The Use of“FIF ”Mobile Application in CLT to Improve English Speaking Skills of Vocational College Students in Sichuan, China

Jiaqi Cai

A Thesis Submitted in Partial Fulfillment of Requirements for

degree of Master of Education in Curriculum and Instruction

November 2024

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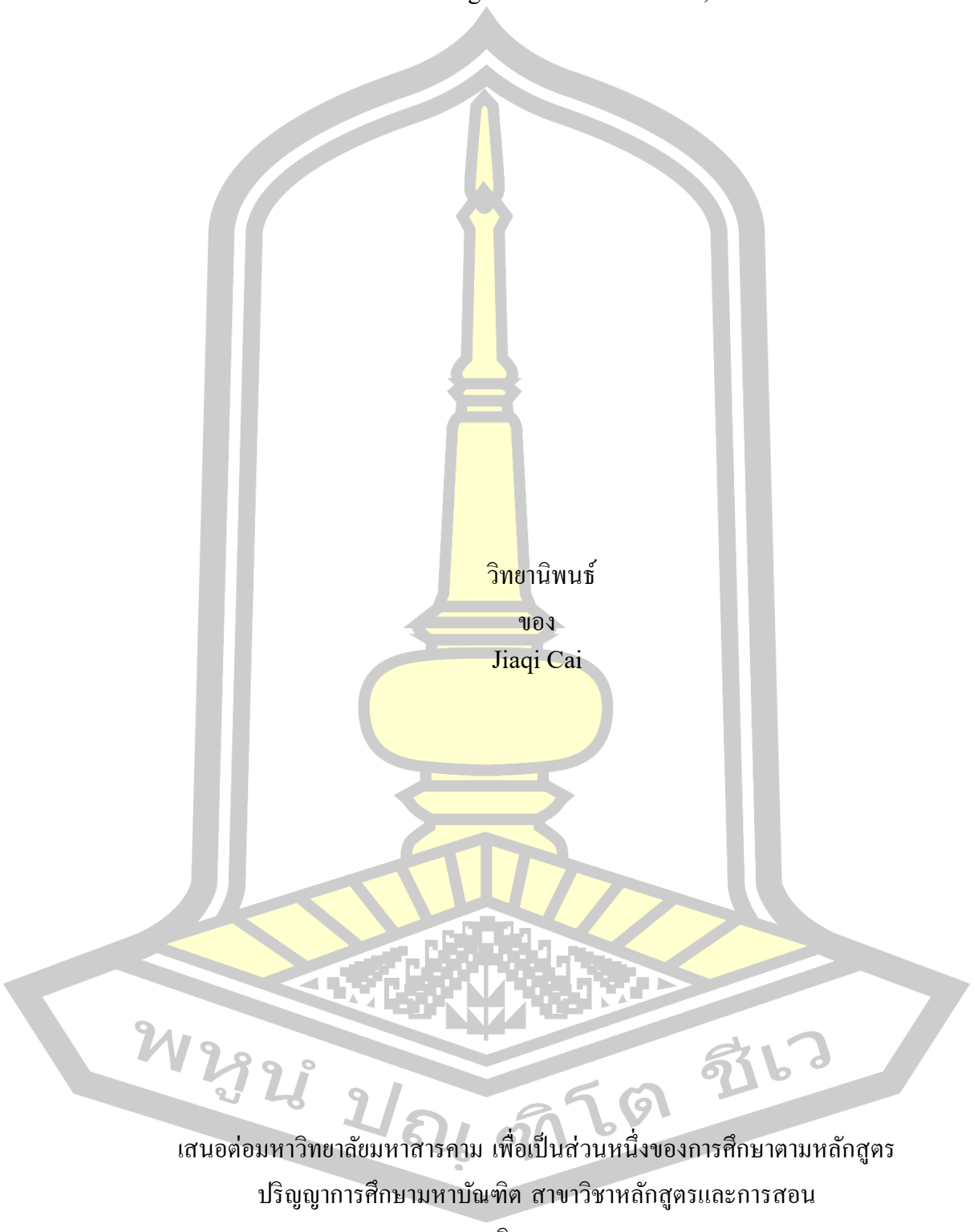

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พฤศจิกายน 2567

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DEGREE Master of Education **MAJOR** Curriculum and Instruction

UNIVERSITY Mahasarakham University **YEAR** 2024

ABSTRACT

With the rapid advancement of globalization, improving English-speaking skills is essential for Chinese vocational students, influencing academic performance and career prospects. This study integrates the FIF App with Communicative Language Teaching (CLT) to explore 1) the development of students' speaking skills, 2) the effectiveness of sustained progress during the learning process, 3) performance differences among students at varying proficiency levels within the same context, and 4) changes in learning attitudes.

This quantitative research involved 30 students from a vocational college in Sichuan, conducted over eight weeks. CET-SET was used for pre-and post-tests to assess speaking skills, the FIF App tracked weekly progress, and a Likert scale questionnaire evaluated shifts in learning attitudes.

The results reveal that about 50% of the students achieved a grade of B or higher in the post-test, with the average Read-Aoud growing by 0.85 points. Similarly, all students showed positive learning attitudes, with about 70% showing significant.

Keyword : English Speaking Skills (ESS), FIF Applications, Learning Attitude

ACKNOWLEDGEMENTS

As I reached the end of my postgraduate studies, I would like to express my gratitude to all those who had assisted, guided and encouraged me during this journey. Without your help and support, the completion of this thesis would not have been possible.

First and foremost, I would like to express my sincere appreciation to my mentor, Asst. Prof. Dr. Prasong Saihong. Thank you for your careful guidance and unremitting encouragement throughout my postgraduate studies. From the choice of research topic to the final submission of the thesis, you have given me meticulous concern and valuable advice. Your professional knowledge and attitude towards academic research have influenced and enabled continuous progress in my academic life.

