative performance. Beyond measurable skills, participants reported heightened motivation, confidence, and self-efficacy, all of which contributed to a more positive and proactive attitude toward language learning. Overall, this study concludes that microlearning offers a promising and practical pathway for improving listening proficiency and cultivating a positive mindset among Thai EFL learners, while suggesting that the attainment of higher speaking proficiency may require extended exposure and more complex communicative practice. Future research is therefore encouraged to explore the integration of microlearning with AI-supported assessments

*Corresponding author: Pitchada Prasittichok; *pitchada@g.swu.ac.th*

as a sustainable and scalable framework for advancing English communication skills in higher education contexts.

**Keywords:** Microlearning; Listening; Speaking; Growth Mindset; Higher Education

## 1. Introduction

Since the establishment of the Association of Southeast Asian Nations (ASEAN) Economic Community in 2015, English language proficiency has emerged as a cornerstone of Thailand's regional competitiveness, serving not merely as a communicative tool but as a vital instrument for international collaboration, trade, and innovation. This national urgency is echoed across policy frameworks such as the 13th National Economic and Social Development Plan (2023–2027) and the Thailand 4.0 initiative, both of which reinforce English as a gateway to global participation.

Yet, despite early English instruction and decades of educational reform, Thai learners continue to struggle with genuine communicative competence, ranking 106th out of 116 nations in the 2024 EF English Proficiency Index. A wealth of prior research attributes this persistent challenge to the dominance of the traditional grammar–translation method, which prioritises rote memorisation and grammatical accuracy over practical use and interaction, ultimately resulting in chronic communication difficulties, performance anxiety, and disengagement among learners (Smithsarakarn, 2022; Pundee, 2017).

Studies by Lou and Noels (2020) further reveal that the roots of these difficulties lie not only in linguistic competence but also in mindset-related barriers, as learners' beliefs about their own ability profoundly shape their willingness to communicate. Specifically, Thai student's limited oral proficiency often stems from insufficient exposure to authentic speaking opportunities and an ingrained fear of making mistakes, which diminishes confidence and self-efficacy (Baker & Jarunthawatchai, 2017; Rayati et al., 2022).

In contrast, emerging research highlights that cultivating a growth mindset, believing that language ability can be developed through effort and persistence, can significantly enhance motivation and resilience among non-native English speakers (Dweck, 2024). Therefore, this study argues that improving English oral skills and fostering a positive mindset should not be treated as separate educational goals but as interdependent dimensions of the same learning process.

Equally transformative is the role of digital technology in shaping modern education. In a world where digital media permeates nearly every aspect of life, the COVID-19 pandemic accelerated the shift from conventional classrooms to flexible, remote, and technology-enhanced learning environments, offering students personalized, immediate, and adaptive feedback (Kohnke, 2023). Among the many innovations that emerged from this transition, microlearning, the delivery of content in short, focused, and easily digestible segments, has gained remarkable traction for its ability to cater to modern learners' attention spans and

lifestyles (Corbeil et al., 2021; Nikkhoo et al., 2023). The widespread use of mobile devices and learning applications has further amplified microlearning's appeal, particularly among Gen Z students who prefer autonomy, flexibility, and on-demand access to educational materials that fit seamlessly into their digital routines (Krasnova et al., 2023). Within the Thai context, where learners often face communication apprehension, Tantiwich and Sinwongsuwat (2021) underscore the importance of repeated, low stakes speaking activities to build confidence and fluency, conditions that microlearning environments naturally support. Hence, it becomes both timely and compelling to explore whether this approach can serve as a viable and sustainable alternative for developing Thai learners' oral communication competence.

Although scholarly interest in microlearning has grown rapidly, empirical studies that examine its impact on English listening and speaking proficiency, particularly within Thailand, remain scarce. Existing research has largely focused on vocabulary acquisition or reading comprehension, leaving a critical gap in understanding how microlearning might address the deeper and more intricate relationship between communicative performance and learners' psychological growth. This gap is especially evident in the Thai and broader ASEAN educational contexts, where assessment systems often privilege receptive skills such as reading and listening over productive ones like speaking and writing.

Consequently, this study seeks to investigate whether a microlearning-based approach can effectively enhance Thai undergraduates' English listening and speaking proficiency to an internationally recognised standard, while simultaneously nurturing a growth mindset that empowers learners to sustain their communicative development in an increasingly digital, interconnected world.

## 2. Conceptual Framework

Learners' mindsets and attitudes play an undeniably crucial role in determining success in English as a Foreign Language (EFL) learning. As Sun and Wudthayagorn (2024) argue, a positive attitude not only shapes learners' overall achievement but also acts as a motivational driver that propels them toward their goals. Similarly, Janudom (2023) observes that students who lack a constructive or growth-oriented mindset encounter far greater difficulty in improving their language skills, often struggling to sustain the effort and confidence required for communicative competence.

Dweck (2024) further reinforces this connection, illustrating a dynamic two-way relationship between fostering a growth mindset and the enhancement of listening and speaking abilities, each reinforcing and amplifying the other. In contemporary educational contexts, this connection becomes even more significant, particularly for Gen Z learners who thrive on active, technology-integrated approaches to learning (Krasnova et al., 2023). For Thai learners, whose communicative development depends heavily on consistent practice both inside and outside the classroom (Cambridge University Press & Assessment, 2025; Wongsuwan, 2020), cultivating such a mindset through innovative pedagogical

strategies is essential. Against this backdrop, the present study introduces microlearning as an educational intervention designed to concurrently enhance oral communication skills and nurture a growth-oriented disposition among Thai EFL students.

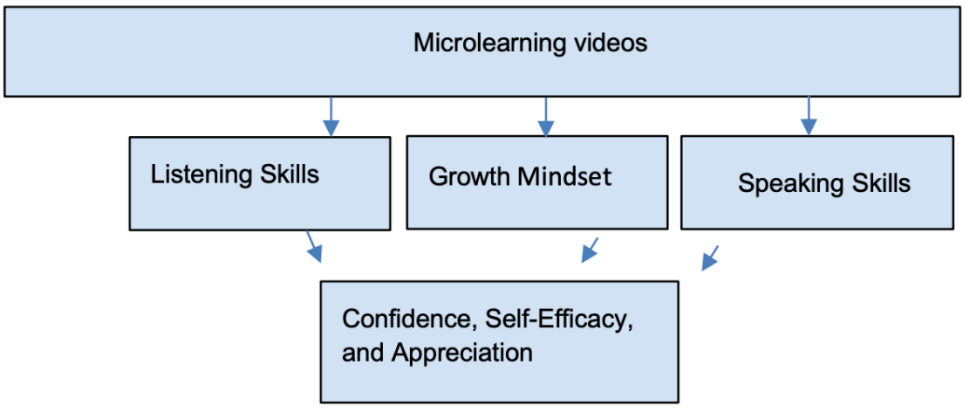



**Figure 1: Conceptual framework**

Figure 1 illustrates the conceptual framework guiding this research. It comprised three interconnected stages that demonstrate how microlearning influences learners' English listening and speaking skills and their mindset.

*Stage 1* positions microlearning as the independent variable. The pedagogical intervention is delivered through mobile-accessible short video modules.

*Stage 2* identifies three dependent variables. This second stage includes listening skills, speaking skills, and growth mindset, which serve as the primary outcomes. *Stage 3* represents the expected long-term impacts. This stage emphasises the enhancement of learners' confidence, self-efficacy, and appreciation, resulting in improvements in Stage 2 outcomes.

**Stage 1: Microlearning as Pedagogical Intervention**

Microlearning, characterised by delivering content in short, focused units, is positioned as the foundational component that enables Thai learners to practise English beyond traditional classroom constraints. Research demonstrates that microlearning is particularly effective for language communication skills due to its capacity to provide frequent, manageable, and repetitive practice (Kohnke, 2023). Liu (2022) emphasises microlearning's role in fostering a growth mindset through goal setting, self-reflection prompts, and positive reinforcement mechanisms, while Dweck (2024) establishes that students' beliefs about their abilities significantly influence their engagement with challenging tasks.

However, critical examination of microlearning reveals important limitations. While microlearning effectively supports discrete skill acquisition and knowledge, it is less suitable for complex concept mastery that requires integration of multiple competencies (Beedeez, 2025). The current research thus proposed that this constraint has particular implications for speaking proficiency development,

which demands simultaneous coordination of phonological accuracy, grammatical structures, pragmatic competence, and sociolinguistic awareness. In other words, the speaking competencies of many Thai learners are inherently more complex than the primarily receptive cognitive processes, such as listening comprehension.

Although previous studies demonstrate microlearning's positive effects on both listening and speaking skills (Kohnke, 2023; Samala et al., 2023), a critical gap exists in the literature. Specifically, previous research often did not evaluate outcomes against international speaking proficiency standards, such as the Common European Framework of Reference for Languages (CEFR), within a short period for learners with limited speaking competence.

Hence, the current research scrutinises whether microlearning can realistically help learners with lower speaking proficiency achieve measurable gains at internationally recognised levels within typical implementation timeframes. This study thus adopts a 4-week period while employing CEFR-aligned assessment to examine whether such interventions can produce internationally standardised speaking proficiency gains among Thai learners with existing speaking limitations.

**Stage 2: Listening and Speaking Skills and Growth Mindset**

The second stage of the framework identifies three interdependent outcome variables—listening skills, speaking skills, and growth mindset—that together provide a comprehensive measure of communicative development. Listening and speaking represent the receptive and productive poles of oral competence, while growth mindset serves as the psychological catalyst that sustains progress across both domains. Each skill area is evaluated through internationally recognised criteria, including CEFR, IELTS, and TOEFL descriptors.

Listening assessments emphasise comprehension accuracy and inferential understanding, whereas speaking assessments focus on fluency, pronunciation, and pragmatic appropriateness. Al-Khresheh (2020) underscores that limited exposure to authentic English-speaking environments and minimal opportunities for real interaction make speaking one of the most persistent challenges for Thai learners. Consequently, many university students experience anxiety, self-doubt, and an acute fear of making errors or being judged against native-speaker norms (Panthito, 2018).

The integration of the growth mindset variable represents an emerging and critical dimension in language acquisition research. Lou and Noels (2020) demonstrate that cultivating a growth mindset fosters persistence, intrinsic motivation, and resilience, while Dweck (2024) further affirms that such a mindset enhances learners' confidence and willingness to engage in communicative activities despite difficulties. By measuring growth mindset alongside linguistic competence, this study adopts a holistic approach, recognising that psychological readiness is as essential as linguistic input in achieving meaningful

communicative progress, particularly within Thai EFL contexts characterised by performance anxiety and limited speaking practice.

**2.1 Integration of AI-Supported Assessment**

A significant innovation within this study is the inclusion of artificial intelligence–based assessment tools, which represent a transformative step in language education research. Recent studies highlight how AI-enabled systems provide immediate, objective, and data-driven evaluation of learners' pronunciation, fluency, and grammatical accuracy, thereby supporting autonomous learning and self-correction (Kim, 2022; Kohnke, 2023; Prasad, 2023).

Unlike conventional teacher-led evaluation, which is often constrained by time and subjectivity, AI-driven assessments offer scalable, consistent, and anxiety-reduced feedback accessible anytime and anywhere. Graham (2019) further notes that technology-enhanced assessments foster more interactive and learner-centred environments, allowing for continuous engagement rather than one-off evaluations. Despite these promising developments, empirical research on AI-assisted assessment in Thai EFL contexts remains limited, particularly regarding its potential to support speaking skill development, thus presenting an important avenue that this study seeks to explore.

**Stage 3: Long-term Outcomes**

The third stage shows the long-term effects of the improvements in listening, speaking, and having a growth mindset. The present study contends that microlearning will augment learners' confidence, self-efficacy, and valuation of their communicative competencies. This stage acknowledges that sustained development requires gradual recognition of progress, which microlearning's frequent low-stakes practice opportunities may facilitate. It is worth highlighting that the current research framework stresses mobile-supported learning accessibility to align with Gen Z learners' digital preferences and lifestyle patterns, ensuring that interventions remain contextually appropriate for the target population. Hence, all learning videos and assessments are designed to be accessed in a friendly, flexible manner, allowing learners to explore the content at any time at their pace and in alignment with real-world contexts.

The main question then raised is:
'To what extent does microlearning enhance English listening and speaking skills and foster a growth mindset in Thai undergraduate students?'

**2.2 Research Hypotheses**

Based on the research question and conceptual framework, the following hypotheses were formulated:

**Table 1: Research Hypotheses**

| *Hypothesis* | *Prediction* |
|---|---|
| H1-1 | Microlearning significantly improves learners' English-listening skills. |
| H1-2 | Microlearning significantly improves learners' English-speaking skills. |
| H1-3 | Microlearning significantly improves learners' growth mindset toward English learning. |

## 3. Methodology

### 3.1 Research Design

This study followed a mixed-method research design, combining both quantitative and qualitative approaches to give a more complete understanding of how microlearning impacts English listening and speaking skills. By using both primary and secondary data, the research aimed to bridge any gaps that might exist if only one type of source were used.

For the primary data, the study was carried out in two phases. The first phase, which is the quantitative phase, involved a 4-week microlearning programme, where pre-tests and post-tests were used to measure its effectiveness and learners' overall satisfaction. The second phase, the qualitative phase, consisted of interviews that explored students' experiences in more detail, uncovering insights that numbers alone could not show. To strengthen the study's accuracy and credibility, the triangulation technique was used. This approach allowed the researcher to cross-check information from different sources and methods, ensuring the findings were both reliable and meaningful. By integrating quantitative and qualitative data, the research offered a well-rounded picture of how microlearning influenced students' English listening and speaking development.

The fieldwork took place from September to November 2023. A pilot study was conducted first, in September, before the main research began in October. In the pilot, 21 English-major students participated in a pretest and joined microlearning classes through a metaverse classroom—a virtual learning space that mimicked real classroom interaction. Out of these 21 students, five were interviewed to share their feedback and clarify any difficulties they faced. During this pilot, a few practical challenges emerged, such as the length of pretest questions and occasional access issues with the virtual classroom. These observations were extremely helpful and led to improvements in the design of the pretest and posttest, the microlearning content, and the interview questions before the full study was launched.

### 3.2 Instruments and Participants

To conduct the study, several tools were used: microlearning video lessons, listening and speaking assessments, a questionnaire, and semi-structured interviews. A total of 60 Thai undergraduate students majoring in English at the Faculty of Humanities, Srinakharinwirot University took part. Among them, 17 were male and 43 were female. These 60 participants were divided equally into two groups: an experimental group (30 students who joined the microlearning sessions) and a control group (30 students who continued with their usual English classes). The participants were recruited using purposive and snowball sampling. At first, students were selected because they met specific criteria, such as being English majors and willing to take part in both testing and interviews. Later, these initial participants recommended other peers who fit the same profile and were also interested in joining.

For the speaking assessments, the AI-based tool Speechace was selected. This platform uses automated speech recognition technology similar to the systems used in international English proficiency tests like IELTS and TOEFL. It evaluates learners based on three main criteria: fluency, pronunciation, and grammatical accuracy. The students' spoken responses were recorded and scored by the system, ensuring that each participant was assessed objectively and consistently. Speechace has been widely used in educational research and is recognised for its reliability in measuring speaking improvement among non-native English speakers.

The 4-week microlearning programme was chosen intentionally, following existing studies suggesting that microlearning works best when conducted through short, focused sessions, typically around 20 minutes each (Shatte & Teague, 2020). This approach fits with the philosophy behind microlearning: learning in small, concentrated bursts rather than through long, traditional lectures (Willoughby & Sell, 2024). While this shorter duration might not lead to drastic improvements in complex skills like speaking fluency, it allows for a realistic evaluation of how effective microlearning can be within a typical university schedule.