In addition, I would like to express my sincere gratitude to my committee members, Asst. Prof.Dr.Sampan Thinwiangthong, Asst. Prof. Dr.Yada Thadanatthaphak, and Asst. Prof. Dr.Surachet Noirid. Your constructive comments and thoughtful suggestions have greatly improved the quality of this study. I sincerely appreciate the time and effort you have devoted to helping me complete this project.

Finally, I would like to express my heartfelt gratitude to Laura Liu, who willingly lent a hand during my difficult time. I sincerely appreciate Jiang Liao, who always stands by me and offers guidance whenever needed. I am also deeply grateful to my parents for their boundless love and support throughout my studies. Your encouragement and understanding have been my greatest motivation to persevere.

Last but not least, to all those who have helped me during my Master's studies. Because of your kindness, I successfully completed my studies and achieved this important life goal.

Jiaqi Cai

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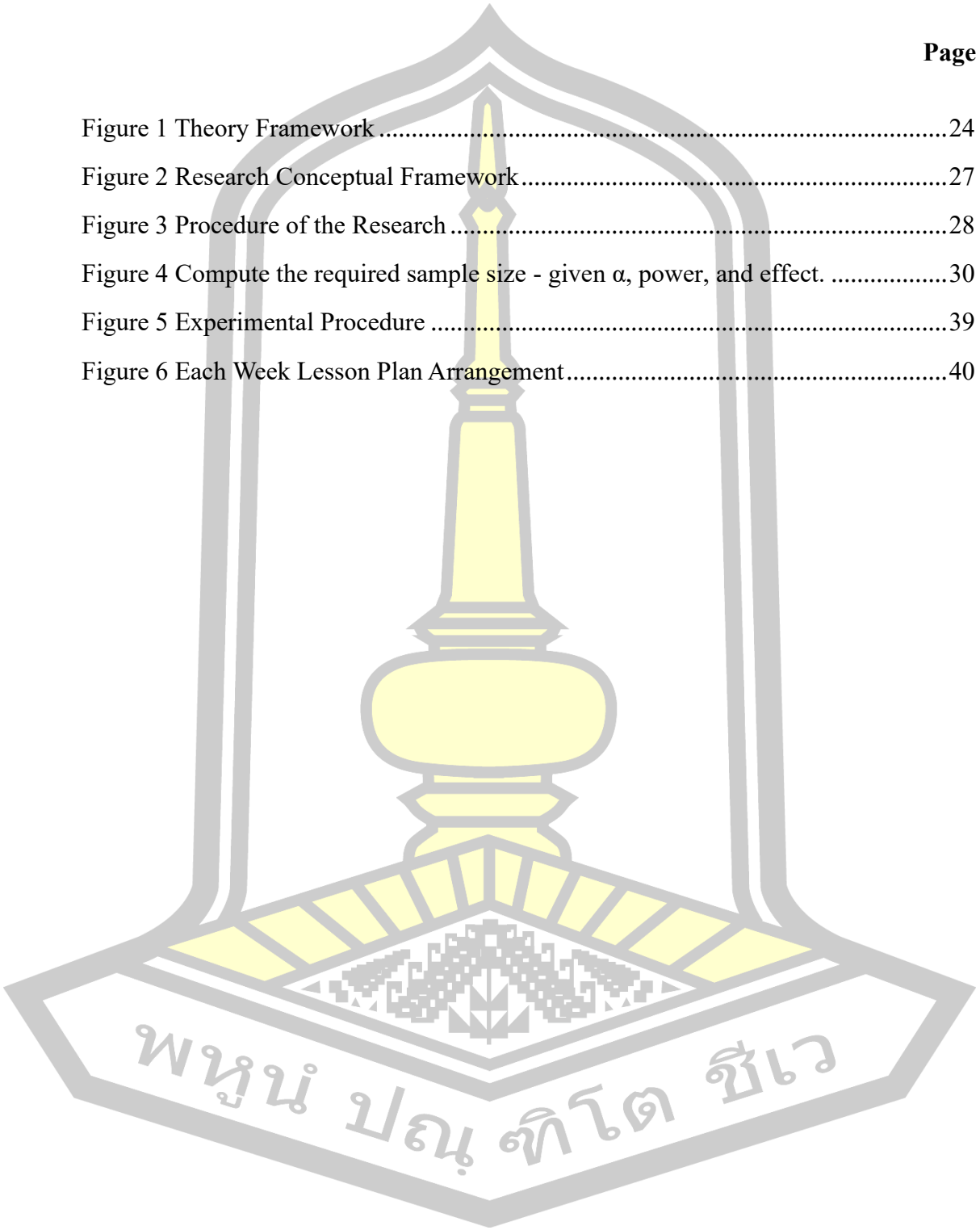

CHAPTER 1

INTRODUCTION

1. Background of the Study

With rapid globalization, the importance of English as an international common language is increasing. With the background of and in light of it, English has become a core tool for communication and cooperation among different cultures and is widely used in the fields of business, technology, and education (Khomyshak, 2024). For Chinese students in higher vocational colleges, the improvement of English-speaking skills not only affects academic performance but also has potential competitiveness in future career development. The forces of worldwide development have prompted more non-English speaking students to upgrade their English-speaking skills in order to better participate in the international workplace (Graddol, 2006; Sawalmeh & Dey, 2023).

However, students at Sichuan Vocational College of Health and Rehabilitation face a number of challenges in their learning of spoken English, in particular, the lack of sufficient opportunities for practice in the actual use of English. Such a situation is common in many higher vocational colleges, where students' learning content is often disconnected from real-life application scenarios, resulting in limited opportunities for language practice (Deng & Kitan, 2023). To further understand the current situation of students' oral English learning, this study investigated 1,640 first-year students. The survey results indicate that 76.3 percent of students believe their speaking skills are poor. A total of 77.78 percent of students expressed a desire to improve their English speaking skills, with 73.76 percent aiming to enhance accuracy, 77.78 percent hoping to improve fluency, and 66.43 percent wanting to strengthen pronunciation. However, 53.4 percent of students reported that class time is insufficient for practicing speaking, and 18.2 percent mentioned that teacher feedback is not timely enough. The lack of class time also restricts students' speaking practice, further impacting their fluency and accuracy (Zhang, 2023; Yan, 2024). Meanwhile, 65.9 percent of students cited a lack of motivation, and 59.3 percent reported studying English solely to pass exams. Existing research suggests that higher education students generally lack willingness to

learn, particularly in English speaking, where they demonstrate low engagement and insufficient interest (Pan & Dapat, 2023; Sitorus et al., 2022). Learning attitudes have a direct impact on language learning, with positive attitudes especially able to promote the development of speaking skills (Wang & Liu, 2024; Anokye, 2022).Studies have shown that students with a positive attitude towards learning English achieve higher scores in speaking assessments. For instance, students with a positive outlook scored significantly higher in general speaking, pronunciation, fluency, and comprehensibility compared to those with a negative attitude(Wahyu et al., 2014).