*3.2.1 Validity and Reliability*

Ensuring validity and reliability has always been a key part of conducting trustworthy research. As Zohrabi (2013: 254) notes, collecting information through multiple procedures and from different groups of participants helps strengthen both the credibility of the data and the accuracy of the conclusions drawn from it. In this study, both statistical data (from tests and questionnaires) and qualitative data (from interviews) were analysed together to provide insights on two levels: the broad, overall trends and the specific, detailed experiences of learners. By applying triangulation, the researcher could compare and interpret findings from different angles, making the results clearer, more meaningful, and more dependable.

*3.2.2 Microlearning Materials*

The microlearning content was carefully designed to help students improve their English listening and speaking skills over the four-week period. Each week, participants watched a series of short on-demand videos, each lasting about 10 minutes. After viewing the videos, they completed short assessments to reinforce what they had learnt. The listening materials were created to develop key skills such as accuracy, comprehension, and inference. The exercises reflected real-life listening situations, like conversations, short talks, and question-and-response tasks, closely aligned with CEFR standards.

Meanwhile, the speaking practice videos focused on pronunciation, word stress, and grammatical precision. For these tasks, learners were assessed through the Speechace AI test, which provided immediate, personalised feedback. One of the unique features of the programme was that students could choose topics that matched their personal interests, such as job interviews, university applications, or business meetings, making the experience more engaging and relevant. After the four-week intervention ended, each participant's post-test scores were

compared with their pre-test results to determine how much their listening and speaking skills had improved.

Overall, this research design supported by both technology and thoughtful pedagogy allowed students to learn in short, meaningful bursts while also receiving real-time feedback to guide their improvement. The combination of structured practice, AI assessment, and flexible digital access offered a realistic way to help Thai learners strengthen their communication skills within the modern, fast-paced learning environment.

### 3.3 Data Collection Methods and Procedures

The study consisted of four stages. In the first stage, participants were required to take pretests that assessed their English listening and speaking skills, as well as their personal mindset regarding English proficiency. Second, experimental participants were asked to study the 4-week microlearning videos and do assessments after watching them. Next, all participants from both the control and experimental groups were asked to do a posttest and complete the questionnaire. Finally, 18 selected participants were invited to participate in the follow-up volunteer semi-structured, in-depth interviews. All participants agreed to take this experiment voluntarily.

**Table 2: The 4-Week Microlearning Experiment**

| Wk | Experimental Group | Control Group |
|---|---|---|
| 0 | - Pretest: listening and speaking<br>- Questionnaire: Growth mindset perceptions | - Pretest: listening and speaking<br>- Questionnaire: Growth mindset perceptions |
| 1 | - Introduction to the 4-week microlearning<br>- Listening: Basic listening<br>- Speaking: Intonation<br>- Weekly assessment | - Regular class<br>- No microlearning intervention |
| 2 | - Topic: World Englishes<br>- Listening: Question-response<br>- Speaking: Syllables & stress<br>- Weekly assessment | - Regular class<br>- No microlearning intervention |
| 3 | -Topic: Language for occupation<br>- Listening: Conversations<br>- Speaking: Fluency & coherence<br>- Weekly assessment | - Regular class<br>- No microlearning intervention |
| 4 | - Topic: Wrap-Up<br>- Listening: Talks & lectures<br>- Speaking: Pauses<br>- Weekly assessment | - Regular class<br>- No microlearning intervention |
| Wrap-Up | - Posttest: Listening and speaking<br>- Questionnaire: Growth mindset perceptions<br>- Interviews with selected participants | - Posttest: Listening and speaking<br>- Questionnaire: Growth mindset perceptions<br>- Interviews with selected participants |

*3.3.1 Questionnaire*

There were three parts to the questionnaire: (1) demographic information (gender, university level, years of English study), (2) perceptions of the English language mindset, and (3) satisfaction with microlearning. The satisfaction with the microlearning section was measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). In this research, the Cronbach's Alpha was calculated to assess the reliability of each scale of the questionnaire survey data. The general agreement in Cronbach's alpha reliability at 0.70 or above indicates appropriate instrument internal consistency. The Cronbach's Alpha value for the multiple Likert questions in this survey was 0.881, exceeding the recommended value.

*3.3.2 Interview*

To gain a deeper understanding beyond numbers and scores, semi-structured interviews were conducted with 25 volunteers. The interviews explored participants' personal views on microlearning and their own listening and speaking progress. Although the interviewer followed a guiding set of questions, participants were encouraged to express themselves freely, allowing their genuine opinions and experiences to emerge. All sessions were audio-recorded, transcribed, and then translated into English. The transcripts were later examined through thematic content analysis, which involves identifying recurring ideas and key themes that help explain and support the numerical findings from the quantitative data.

*3.3.3 Listening and Speaking Assessment Tools*

Listening and speaking performance were tested both before and after the four-week microlearning programme. The listening test was modelled after the TOEIC Listening section, ensuring it reflected a standardised level of difficulty and structure appropriate for university learners. For the speaking assessment, the study used Speechace AI, a digital speech evaluation tool that automatically analyses pronunciation, fluency, rhythm, and intonation. This allowed for objective, real-time assessment of how students' speaking skills developed over the study period.

**3.4 Data Analysis**

The data collected from both tests and surveys were analysed using SPSS Version 28, a widely used software for statistical analysis.

For the quantitative data, descriptive statistics were first used to summarise demographic details and initial mindset scores. To evaluate how effective microlearning was, paired-sample t-tests compared each participant's pretest and posttest results. Additionally, a Multivariate Analysis of Covariance (MANCOVA) was used to explore how different frequencies of microlearning engagement might influence overall speaking performance between the two time points. Together, these tests provided a clear picture of where and how the most significant improvements occurred.

For the qualitative data, the interviews were transcribed and translated. Each participant was coded as I1, I2, I3, and so on. Thematic analysis was employed

using an inductive approach. In the first coding cycle, descriptive codes were generated based on the participants' responses relevant to the research objectives. These data were then grouped into interpretive codes in the second cycle. Finally, the third coding cycle and four key themes were identified. These include useful microlearning video content, improvements in listening and speaking skills, preferences for microlearning, and positive shifts in the English language learning mindset.

## 4. Results

### 4.1 Quantitative Analysis

Regarding the socio-demographic profile, the experimental group comprised 73% female students and 27% male students, whereas the control group consisted of 70% female participants and 30% male participants.

According to the data presented in Table 2, the mean growth mindset score in the intervention group during the pretest was 3.37, with a standard deviation (SD) of 0.20, which increased to 4.45 during the posttest, with a standard deviation of 0.24. In comparison, the mean growth mindset score in the control group was 3.21 during the pretest, with a standard deviation of 0.38, and during the posttest, it marginally increased to 3.29, with a standard deviation of 0.35.

For English listening skills, the average score in the experimental group was 24.70 during the pretest, with a standard deviation of 5.43, and it rose to 28.43 during the posttest, with a standard deviation of 4.22. Conversely, in the control group, the mean English listening score was 26.20 during the pretest, with a standard deviation of 2.61, and during the posttest, it decreased to 25.54, with a standard deviation of 1.07. Similarly, in the speaking component, the experimental group showed a significant sign of improvement from a mean of 6.25 (SD = 0.44) to 7.01 (SD = 0.52), whereas the control group's score remained relatively stable. The changing score of the control group was marginal, from 6.94 (SD = 0.46) to 6.97 (SD = 0.32). The normality test was conducted using skewness and kurtosis, as shown in Table 2.