Additionally, the learning environment and teachers' motivational strategies play a crucial role in shaping students' learning attitudes (Mushaathoni & Cekiso, 2022). Furthermore, 68 percent of students expressed a need for timely feedback, 62.88 percent desired more personalized learning designs, and 44.2 percent suggested regular speaking assessments. This phenomenon suggests that students face challenges not only in improving their English-speaking skills but also in changing their learning attitudes.

Against this background, the FIF App, as a personalized mobile learning tool combined with the Communicative Language Teaching (CLT) approach, provides students with a flexible way of practicing speaking English. It has been shown that mobile learning tools, such as FIF, which provide a learning experience with high interactivity and instant feedback, can improve students' language skills (Șișianu & Pușcașu, 2024). Some existing studies have also shown that Communicative Language Teaching (CLT) is effective in enhancing students' communication skills through language interaction in authentic scenarios (Liu, 2014; Faridha, 2024).

Therefore, it is of significant research value to explore the practical application effects of the combined use of FIF App and CLT among higher education students. Not only can the combination of M-Learning and CLT improve language learning outcomes, but it can also promote students' autonomy learning skills as well as enhance their positive attitudes towards English learning (Garzón et al., 2023; Haerazi, 2023).

2. Significance of the Study

This study investigates the use of the FIF APP in Communicative Language Teaching (CLT) to improve vocational college students' English-speaking skills and learning attitudes. Its significance is reflected in the following aspects:

1. Improving English Speaking Skills

This study confirms that integrating the FIF APP with CLT effectively enhances students' English-speaking skills. Through the combination of CET-4 speaking tests and FIF APP weekly assessments, the research ensures that students' progress is continuous and reliable, providing scientific support for optimizing English-speaking instruction.

2. Enhancing Attitudes

The research emphasizes the positive impact of the FIF APP on students' learning attitudes, focusing on four key dimensions: interest, motivation, autonomy, and confidence. The results show that the APP strengthens language skills, boosts student motivation, promotes autonomy, and fosters confidence in language use.

3. Optimized Teaching

This study provides empirical evidence for integrating mobile applications with classroom instruction. The findings demonstrate that using the FIF APP within the CLT framework optimizes teaching practices and improves educational outcomes. These insights offer practical guidance for the future design and improvement of mobile learning tools in English education.

3. Purposes of the Research

This study aims to explore the impact of using the FIF App with Communicative Language Teaching (CLT) on improving English-speaking skills and transforming learning attitudes among vocational college students. Specifically, it focuses on four critical dimensions of learning attitude: interest, motivation, autonomy, and confidence. Through quantitative analysis and data collection from the questionnaire, the objectives of the study are:

1. Evaluate the Comprehensive Improvement of Students' English-Speaking Skills

Conduct a thorough analysis of students' oral mastery by comparing pre-and post-test results and transitions in proficiency levels. Focus on critical dimensions such as

Accuracy and Range, Length and Coherence, Flexibility and Relevance, Pronunciation, Fluency and Integrity mastery.

2. Analyze performance differences among students at varying proficiency levels.

Perform a stratified analysis of students with higher, medium, and lower groups. Compare their pre-and post-test results and performance in essential skill dimensions to uncover patterns of improvement and variability.

3. Track students' progress using the FIF App to validate sustained improvement.

Employ weekly FIF tests over eight weeks to monitor students' gradual progress and ensure that the observed improvements are consistent and not coincidental.

4. Examine changes in students' learning attitudes by analyzing questionnaire results.

Explore shifts in student interest, motivation, autonomy, and confidence to gain valuable insights for refining teaching strategies.

4. Hypotheses of the Research

Hypothesis 1: Using the FIF App in CLT will significantly improve the English-speaking skills of vocational college students (evaluated through CET4-SET and weekly FIF tests).

Hypothesis 2: Using the FIF App in CLT will bring a positive learning attitude in four dimensions of vocational college students (measured through Likert-scale questionnaires).

5. Scope of the Research

1. Research object

The population of study is the first-year students at Sichuan Vocational College of Health and Rehabilitation, who are relatively consistent in their English-speaking skills

but suffer from a shortage of speaking skills in general and low autonomy in learning. It matches the objectives of this study greatly.

2. Research design

During the eight-week experimental period, the FIF App was used in combination with the CLT pedagogy to promote students' English-speaking skills by involving them in speaking practice both inside and outside the classroom; the overall speaking skills of the students were quantified by using the CET4- SET National Standardized Speaking Test; the FIF Tests tracked the whole process of the experiment; and changes in their learning attitudes were evaluated by questionnaire surveys.

3. Research Tools

Using quantitative statistical methods, the FIF App was used as a daily teaching, after-class practice and measurement tool; the CET4-SET test was used as a standardized instrument to evaluate students' English-speaking skills. A comparison of the pre and post-tests and FIF tests was performed to analyze the improvement of student's English-speaking skills; meanwhile, a Likert scale questionnaire was used to investigate the change in students' attitudes towards learning English and to verify the research hypotheses.

4. Research Variables

Independent variables: FIF App; Communicative Language Teaching (CLT) method

Dependent Variables: English-speaking skills (ESS); learning attitudes

6. Definition of Terms

1. FIF App: a language learning application that focuses on English-speaking skills training. In this study, the application was used to provide functions such as simulated dialogue, pronunciation correction and instant feedback to help students improve their English-speaking skills through an interactive and personalized learning experience.

2. Communicative Language Teaching (CLT): a teaching method that develops language skills through real-life language communication scenarios, with an emphasis on practical application and interactive learning. In this study, CLT is used in conjunction with the FIF App to improve students' speaking skills in an autonomous language environment.

3. English-speaking skills (ESS) refers to students' skills in speaking and communicating in English, including fluency, integrity, pronunciation, vocabulary and grammar accuracy, and other skills. This study relies on the CET4-SET Standards and the FIF APP dimensions to quantify students' English-speaking skills.

4. Learning attitudes: the interest level of acquiring knowledge. In this study, the shift in students' attitudes toward English-speaking practice was evaluated through a structured questionnaire administered after using the FIF App—the assessment aimed to capture changes in students' interest, motivation, autonomy and confidence.

5. CET4-SET: The speaking test section of the College English Test Brand 4 and 6 introduced by the Ministry of Education of China. In this study, it was used to assess students' comprehensive English-speaking skills.

CHAPTER II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

This chapter reviews relevant literature and theoretical concepts, analyzing the current state of English teaching in Chinese vocational colleges and proposing solutions to existing problems by integrating CLT, MALL, ESS, and learning attitudes. Substantial theory support and results from domestic and international references are cited to provide a reliable academic foundation. The text also addresses the tools available and the existing gaps.

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1. English Teaching in Chinese Vocational Colleges

1.1 Positioning of Chinese Vocational Colleges and the Current State of English Teaching

Chinese vocational colleges mostly aim to cultivate practical and technical talents; thus, the curriculum are more focused on vocation-related skill subjects, while English tends to exist as a tool course. While the importance of English has increased due to globalization, students' attitudes towards learning English, especially speaking, are still low, and the limited opportunities for practice have led to a general weakness in students' English-speaking skills in many vocational colleges (Cao et al., 2024; Deng & Kitan, 2023).

Meanwhile, English teaching in vocational colleges usually focuses on cultivating test-taking ability, and the teaching mode is textbook and exam-oriented, with less emphasis on practical use and oral expression (Qiuxia & Jinyao, 2019). Although this teaching style can help students pass exams, it does not adequately develop their skills in practical application of English, particularly communication skills related to future professional careers (Zhao, 2020).

1.2 Characteristics of Vocational College Students and Challenges in English Learning

Generally, students in vocational colleges prioritize courses related to their majors, viewing English learning primarily as a means to pass course examinations (Deng & Kitan, 2023). Furthermore, the English-speaking skills of vocational college

students are variable, especially those from different educational backgrounds, who show wide differences in their English-speaking skills (Zhang & Osman, 2024).

In general, students lack a long-term understanding of English acquisition, particularly in speaking, and there are insufficient opportunities for exercise. Due to limited equipment and facilities, the English learning environment in vocational colleges cannot provide adequate support for students, resulting in a negligible improvement in their speaking skills (Deng & Kitan, 2023; Ni, 2019). Studies have shown that students lack confidence and autonomy, and they experience problems such as vocabulary retention and anxiety about speaking in public (Mi, 2024; Xia, 2019).

1.3 Case Studies of English Teaching in Sichuan Vocational Colleges

Students' English learning at Sichuan Vocational College of Health and Rehabilitation, for example, faces similar challenges to other vocational colleges. Most of the students have a weak foundation in English, and their main purpose for learning English is to pass exams, with little need for practical skills (Deng & Kitan, 2023). Despite the teachers' adoption of the Communicative Language Teaching (CLT) method for English classes, the limited number of teachers and equipment has hindered its full implementation (Lu et al., 2024).

According to the findings of previous surveys, students are less engaged and willing to learn English, and their learning attitudes further decrease their English-speaking skills development (Pham & Nguyen, 2021). Even though students are aware of the importance of English for their future career development, they still show disinterest in studying English (Deng & Kitan, 2023).

1.4 The Necessity of Improving the Effectiveness of English Teaching in Vocational Colleges

As globalization accelerates, vocational college students require not only proficiency in test-taking skills but also proficiency in English usage in the job environment (Simanjuntak et al., 2024). Especially for those students who have a clear direction for their career development, their English language skills will become their core competitive advantage in the internationalized workplace (Zhao, 2020).

It is critical to provide students with more interactive and practical learning experiences by combining teaching tools such as FIF APP and Communicative

Language Teaching (CLT) (Alda, 2023; Criollo-C et al.) to improve students' English-speaking skills and learning attitudes. Blended learning and flipped classroom models can assist students in applying English more effectively in real-life situations (Li, 2021; Min, 2024). Furthermore, studies have shown that using mobile-assisted language learning (MALL) tools significantly improves students' English-speaking skills and increases their appetite for learning (Nguyen, 2023).

1.5 Modernization and Reform of Teaching Methods

Using blended learning methods, such as combining online courses with traditional teaching and integrating methods with big data, can improve the effectiveness of English teaching in vocational colleges. This type of approach not only improves students' performance in online courses, but also enhances students' independent learning and practical skills (Teng, 2024). The flipped classroom model is also gaining popularity, shifting the focus from teacher-led learning to student-led learning. This shift is important for improving the quality of teaching and adapting to the needs of vocational education (Li, 2021).

English language teachers in vocational colleges widely use task-based language teaching (TBLT) to assist students in creating tasks and projects relevant to their future careers (Chen, 2024). However, to ensure its effectiveness, the implementation of this concept must align with the students' skill level and vocational needs (Min, 2024). It is also critical to choose a multi-objective, individualized, and stepped teaching model to meet the diverse needs of vocational students, who have different English-speaking skills and attitudes toward learning (Li, 2022).

1.6 Teacher Development and Support

English teachers in vocational colleges play a key role in education reform. The aim of professional development programs for teachers is to shift the concept of English language teaching from a skills-based perspective to a social practice view, which is essential for developing students' comprehensive prospects (Xu, 2023). More interactive and multimedia teaching methods significantly increase student motivation and learning outcomes (Deng & Kitan, 2023). Additionally, teachers' self-efficacy and training opportunities directly influence the quality of teaching (Zhang & Sihes, 2024).