**Table 3: Results of normality test**

| Variate | Group | test | Mean | SD | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| Growth Mindset | Intervention group | Pretest | 3.37 | 0.20 | -0.22 | -0.62 |
| | | Posttest | 4.45 | 0.24 | 0.15 | -0.29 |
| | Control group | Pretest | 3.21 | 0.38 | -0.19 | 1.42 |
| | | Posttest | 3.29 | 0.35 | 0.33 | 0.02 |
| Listening | Intervention group | Pretest | 24.70 | 5.43 | -0.82 | 0.23 |
| | | Posttest | 28.43 | 4.22 | -1.29 | 0.86 |
| | Control group | Pretest | 26.20 | 2.61 | -0.04 | 0.28 |
| | | Posttest | 28.03 | 2.76 | 0.02 | -0.63 |
| Speaking | Intervention group | Pretest | 6.25 | 0.44 | 0.39 | -0.47 |
| | | Posttest | 7.01 | 0.52 | -0.08 | -0.73 |
| | Control group | Pretest | 6.86 | 0.42 | -0.26 | -0.39 |
| | | Posttest | 6.94 | 0.46 | -0.09 | -0.46 |

Table 2 presents the skewness and kurtosis values. According to Pallant (2020), data is deemed to approximate a normal distribution if it falls within the range of -3 to +3. From the values obtained, it is evident that the data conform to a normal distribution, as they fall within this specified range.

The experimental group demonstrated an advancement in the students' mindset, listening and speaking performances following a 4-week experiment. These gains are supported by statistically significant differences in pre- and post-test scores, with t-values below -2 and p-values less than .001, as per thresholds suggested by Everitt and Skrondal (2010).

**Table 4: Descriptive Statistics and Paired-Sample t-test Results**

| Variate | group | test | Mean | SD | Mean Difference | t |
|---|---|---|---|---|---|---|
| Growth Mindset | Intervention group | Pretest | 3.37 | 0.20 | 1.08 | 19.29*** |
| | | Posttest | 4.45 | 0.24 | | |
| | Control group | Pretest | 3.21 | 0.38 | 0.08 | 0.83*** |
| | | Posttest | 3.29 | 0.35 | | |
| Listening | Intervention group | Pretest | 24.70 | 5.43 | 3.73 | 6.36*** |
| | | Posttest | 28.43 | 4.22 | | |
| | Control group | Pretest | 26.20 | 2.61 | 1.83 | 3.34*** |
| | | Posttest | 28.03 | 2.76 | | |
| Speaking | Intervention group | Pretest | 6.25 | 0.44 | 0.76 | 6.93*** |
| | | Posttest | 7.01 | 0.52 | | |
| | Control group | Pretest | 6.86 | 0.42 | 0.08 | 0.82 |
| | | Posttest | 6.94 | 0.46 | | |

Note: SD = Standard Deviation, ***p < 0.001

Table 3 shows the results of the paired-sample t-test in the intervention group. There was a significant difference ($t = 19.29$, $p < .001$) between the growth mindset pretest (Mean (M) = 3.37, Standard Deviation (SD) = 0.20) and posttest (M = 4.45, SD = 0.24). The students demonstrated progress in their growth mindset towards English language learning, with an average score gain of 1.08.

Listening proficiency improved from M = 24.70 (SD = 5.43) to M = 28.43 (SD = 4.22), $t(29) = 6.36$, $p < .001$. Likewise, speaking scores rose from M = 6.25 (SD = 0.44) to M = 7.01 (SD = 0.52), $t(29) = 6.93$, $p < .001$. In contrast, the control group showed no statistically significant gains in growth mindset ($t(29) = 0.83$, $p > .05$) or speaking ability ($t(29) = 0.82$, $p > .05$), with only listening showing a moderate improvement from M = 26.20 (SD = 2.61) to M = 28.03 (SD = 2.76), $t(29) = 3.34$, $p < .001$. Taken together, these findings indicate notable improvements in growth mindset, listening, and speaking proficiency in English within the intervention group.

The results of the control group also revealed some changes. Although the difference between the growth mindset pretest (M = 3.21, SD = 0.38) and posttest (M = 3.29, SD = 0.35) was small, it reflected a slight increase in students' mindset scores. A significant difference was observed in listening scores. The median score of listening jumped from 26.20 (SD = 2.61) to 28.03 (SD = 2.76) with an average score gain of 1.83. However, there was no sign of differences in speaking scores pretest (M = 6.86, SD = 0.42) and posttest (M = 6.94, SD = 0.46). Overall, the findings revealed some statistically significant improvement in growth mindset and listening skills; however, there was no significant change in speaking proficiency in the control group.

Following the demographic characteristics, the analysis proceeds to hypothesis testing. The hypotheses were tested using the MANCOVA test. In this research, the pretest scores for growth mindset, English listening, and speaking served as auxiliary variables, also known as covariates, while the corresponding posttest scores were treated as dependent variables. To ensure the homogeneity of variance-covariance matrices, a prerequisite for multivariate analysis of covariance, the Box's M test was conducted.

With a calculated F value of 1.78 and Box's M test value of 11.311, yielding a p-value greater than .05, it was determined that under the assumption of equality of variance-covariance between variables in both groups within the population, the Box test insignificance suggests homogeneity in the variance-covariance matrix. In each instance, the significance level computed for Levene's test surpasses the test's significance threshold of 0.05. This outcome affirms the homogeneity of variances. Additionally, the significance level of Wilks' Lambda test (Wilks' Lambda = 0.285, F = 44.386, $p < .05$) for MANCOVA, which analyses the mean posttest scores of growth mindset, listening, and speaking among respondents from both the control and intervention groups while controlling for the pretest, is less than 0.05.

**Table 4: MANCOVA of Posttest Scores**

| Dependent variables | Change source | Sum of squares | Degree of freedom | Mean squares | F |
|---|---|---|---|---|---|
| Growth Mindset | Group | 11.839 | 1 | 11.839 | 127.074*** |
| | Error | 5.124 | 55 | 0.093 | |
| Listening | Group | 46.951 | 1 | 46.951 | 7.418*** |
| | Error | 348.103 | 55 | 6.329 | |
| Speaking | Group | 0.250 | 1 | 0.250 | 1.096 |
| | Error | 12.560 | 55 | 0.228 | |

While the paired-sample t-test revealed statistically significant improvements in speaking scores within the intervention group ($t = 6.93$, $p < .001$), the MANCOVA analysis, which controlled for baseline pretest differences, showed that this improvement was not significant when compared to the control group ($F = 1.096$, $p > .05$). This distinction is critical because the t-test demonstrates within-group progress that participants improved relative to their starting point, whereas MANCOVA assesses between-group differences while accounting for initial proficiency levels.

The lack of statistical significance in MANCOVA suggests that while intervention participants experienced speaking skill development, this growth did not substantially exceed the control group's performance when baseline proficiency was controlled. This outcome indicates that achieving measurable speaking proficiency gains at international CEFR standards within a 4-week period remains challenging, particularly for learners with limited speaking proficiency. Consequently, the MANCOVA results indicate that H1-1 (listening skills) is supported. Microlearning significantly improved listening proficiency at

international standards ($F = 7.418$, $p < .05$).

On the other hand, H1-2 (speaking skills) was partially supported. While within-group improvements were observed (paired t-test: $p < .001$), between-group differences were not statistically significant when controlling for international proficiency (MANCOVA: $F = 1.096$, $p > .05$), indicating that speaking skill development occurred but did not reach statistically measurable proficiency gains at CEFR levels within the 4-week period. Meanwhile, H1-3 (growth mindset) was also supported. Microlearning significantly enhanced growth mindset ($F = 127.074$, $p < .001$).

These findings indicate meaningful impacts of microlearning on listening proficiency and growth mindset cultivation, while revealing realistic limitations for achieving international-standard speaking proficiency gains in short-term interventions with limited-proficiency learners. Additionally, the research examined students' perceived satisfaction with microlearning, particularly in relation to its effectiveness in fostering a growth mindset and enhancing listening and speaking for professional communication. Based on 30 participants' responses, the mean satisfaction with the microlearning score was 4.47. The score indicated high overall satisfaction with the spoken classroom experience (Table 5).

**Table 5: Students' Overall Satisfaction**

| Satisfaction | Mean | SD | Level |
|---|---|---|---|
| The microlearning boosts my confidence in utilising English for communication. | 4.47 | 0.63 | Satisfactory |
| The microlearning improves my listening skills. | 4.37 | 0.56 | Satisfactory |
| The microlearning improves my speaking skills. | 4.07 | 0.78 | Satisfactory |
| I am satisfied with the microlearning experience. | 4.47 | 0.57 | Satisfactory |

### 4.2. Qualitative Analysis

According to the interview findings, all participants expressed favourable views regarding the use of microlearning approaches for learning English listening and speaking, which automatically embraces the positive mindset on their English language learning.

#### *4.2.1 Benefits of Listening Skills*

The interview data from some respondents (I2, I6, I7, and I11) reveal that engaging with microlearning videos and participating in weekly assessments on listening practice have led to increased confidence and knowledge. These videos are concise and focused on the main points of improvement in their listening skills. One interviewee (I18) expressed her positive experience.

> *"I had fun doing this project; the topics are all intriguing. I had a difficult time picking which topic to tackle first. And yes, I gained some knowledge. When I received the questions, they encouraged me to think of the best answers to provide, which I typically do not consider in my everyday life. Answering these questions also built my confidence in listening to English and thus reflects on my speaking. I am now ready to take the TOEIC listening test with strategies." (I2)*

*4.2.2 Benefits of Speaking Skills*

Most of the interviewees (I1, I2, I4, I5, I8, I9, I10, I11, and I12) found the microlearning videos and assessments intriguing and advantageous, especially the use of AI-driven assessment. They have gained more confidence in communicating in English. They are now aware of the proper way to practise speaking English, including its pronunciation, syllables, stress, accuracy, and pauses.

> *"I gained more confidence in speaking English. I now speak with strategies and techniques. I feel like I can speak English more fluently and coherently. I am now more confident in using English in daily life. AI has boosted my strengths and weaknesses in speaking. It didn't just show the score but also highlighted how I can improve myself. This way I can be a better English speaker." (I10)*

*4.2.3 Benefits of Growth Mindset*

Some insight information from interviewees (I3, I6, I7, I9, and I11) confirmed that taking the 4-week microlearning sessions allows them to enjoy studying English more, be more willing to try to speak English more, and feel less stressed when communicating in English because they now know some tips and strategies on listening and speaking English.

> *"This project provides me with the opportunity to challenge myself and exceed my limits, particularly in the speaking task." It's actually pretty fun and not too difficult to complete. It lets me know some points that I can or need to improve. All of the tips from the videos are really beneficial. Furthermore, once I become more familiar with the programme, I feel more confident to speak out my thoughts in English and be more natural when speaking. I enjoyed it." (I9)*

Insights from interviews with participants (I3, I4, and I10) confirm that engaging in the 4-week microlearning has made studying English more enjoyable for them. They are now more willing to try speaking English, and they feel less stressed when communicating in that language because they've learnt tips and strategies for listening and speaking. Additionally, they express increased confidence in themselves and feel more prepared for future career opportunities than ever before.

Nevertheless, respondents from the control group (I13, I14, I15, and I16) demonstrated a lack of self-appreciation. Despite potential improvements in posttest results, they remained uncertain about their achievements, primarily due to uncertainties surrounding accents, rules, and listening and speaking strategies.

*4.2.4 Quantitative and Qualitative Findings*

The qualitative data reveals an important distinction between learners' improvement and statistically measured proficiency gains. While MANCOVA results showed speaking improvements were not statistically significant at CEFR proficiency levels, interview data consistently demonstrated that participants experienced meaningful practical benefits, including enhanced confidence, strategic awareness, and reduced communication anxiety.

These findings reflect the differences between language skill developments in specific competencies, such as pronunciation accuracy, and proficiency

advancement, measured against the international standards. More specifically, qualitative data revealed that microlearning successfully fostered metacognitive awareness, communicative willingness, and tactical knowledge, even though these improvements did not translate to statistically significant CEFR-level proficiency gains within the 4-week period. This outcome indicates that the advancement of speaking proficiency necessitates both the strategic knowledge that microlearning effectively imparts and additional practice time to achieve international-standard proficiency expeditiously.

## 5. Discussion

When looking closely at the results, it becomes clear that the research question and hypotheses were carefully explored. The study showed that microlearning had a strong positive effect on students' listening skills and on their growth mindset. However, improvements in English-speaking ability were more modest, likely because of the short four-week intervention and the learners' initial low speaking proficiency. Still, the overall findings highlight that even within a short time, microlearning can make a real difference in how students listen, learn, and think about their own progress.

### 5.1 Microlearning and English-Listening Skills

The findings of both quantitative and qualitative data strongly support the first hypothesis, "Microlearning significantly improves English listening skills." The quantitative results revealed clear, statistically significant progress in post-test scores for the students who took part in the microlearning lessons. The interviews backed this up; students expressed that they felt more confident and comfortable understanding spoken English. One reason behind these gains lies in the structure of microlearning itself. The short, focused video lessons allowed learners to listen repeatedly in manageable segments, which made comprehension easier and less overwhelming. These results match earlier studies showing that microlearning helps young non-native speakers improve listening comprehension through frequent and bite-sized exposure (Chero, 2023).

By the end of the study, participants showed better understanding of short conversations, everyday questions, and brief talks. Several students proudly noted that they could now follow spoken English more naturally and answer listening questions correctly. Many also said that they loved the flexibility of the lessons; microlearning fit smoothly into their busy schedules and daily routines. For Thai Gen Z students used to digital platforms and mobile learning, this kind of approach offered an accessible and comfortable space to practise listening anytime, anywhere. In short, microlearning helped fill the gap in authentic listening input that many Thai university learners typically lack.

### 5.2 Microlearning and English-Speaking Skills

The analysis of the hypothesis, "Microlearning significantly improves learners' English-speaking skills," indicated that participants experienced increased ease in speaking English and utilising listening strategies following their engagement with the weekly tasks. More specifically, although there were some speaking skill improvements, it was not sufficient enough to achieve statistical significance of

the international English proficiency standard. Hence, it is why this hypothesis was not statistically significant. Based on the quantitative and qualitative data analyses, it can be explained that some students felt like they understood how to speak better English. However, when learners need to use their skills quickly, they still find it difficult to apply what they have learnt in real-life situations.

Three interrelated factors explain the differential outcomes between listening and speaking proficiency. The first factor is the cognitive demands. Listening primarily involves receptive processing and pattern recognition, whereas speaking requires real-time integration of phonological, grammatical, pragmatic, and sociolinguistic competencies simultaneously (Rayati et al., 2022). Second, the time investment necessary for observable gains differs by skill complexity. The 4-week course provided approximately 20 minutes of speaking practice per session, yet research indicates that achieving measurable CEFR-level speaking advancement requires sustained time for practising, particularly for learners starting from limited baseline proficiency. Third, speaking proficiency development involves interacting with authentic feedback.

Most specifically, while AI assessment tools effectively identify errors, they cannot engage in the negotiation of meaning and conversational repair strategies essential for developing pragmatic competence (Willoughby & Sell, 2024). These factors collectively explain why Thai learners demonstrated statistically significant listening gains but more modest speaking improvements. It is also worth mentioning that qualitative feedback indicated that learners felt more confident and appreciated the targeted AI-generated feedback on pronunciation, fluency, and coherence. This aligns with prior research (Kohnke, 2023; Prasad, 2023) suggesting that while microlearning supports pronunciation and awareness, consistent output practice and interaction are still necessary for robust speaking development.

**5.3 Microlearning and Growth Mindset**

The hypothesis, "Microlearning significantly improves learners' growth mindset towards English learning", was supported by both quantitative data and participant interviews. Across the board, students showed noticeable improvements in how they viewed themselves as English learners. Many of them reported feeling more motivated, more capable, and generally more positive about their learning journey. Before taking part in this four-week programme, several participants described feeling lost when it came to improving their English communication skills.

They often lacked confidence and had no clear idea of how to make progress in listening or speaking. But after engaging with the short, focused microlearning videos designed for this project, things began to change. The modules introduced simple but effective listening and speaking tips that students could immediately apply, and this consistent exposure seemed to make a real difference. Learners began to notice small wins, and those successes boosted their belief that improvement was possible.