2. Communicative Language Teaching

2.1 Theoretical background

Communicative Language Teaching (CLT) originated in the 1970s as a response to traditional pedagogues, particularly the Grammar-Translation Method and the audio-visual method. These traditional approaches tended to focus on the teaching of grammar and syntax while ignoring the practical application of language as a communicative tool (Richards & Rodgers, 2001). In contrast, CLT emphasizes the functionality of language and focuses on the development of learners' skills to use language in authentic communicative contexts. Hymes (1972) proposed the concept of "communicative competence," which is the theoretical cornerstone for the development of CLT and emphasizes that language learning is not only about acquiring knowledge of the language but also the skill to use the language to communicate. It emphasizes that language learning is not only the acquisition of language knowledge but also the skill to use language to communicate.

The communicative competence framework proposed by Canale and Swain (1980) consists of four dimensions: grammatical competence, sociolinguistics competence, discourse competence, and strategic competence, and this framework has contributed to the widespread use of CLT. Grammatical competence is concerned with the correctness of language forms, while sociolinguistics competence emphasizes the adaptability of language in different social contexts. Discourse competence is concerned with the coherence and articulation of linguistic structures, while strategic competence refers to the skill of language learners to solve problems and sustain communication in communication. Savignon (2002) expands on this by further expanding the notion of communicative competence and emphasizing the relationship between cultural knowledge and linguistic competence. She points out that learners need not only to master the rules of the language but also to be able to understand and utilize the specific contexts of the target language culture.

Meanwhile, Widdowson (1978) put forward the discrepancy between linguistics and actual communicative needs and argued that language teaching should shift from structural teaching to functional and meaningful teaching. This viewpoint provides a theoretical basis for the practical application of CLT and further promotes its wide application in the field of language teaching.

However, Bax (2003) questioned the practical application of communicative competence, arguing that challenges remain in the application of its theory in cross-cultural contexts. He points out that teachers and students in different cultural contexts may have different understandings of communicative competence, thus affecting the effectiveness of CLT. Therefore, the implementation of CLT needs to be rationally adapted by teachers to specific cultural contexts to ensure that learners can effectively improve their language proficiency.

2.2 Application of CLT in different educational settings

As a learner-centered teaching method, CLT has been widely used in non-native English-speaking countries around the world, especially showing obvious advantages in enhancing language communicative competence (Liu, 2014). In Europe, CLT has gradually become a mainstream language teaching method because it can effectively improve students' communicative competence and help them flexibly use language in real situations (Nunan, 2004). In addition, in South America and the Middle East, the application of CLT has begun to be recognized, and focusing on students' language practice has led to a significant improvement in their language proficiency.

However, differences in cultural backgrounds and education systems pose challenges to the promotion of CLT. For example, Butler (2011) pointed out that the education systems in Asian countries emphasize the authority of teachers, and the traditional teacher-centered teaching model is still dominant. This cultural context conflicts with the interactive, learner-centered philosophy advocated by CLT. Especially in China, although teachers theoretically recognize the effectiveness of CLT, many teachers still choose the traditional grammar-translation method due to the pressure of the college entrance examination and the influence of traditional teaching concepts (Li, 2010). This phenomenon not only reflects the limitations of the promotion of CLT in different educational contexts but also illustrates the problem of cultural adaptation in cross-cultural teaching.

The successful implementation of CLT in different cultural contexts relies on teachers' adaptability and creativity. Taking Japan as an example, Nishino (2012) found that although CLT was beginning to be implemented in Japan's education policy, its application was still limited due to the lack of adequate training and support for teachers. Teachers often do not have a deep enough understanding of

communicative competence in their actual teaching, resulting in less effective implementation of CLT than expected. In addition, teachers' language proficiency and lack of teaching resources also affect the promotion of CLT in developing countries. Therefore, in the process of implementing CLT, various factors such as the education system, cultural background and teacher resources need to be taken into account.

2.3 CLT cultural adaptation and challenges

The implementation of CLT does not only depend on the teaching of the language itself but must also take into account the influence of the cultural context. In many countries influenced by Confucianism, the education system still favors a teacher-as-authority model, and students usually rely on teachers' guidance with low classroom participation. This contradicts CLT's goal of emphasizing interactivity and learner autonomy (Wei et al., 2018). For example, in China, many teachers and students have difficulty in fully adapting to the teacher-student interaction model advocated by CLT because it is contrary to the teacher-centered approach to teaching and learning to which they are accustomed (Littlewood, 2007).

In addition, teachers' acceptance of CLT and their skill to implement it also affect its effectiveness in different cultural contexts. In some cultures, teachers' identification with an authoritative role makes it difficult for them to relinquish their traditional control over teaching and learning, which limits the promotion of CLT to some extent. Meanwhile, students in these cultures may be reluctant to actively in interactions in the classroom because they are more accustomed to passively receiving knowledge. To overcome these cultural barriers, the application of CLT in these regions needs to be adapted to the local educational environment. For example, by gradually introducing interactive teaching elements in CLT instruction, students can gradually adapt to the new teaching mode.

In terms of cultural adaptability, Liu (2005) suggests that CLT should be implemented with a focus on the diversity of cultural contexts and that teachers should give due consideration to students' cultural needs and learning habits when designing teaching activities. By incorporating local cultural and communicative needs, CLT can be more widely applied globally.

3. Mobile-assisted learning technology (MALL) and FIF applications

3.1 The rise of MALL and its use in language teaching and learning

With the rapid development of mobile Internet technology, mobile-assisted language learning (MALL) has become an important part of modern language teaching and learning.MALL refers to language learning through portable mobile devices such as smartphones and tablets, which breaks the time and space constraints of traditional classroom learning and enables learners to control their learning progress more autonomously (Kukulska-Hulme, 2012). In the process of language learning, learners can not only access a variety of learning resources through mobile devices but also participate in interactive learning tasks, such as speech recognition and real-time dialog simulation, through apps so as to enhance their language use skills.