These findings strongly align with the work of Dweck (2024) and Boekaerts (2016), who both emphasise that allowing learners to control their own pace can reduce anxiety and strengthen persistence, two of the most essential ingredients of a growth mindset. When students feel ownership of their learning, they stop worrying so much about making mistakes and start focusing on progress instead. Interestingly, many participants said this mindset shift didn't just help with English; it carried over to other areas of their studies as well, where they felt more confident about trying, failing, and improving.

In summary, the data suggests that microlearning can be a particularly effective approach for developing communicative skills when lessons are short, clear, and focused. For Thai learners, whose English education has traditionally emphasised grammar and written tests over speaking and listening, this represents a meaningful step forward. Microlearning not only provides structure and autonomy but also encourages a more positive relationship with learning itself.

In settings where language anxiety and low self-confidence are common (Panthito, 2018), this kind of learner empowerment is especially valuable. Through microlearning, students can reflect on what they have learnt, recognise their progress, and gradually strengthen both self-efficacy and a growth mindset. However, the results also suggest that while listening skills respond well to short-term interventions, speaking abilities typically require longer, more interactive practice to achieve lasting improvement.

**5.4 Practical Implications for Thai EFL Pedagogy**

The findings from this study offer several practical recommendations for Thai higher education institutions aiming to improve English communication skills through microlearning. First, universities could integrate microlearning as a supportive rather than a standalone teaching tool, particularly for developing listening skills and fostering a positive learning mindset. For instance, short mobile-accessible modules could target specific listening strategies, such as identifying key ideas or predicting content, and be assigned as pre-class or post-class tasks. This approach frees up classroom time for more interactive, communicative activities while allowing students to prepare and review at their own pace.

Second, when it comes to speaking skills, a blended model is essential. While microlearning can effectively introduce pronunciation awareness, useful expressions, and conversation strategies, real speaking improvement requires opportunities for live interaction and feedback. Teachers could therefore combine microlearning videos with in-class pair work, small-group discussions, and role-play sessions. These activities give students a safe environment to practise fluency, build pragmatic awareness, and learn how to respond spontaneously, skills that cannot fully develop from videos alone.

Third, the study highlights the growing potential of AI-supported assessments. These tools can serve as formative assessments, providing immediate and objective feedback on pronunciation, fluency, and grammar while reducing the anxiety that often comes with teacher evaluation. When used wisely, AI tools make the learning

process less intimidating and more continuous. Teachers, meanwhile, should use these results as guides for further coaching, ensuring that the feedback students receive translates into genuine communicative growth.

Finally, the strong improvement in learners' mindsets suggests that microlearning programmes should explicitly include self-reflection and progress tracking. When students are encouraged to notice their own progress — however small — it helps them replace frustration with curiosity and persistence. Still, it is important to set realistic expectations: for students starting from a low speaking baseline, reaching internationally recognised standards such as the CEFR level typically requires sustained effort over a full semester or even a year.

Microlearning, therefore, should be seen as a catalyst, an entry point that builds awareness, confidence, and motivation, rather than as a quick solution for full language mastery. In short, this study underscores the idea that small, consistent learning steps can lead to meaningful change. By combining microlearning, AI-supported feedback, and reflective practice, Thai EFL classrooms can move toward a more modern, learner-centred model, one that not only improves communication skills but also helps students believe in their own capacity to grow.

**5.5 Limitations and Future Research Directions**

While this study offers meaningful insights into how microlearning can support Thai EFL learners, a few limitations should be acknowledged so future research can build upon and refine these findings. First, the study's short, four-week duration limited the time available for learners to show measurable progress in speaking skills. Unlike listening, which can improve more quickly through exposure and repetition, speaking proficiency requires longer, sustained practice to reach internationally recognised standards.

Future studies might therefore extend the research period, perhaps over an entire academic term, to determine whether continued engagement with microlearning produces stronger, statistically significant gains in speaking fluency and overall communicative competence. Second, the participants in this study began with relatively low speaking proficiency levels. This starting point may have influenced the modest improvements recorded in their post-assessments. To gain a clearer picture of microlearning's true potential, future researchers could explore its effectiveness across a range of proficiency bands—from beginners to advanced learners to identify where microlearning makes the greatest difference and which learner groups benefit most from it.

Third, while AI-assisted assessments proved valuable in evaluating pronunciation and fluency, they still have limitations. Current AI tools cannot accurately measure pragmatic competence or sociolinguistic awareness, that is, a learner's ability to use English naturally, appropriately, and culturally sensitively in different social contexts. For this reason, upcoming studies might explore a hybrid assessment model that blends AI evaluation with human judgement to balance objectivity with the nuanced insights teachers can provide.

Finally, this research examined microlearning as a standalone teaching strategy. However, language learning rarely thrives through a single approach. Future investigations could examine how microlearning performs when combined with other established methods such as task-based learning, flipped classrooms, or collaborative group activities. Integrating microlearning within these approaches could reveal powerful synergies and help identify the most effective instructional combinations for enhancing students' confidence, fluency, and real-world communication skills.

## 6. Conclusion

This study set out to explore whether microlearning could effectively improve English listening and speaking skills while fostering a growth mindset among Thai university students. The findings showed that microlearning had a clear and measurable impact on learners' listening proficiency, bringing many participants closer to international standards. It also significantly strengthened their motivation, confidence, and belief in their ability to improve.

However, improvements in speaking were more modest. While the AI-based assessment data reflected limited progress in measurable fluency, follow-up interviews revealed that students themselves felt their pronunciation, vocabulary use, and overall comfort with speaking had noticeably improved. This suggests that progress in speaking may take longer to manifest in formal testing, even when learners are making meaningful strides in everyday communication.

The findings also shed light on a broader issue within Thailand and indeed across many NNES countries where education systems tend to emphasise receptive skills like reading and listening, while productive skills such as speaking and writing receive less attention. Thai undergraduates, having been taught through traditional grammar-translation and test-oriented methods from a young age, therefore excel in understanding English but struggle to produce it spontaneously.

Based on these results, this study recommends that universities consider integrating microlearning into their English programmes, particularly for speaking practice. Mobile-accessible, short-format lessons could offer students consistent opportunities to practise in low-pressure, flexible environments, making learning more engaging and aligned with the habits of digital-age learners. Nevertheless, it is important to recognise that meaningful progress in speaking requires time, effort, and a certain level of existing proficiency.

To reach international standards, learners must be given sufficient opportunities for sustained interaction and feedback. Future research should thus focus on testing microlearning interventions among students with varied proficiency levels, exploring how different starting points affect learning outcomes. Additionally, adaptive microlearning frameworks, those that automatically adjust difficulty and content to match individual learners' progress, could be developed to meet the diverse needs of all learners.

## 7. Acknowledgements

This research was supported by the Faculty of Humanities, Srinakharinwirot University, Bangkok, Thailand (approval no. SWUEC–166/2566E), ensuring compliance with ethical standards for scientific research. We extend our appreciation to the editors and anonymous reviewers for their valuable feedback. We also extend special thanks to the participants and experts whose contributions enriched this study.

## 8. References

Al-khresheh, M. H. (2020). The impact of cultural background on listening comprehension of Saudi EFL students. *Arab World English Journal, 11*(3), 349- 371. https://dx.doi.org/10.24093/awej/vol11no3.22

Baker, W., & Jarunthawatchai, W. (2017). English language policy in Thailand. *European Journal of Language Policy, 9*(1), 27–44. https://doi.org/10.3828/ejlp.2017.3.

Beedeez. (2025). *The microlearning guide 2025*. https://www.beedeez.com/en/resources/guides/microlearning-guide

Boekaerts, M. (2016). Engagement as an inherent aspect of the learning process. *Learning and Instruction*, *43*(1), 76-83. https://doi.org/10.1016/j.learninstruc.2016.02.001

Cambridge English. (2023, October 23). *Guided learning hours.* https://support.cambridgeenglish.org/hc/en-gb/articles/202838506-Guided-learning-hours

Cambridge University Press & Assessment. (2025). *Practising speaking outside the classroom*. https://www.cambridgeenglish.org/hk/learning-english/parents-and-children/your-childs-interests/practising-speaking-outside-the-classroom/

Chero, C. A. C. (2023). The impact of metacognitive instruction on EFL low-level learners' listening performance and metacognitive awareness. *International Journal of Instruction, 16*(2), 291- 306. https://doi.org/10.29333/iji.2023.16217a

Corbeil, J. R., Khan, B. H., & Corbeil, M. E. (2021). *Microlearning in the Digital Age*. New York, NY, USA: Routledge.

Dweck, C. S. (2024). Personal perspectives on mindsets, motivation, and psychology. *Motivation Science, 10*(1), 1–8. https://doi.org/10.1037/mot0000304

EF Education First (2024). *The world's largest ranking of countries and regions by English skills.* https://www.ef.com/wwen/epi/ Accessed by 1 December 2024.

Everitt, B. S., & Skrondal, A. (2010). *The Cambridge dictionary of statistics*. New York: Cambridge University Press.

Graham, C. R. (2019). Blended learning systems for 21st century learners. In N. Bharati & N. Mishra (Eds.), *Technology Enhanced Innovative Assessment: Development, Modeling, and Scoring*. Interdisciplinary Perspective (pp. 79-97). IGI Global.

Janudom, R. (2023). Instilling growth mindset to promote students' English learning behaviours and oral communication learning achievement. *PASAA: Journal of Language Teaching and Learning in Thailand*, *67*, 1-32. https://www.culi.chula.ac.th/Images/asset/pasaa_journal/file-72-908-8rpdeq909653.pdf

Kim, N. Y. (2022). AI-integrated mobile-assisted language learning: Is it an effective way of preparing for the TOEIC test in classroom environments? *English Teaching, 77*(3), 79-102. 102. https://doi.org/10.15858/engtea.77.3.202209.79

Kohnke, L. (2023). *Using technology to design ESL/EFL microlearning activities*. Springer Nature.

Krasnova, T., Kouznetsova, A., Ovsyannikova, M., & Loginova, A. (2023). Microlearning for generation Z in the foreign language classroom. *EDULEARN23 Proceedings*, 987-996.

Liu, Y. (2022). Investigating the role of English as a foreign language learners' academic motivation and language mindset in their grit: A theoretical review. *Frontiers in Psychology, 13*, 872014.

Lou, N. M., & Noels, K. A. (2020). Mindsets matter for linguistic minority students: Growth mindsets foster greater perceived proficiency, especially for newcomers. *The Modern Language Journal, 104*(4), 739-756. https://doi.org/10.1111/modl.12669

Nikkhoo, I., Ahmadi, Z., Akbari, M., Imannezhad, S., Ardekani, S. A., & Lashgari, H. (2023). Microlearning for today's students: A rapid review of essentials and considerations. *Medical Education Bulletin, 4*(1), 673-685. https://doi.org/10.22034/meb.2022.355659.1066

Pallant, J. (2020). *SPSS Survival Manual: A step by step guide to data analysis using IBM SPSS*. 7th ed. Routledge.

Panthito, B. (2018). A study of English-speaking skills of first-year students in Mahachulalongkornrajavidyalaya University. *Journal of MCU Humanities Review, 4*(2) 185 -195. https://so03.tci-thaijo.org/index.php/human/article/view/164535.

Prasad, R. K. (2023, September 25). *Microlearning videos and AI: Exploring the combo for impactful corporate training*. https://elearningindustry.com/microlearning-videos-and-ai-exploring-combo-for-impactful-corporate-training

Pundee, M. (2017). Teaching EIL: More proper English language teaching paradigm in Thai context. *Silpakorn Educational Research Journal, 15*(2), 41-52. https://so02.tci-thaijo.org/index.php/suedujournal/article/view/174899/125178

Rayati, M., Abedi, H. & Aghazadeh, S. (2022). EFL learners' speaking strategies: A study of low and high proficiency learners. *MEXTESOL Journal*, *46*(4), 1-16. https://doi.org/10.61871/mj.v46n4-5

Samala, A. D., Bojic, L., Bekiroğlu, D., Watrianthos, R., & Hendriyani, Y. (2023). Microlearning: Transforming education with bite-sized learning on the go—insights and applications. *International Journal of Interactive Mobile Technologies, 17*(21), 4-24. https://doi.org/10.3991/ijim.v17i21.42951

Shatte, A. B. R., & Teague, S. (2020, July 14). *Microlearning for improved student outcomes in higher education*. https://doi.org/10.31219/osf.io/fhu8n

Smithsarakarn, P. (2022). National language policy and English language teaching practice in Thailand: English as the language of commerce. *Manutsat Paritat: Journal of Humanities, 44*(2), 163-184. https://so06.tci-thaijo.org/index.php/mpjh/article/view/258504

Sun, L. G. & Wudthayagorn, J. (2024). Investigating beliefs, attitudes and motivation toward English language learning among Thai and Chinese undergraduate students in different study programs. *LEARN Journal: Language Education and Acquisition Research Network, 17*(1), 734-758.https://doi.nrct.go.th/admin/doc/doc_649652.pdf

Tantiwich, K. & Sinwongsuwat, K. (2021). Thai university students' problems of language use in English conversation. *LEARN Journal: : Language Education and Acquisition Research Network, 14*(2), 598-626. https://files.eric.ed.gov/fulltext/EJ1310757.pdf

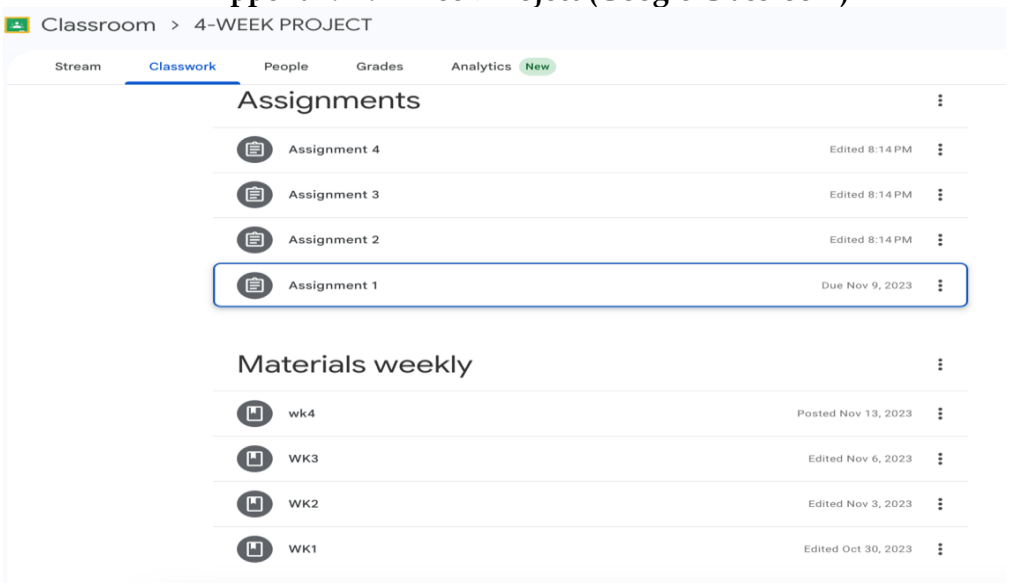
Willoughby, L., & Sell, C. (2024). Online videos for self-directed second language learning. *Language Learning & Technology, 28*(1), 1–15. https://doi.org/10.64152/10125/73545.

Wongsuwan, N. (2020). Improvement of learning speaking English as a Foreign Language. *Improvement of Learning Speaking English as a Foreign Language, 1*(2), 37-46.