Compared with traditional language learning methods, MALL has significant advantages. First, MALL is highly personalized and flexible, and learners can independently choose the content and pace of learning according to their own learning needs and schedules (Stockwell, 2012). Second, MALL provides instant feedback functions through various learning applications to help learners correct errors in time and reinforce the correct language acquisition process. For example, Chen et al.'s (2019) study found that learners who used MALL for vocabulary and speaking training showed higher motivation and learning efficiency. In addition, the mobility of MALL allows it to integrate language learning scenarios in daily life and achieve continuous language practice effects through fragmented learning time.

The promotion and adoption of MALL face some challenges, however. Despite the great convenience provided by MALL, Godwin-Jones (2011) points out that the dependence of mobile devices on networks and the uneven distribution of devices may affect their effectiveness in different learning environments. In areas where the technology is less developed, the instability of the network may lead to interruptions in learning and affect learners' effectiveness. Therefore, the researcher suggests that the promotion of MALL should be rationally designed with local technological conditions and teaching resources to ensure its effectiveness.

3.2 Effectiveness of FIF applications in language learning

The FIF App is typical of MALL and focuses on improving English-speaking skills. It combines language-simulated conversations, pronunciation correction and

instant feedback features, aiming to help learners improve their speaking skills through constant interaction and practice. Liao and Tong (2019) point out in their study that FIF enables learners to use language in real contexts by simulating realistic conversation scenarios while providing instant feedback to correct errors in language use. This real-time feedback mechanism is especially prominent in pronunciation training, where FIF can provide accurate pronunciation correction suggestions by analyzing learners' speech input (Purnama et al., 2023).

One of the best features of FIF is its pronunciation correction function. In traditional language teaching, it is difficult for teachers to provide comprehensive correction of each student's pronunciation. In contrast, the FIF App analyzes students' speech data through intelligent algorithms and provides instant feedback on pronunciation to help students improve their pronunciation effectively. This feature greatly improves students' phonological awareness, especially among non-native English learners, and can significantly reduce errors in speech and intonation (Xu, 2021).

In addition, FIF App support learners to practice independently outside of class time, which is highly compatible with the fragmented nature of mobile learning. By practicing language anytime and anywhere, students can gradually integrate English learning into their lives and thus acquire language skills more naturally (Zhao & Liu, 2020). This flexible learning mode provides students with more autonomy and practice opportunities and enhances their confidence in speaking practice.

The excessive reliance on technology inherent to MALL applications such as FIF also presents certain challenges, as Godwin-Jones (2011) has observed. In the case of poor network conditions or inadequate equipment, the learner's experience may suffer, which in turn reduces learning outcomes. In addition, the functions of application such as FIF tend to focus on specific language skills, such as pronunciation correction and oral fluency enhancement. However, support for comprehensive language application skills, such as grammar and writing, is more limited. Therefore, in actual teaching, teachers can use FIF as a complementary tool for classroom teaching and combine it with other teaching methods in order to comprehensively improve students' language skills.

4. English-speaking skills

4.1 Components and importance of English-speaking skills

English-speaking skills can be categorized into a number of core components that together influence students' performance in real communication scenarios. The main dimensions include pronunciation, fluency, integrity, vocabulary and grammar accuracy, length and coherence, and flexibility and appropriateness (Hughes, 2010). These dimensions help to assess students' knowledge of the language and their skills to use in different situations.

Vocabulary and grammar accuracy are the foundation of effective expression. Richards and Schmidt (2013) state that the mastery of grammatical rules enhances the standardization of language, reduces grammatical errors and improves communicative effectiveness. Grammatical accuracy is essential to ensure that students' expressions conform to the rules of standard English, and it also affects their performance in different contexts.

The use of length sentences and difficulty structures can enhance the logic and coherence of language expression. Skehan (1998) pointed out that the skill to use complex sentence patterns helps students to be more hierarchical in their expression and to be able to articulate complex ideas in a clear and detailed way. Norris and Ortega's (2000) study showed that teaching students to master complex sentence patterns can significantly improve their expression, especially in more formal communication situations.

Flexibility and appropriateness are students' skills to adapt their language expressions to different communicative situations. Kormos and Dénes (2004) showed that linguistic flexibility can help learners to better adapt to changing communicative environments and improve the appropriateness and communicative effectiveness of language expressions. Celce-Murcia et al. (1995) further pointed out that the enhancement of linguistic appropriateness is particularly important for intercultural communication, which can effectively avoid cultural misunderstandings. Communication can effectively avoid cultural misunderstanding.

Fluency refers to the coherence and naturalness of a student's oral expression, which reduces unnecessary pauses and leads to smoother communication. Lennon (1990) suggests that increased fluency not only improves the speed of the student's

language output but also increases the listener's comprehension. Koponen and Riggenbach (2000) emphasize that fluency can be improved through a great deal of actual communicative practice.

Pronunciation and intonation play a key role in effective communication. Derwing and Munro (2005) point out that clear pronunciation and appropriate intonation help the listener to understand the message correctly, and Pronunciation training can gradually improve learners' pronunciation accuracy. Improvement of pronunciation and intonation requires long-term practice and feedback, but it has a positive effect on improving the overall effectiveness of speaking skills.

Finally, integrity refers to whether students are able to convey information completely when they express themselves, avoiding unclear semantics or incoherent expressions. Bygate (2009) argues that complete linguistic output is essential to ensure effective communication. This is supported by Swain's (2005) output hypothesis, which suggests that language learners, through the practice of complete output, can further consolidate the language knowledge they have acquired and use it effectively in actual communication.