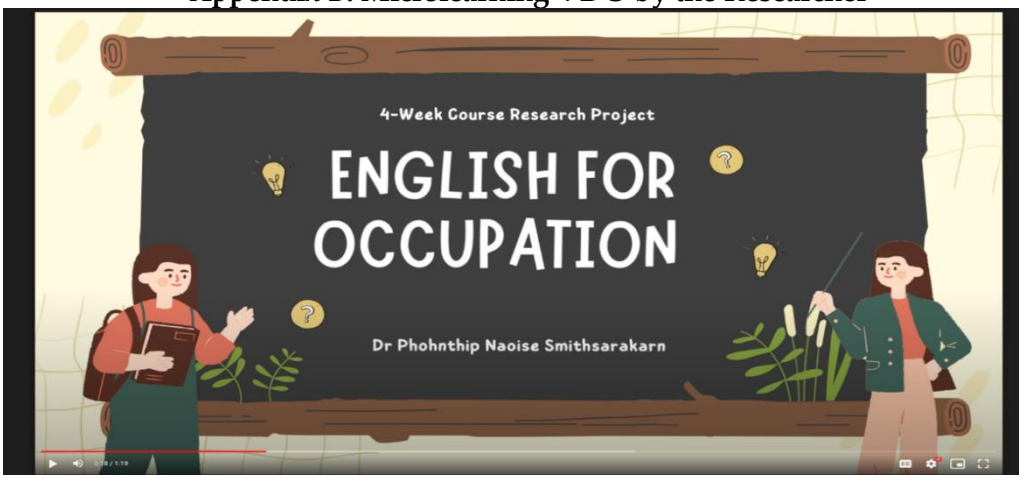
Zohrabi, M. (2013). Mixed method research: Instruments, validity, reliability and reporting findings. *Theory and Practice in Language Studies*, 3(2), 254-262.

# Appendices

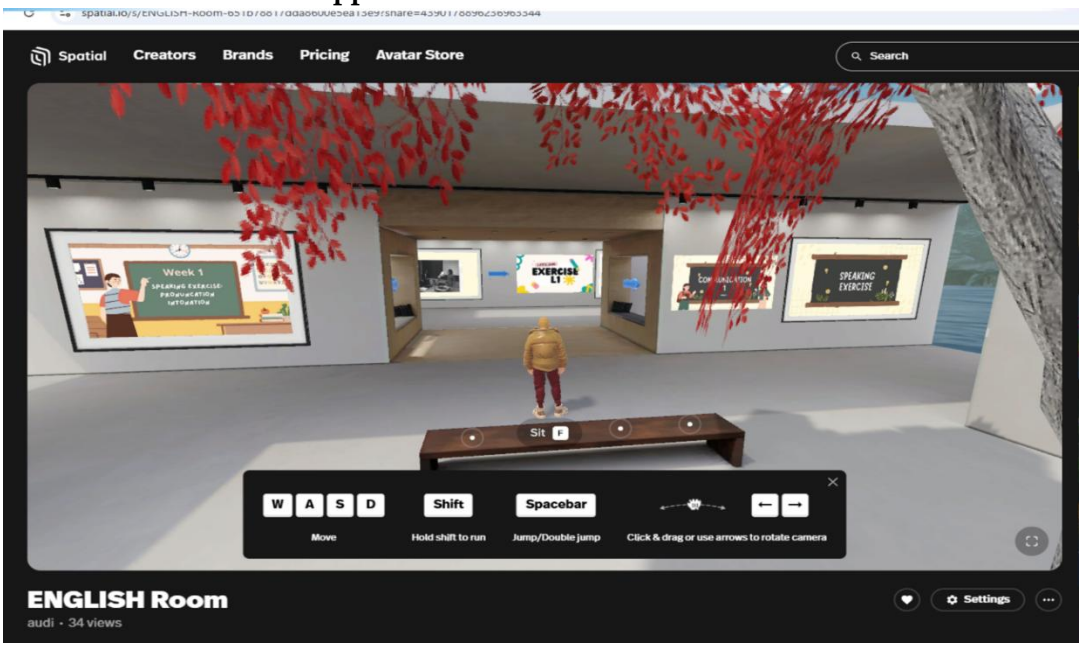
## Appendix A: 4-Week Project (Google Classroom)



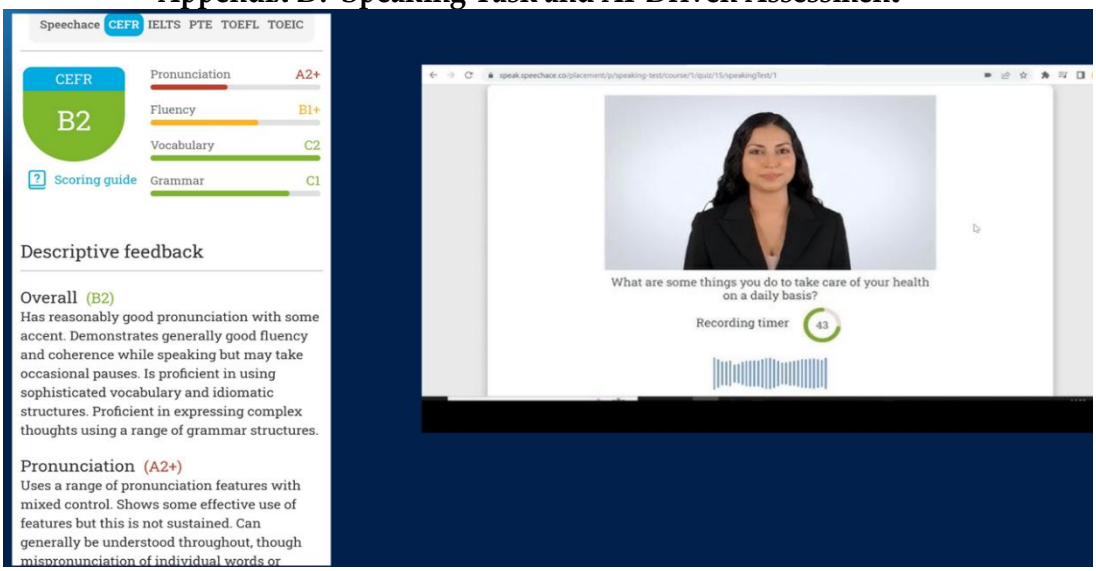

## Appendix B: Microlearning VDO by the Researcher



## Appendix C: Online Classroom




## Appendix D: Speaking Task and AI-Driven Assessment




## Appendix E: Growth Mindset and English Listening and Speaking Questionnaire

1. Your main language is used for communication.
    a) Thai
    b) English
    c) Thai and English
    d) Others
2. Number of years studying English _____
3. Aspired career (what you want to be after graduation) _____
4. In English language classes, I am happy to learn something new even if it's challenging for me.

a) Strongly disagree
b) Disagree
c) Neutral
d) Agree
e) Strongly agree

5. In English language classes, experienced challenging tasks makes me want to learn more.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree
   e) Strongly agree
6. In English language classes, I usually give up when the material becomes difficult.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree
   e) Strongly agree
7. In English language classes, I don't mind making mistakes.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree
   e) Strongly agree
8. In English language classes, if I have to work diligently, it means I'm not smart.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree
   e) Strongly agree
9. In English language classes, the more challenging the English task, the greater effort I will put in.
   a) Strongly disagree
   b) Disagree
   c) Neutral
   d) Agree
   e) Strongly agree
10. In English language classes, I rarely take criticisms as personal attacks.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
11. I dislike receiving negative feedback on my performance in English language classes, even if it aims to help me improve.
    a) Strongly disagree
    b) Disagree
    c) Neutral

d) Agree
e) Strongly agree

12. In English language classes, I feel small/intimidated when other students outperform/do better than me.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
13. In English language classes, I feel inspired when other students succeed.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
14. In English language classes, I believe I can change fundamental aspects of my personality as I learn.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree
15. In English language classes, I can alter my approach, but the core aspects of who I am remain unchanged.
    a) Strongly disagree
    b) Disagree
    c) Neutral
    d) Agree
    e) Strongly agree