4.2 Strategies for improving speaking skills

In order to effectively improve learners' oral English skills, researchers have proposed a variety of teaching strategies. Task-based language teaching (TBLT) is one of the more effective ones, and according to Ellis (2003), TBLT naturally improves fluency and accuracy of language output by allowing students to practice language in the process of accomplishing specific tasks. Task-based teaching puts the actual use of language at the core of teaching and learning. By simulating daily life task situations, such as shopping, asking for directions, or discussing problems, learners can gradually improve their practical use of language in the process of completing the tasks. Nunan (2004) further points out that TBLT not only enhances students' confidence in language output but also stimulates their linguistic creativity through the authenticity of the tasks, enabling them to improve their fluency and accuracy of language output naturally. Nunan (2004) further states that TBLT not only enhances students' confidence in language output but also stimulates their linguistic creativity through the authenticity of the tasks and makes them more comfortable in using language in different communicative situations.

In addition to TBLT, the introduction of mobile-assisted language learning (MALL) technologies has also provided new paths to improve English-speaking skills. Mobile applications such as FIF provide learners with rich interaction scenarios and instant feedback, helping them to continuously improve their language use skills in real-life communication (Stockwell, 2010). A distinctive feature of these applications is their flexibility and convenience, which allows learners to practice language anytime and anywhere, especially in terms of pronunciation and fluency. Through MALL technology, learners not only have access to standard language input but also can enhance the accuracy and naturalness of their speaking through simulated conversations and pronunciation correction features. For example, the FIF App provides pronunciation feedback and instant correction, which can help learners realize their pronunciation problems and correct them in time to achieve a more standard pronunciation level (Purnama et al., 2023).

Although both the MALL technology and the TBLT approach have been remarkably effective in enhancing speaking skills, some challenges need attention. For example, MALL's dependence on technological devices and networks may be limited in resource-poor environments, and teachers need to ensure that tasks are designed to be moderately difficult in order to avoid student frustration. Therefore, when using these strategies, teachers need to adapt them to the specific needs of their students and the teaching and learning environment in order to achieve optimal learning outcomes.

5. The Impact of Learning Attitude on English Learning

5.1 Definition of attitudes in relation to speaking skill

Learning attitudes are considered to be one of the key factors influencing language learning outcomes. According to Gardner's (1985) sociolect-educational model, learners' attitudes directly affect their autonomy and motivation, which in turn have a profound impact on language learning outcomes. Positive attitudes can motivate learners more actively in the language learning process and maintain a higher sense of commitment and persistence in the face of challenges. Especially in speaking English learning, an attitude not only affects students' attitude but also has a direct effect on

the improvement of speaking skills; Calotes (2023) pointed out that a positive attitude can effectively improve students' speaking fluency and accuracy. By establishing a positive learning environment, students are more likely to take the autonomy to speak in classroom interactions and out-of-class exercises and continue to improve their proficiency in language skills use.

The core of learning attitudes can be divided into four dimensions: interest, motivation, autonomy, and confidence. These dimensions have a significant impact on oral learning outcomes:

5.1.1. Interest

Interest is a major driver of learning. Research has found that students with higher levels of interest devote more time and effort to oral learning, which in turn promotes the development of speaking skills (Krapp, 1999; Gardner, 1985).

5.1.2 Autonomy

Autonomy is a key factor in the success of oral learning. Students with a high level of autonomy are more inclined to organize learning tasks and actively select suitable learning resources, thereby enhancing their language application skills (Deci & Ryan, 2000; Littlewood, 1996).

5.1.3 Motivation

Motivation plays a critical role in language learning. Students who are more motivated tend to show greater engagement and resilience in their learning processes, which positively impacts their language proficiency (Dörnyei, 2001).

5.1.4 Confidence

In oral learning, confidence enhances students' willingness to express themselves, further improving their fluency and accuracy in speaking (MacIntyre et al., 1998; Bandura, 1997).

5.2 Impact of m-learning technologies on learning attitudes

With the development of mobile learning technology (MALL), the improvement of learning attitudes has gradually become a hot research topic. Loi and Ang's (2022) study found that students' positive attitudes toward using mobile learning tools such as FIFApp were significantly and positively correlated with their attitude and motivation in language learning. The flexibility and convenience of M-Learning technologies

provide students with any time, anywhere learning opportunities, breaking through the time and space constraints of traditional teaching. Students are able to take more control of their learning progress through personalized learning paths, and motivation helps to increase their interest and autonomy in learning. In addition, Amalia et al. (2023) showed that learning with mobile devices can stimulate students to be more interest about learning, which in turn motivates them to invest more time and energy in speaking English learning. This positive learning attitude not only improves students' learning experience but also enhances their language use.

Through the application of MALL technology, students' attitudes towards learning were improved, and they showed greater resilience and attitude in facing language learning challenges. This change in attitude not only enhances the effectiveness of English learning but also strengthens students' confidence in communication.

6. Theoretical Foundation

6.1 Constructivism

Constructivism is a learner-centered learning theory that holds that knowledge is actively constructed through the learner's interaction with the environment, materials, and others (Piaget, 1970; Vygotsky, 1978). In the constructivist perspective, learning is not merely the passive reception of information but an active process of exploring, expanding and adapting existing cognitive structures, and it is in this process that knowledge is constructed. Learners construct their understanding of new knowledge through interaction with the environment and social interaction.

6.1.1 Situated learning and social interaction

Constructivism emphasizes the two core concepts of contextual learning and social interaction. According to this theory, knowledge acquisition should occur in real or simulated contexts in order for learners to effectively acquire knowledge and apply it to real-world problems (Brown et al., 1989). In language learning, FIF applications provide students with a real-life communicative language situation through simulated conversations and instant feedback, allowing students to construct and optimize their language skills in the application (Nicol & Macfarlane-Dick, 2006). This not only enhances the practical application of language but also motivates students to adjust and revise their language use in the interaction continuously.

Social constructivism Further emphasizes that learning is a social process where knowledge is constructed through interaction with others (Vygotsky, 1978). In this study, the FIF App provided students with the opportunity to simulate real-life language scenarios through a virtual interactive platform, helping them to continuously improve their language proficiency through interaction with the system and their peers. However, the study revealed that in the short term, despite the significant improvement in students' pronunciation and fluency, their improvement in their skill to use the language flexibly was relatively limited. This may be due to the fact that complex language skills such as lexical variety and flexible application of structures require higher levels of cognitive processing and longer periods of practice.

6.1.2 Integration of constructivism with this study

Constructivist theory provides the theoretical foundation for this study, explaining why combining FIF applications with communicative language teaching (CLT) is effective in enhancing students' language skills. Through contextualized communicative tasks and immediate feedback, students are able to engage in learning and improve pronunciation and fluency actively. However, to further improve language flexibility, more complex task designs and more opportunities for practice are needed, which is beyond the time frame of this study (Jonassen, 1994).

6.2 Communicative Language Teaching (CLT)

Communicative Language Teaching (CLT) emphasizes the process of learning language through actual language communication, and its core purpose is to develop students' communicative competence and help them use language fluently and accurately in real-life situations (Richards & Rodgers, 2014).CLT emphasizes the learning of language through authentic communicative tasks that allow students to learn language interactively, and to improve their language use skills.

6.2.1 Task-Based Language Teaching (TBLT) and Interactivity

Task-based language teaching (TBLT) is an important component of CLT, which enhances language proficiency by setting tasks with practical meaning and requiring students to solve problems in the target language. Ellis (2003) points out that TBLT is particularly suited to improving pronunciation and fluency. However, more complex linguistic structures and flexible use require higher-order task design and extensive practice opportunities.

In addition, CLT emphasizes interactivity and authenticity, i.e., providing students with an authentic communicative environment as much as possible in language learning, allowing them to acquire language in meaningful interactions (Canale & Swain, 1980). This approach has been shown to be effective in improving basic language skills. However, research suggests that it may take longer and more complex tasks to significantly improve the use of complex language, such as lexical variety and sentence structure flexibility (Littlewood, 2007).

6.2.2 Integration of CLT with this study

In this study, CLT provided students with an interactive and contextualized learning environment by combining it with the FIF App. This not only enhanced students' pronunciation and fluency but also stimulated their interest in learning. However, the study showed that the short-term improvement in the flexible use of language was not significant. This suggests that the communicative language teaching approach may face limitations in the short term and that long-term sustained practice and more complex language tasks are needed to support the development of advanced language skills (Butler, 2011).

6.3 Mobile Learning (MALL)

Mobile-Assisted Language Learning (MALL) is a new type of learning that has developed in recent years with the popularization of smart devices, which provides flexibility and immediacy through mobile devices, enabling learners to learn languages anytime and anywhere (Kukulska-Hulme, 2012). This type of learning is particularly suitable for language learning because language acquisition requires a lot of repetition and immediate feedback.

6.3.1 Flexibility and instant feedback

One of the core strengths of m-learning is its flexibility, i.e., learners can organize their learning according to their time and place (Traxler, 2009). In this study, the FIF App provides students with a flexible way of learning in which they can practice speaking anytime, anywhere, inside and outside the classroom. Instant feedback is another major advantage of MALL, which helps students identify errors and make corrections in a timely manner (Stockwell, 2010). However, although this feedback mechanism can significantly improve pronunciation and fluency, it is still insufficient to support complex language structures and flexibility (García-Ponce et al., 2021).

6.3.2 Personalized Learning

MALL also supports personalized learning, i.e., providing individualized learning paths based on students' progress and needs (Sharples et al., 2005).FIF applications provide students with a personalized learning experience through immediate feedback and task repetition to help them progressively improve their language skills. However, research suggests that further improvements may still require more sophisticated task design and a wider range of linguistic input to support students' development of more complex language skills fully.

6.4 Technical Pedagogical Content Knowledge (TPACK)

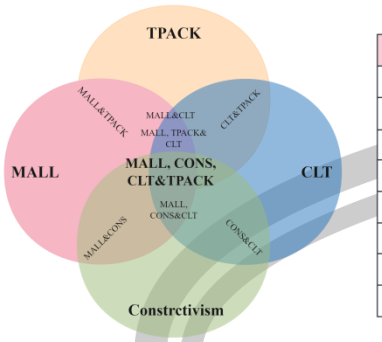
TPACK theory offers a framework for integrating technology, pedagogy, and content knowledge to help teachers teach effectively in technology-supported learning environments (Mishra & Koehler, 2006).TPACK emphasizes that effective integration of technology, pedagogy, and content optimizes learning.

6.4.1 TPACK in this study

In this study, the FIF App was used as a technological tool in conjunction with CLT to support the teaching of spoken English through instant feedback and personalized learning paths. Research has shown that technology-pedagogy integration (TPK) and technology-content integration (TCK) in the TPACK theory help to enhance students' language skills, especially in pronunciation, fluency, and language accuracy (Koehler & Mishra, 2009). Through the TPACK framework, the combination of FIF App and CLT has been effective in improving students' pronunciation and fluency. However, for more complex language skills such as dexterity, the instructional design and integration of technology still need to be further optimized.

6.4.2 Future directions for optimization

While this study demonstrated the effectiveness of the TPACK theory in technology-supported language learning, future research could further explore how to optimize the combination of technological tools and instructional tasks in enhancing complex language skills by providing more complex language tasks that support students' flexible use of language in real-world communication (Godwin-Jones, 2016).



Theroy Framework	
	Constructivism is the foundation of CLT, emphasizing knowledge construction through practice.
	MALL supports CLT by increasing opportunities for communicative practice and improving speaking skills.
	CLT uses TPACK to integrate technology, enhancing interaction and outcomes
	MALL aligns with Constructivism through personalized, contextual learning.
	TPACK makes MALL more effective.
	MALL enables knowledge construction in Constructivism.
	TPACK integrates pedagogy and technology, enhancing teaching effectiveness.
	MALL and TPACK enhance CLT, while Constructivism supports knowledge construction in practice.

Figure 1 Theory Framework

7. Domestic and International Research

7.1 National studies

Using mobile-assisted language learning (MALL) technology in Chinese vocational colleges has shown potential for improving students' English-speaking skills. Students can use fragmented time for language learning, especially for listening and speaking practice, due to the portability and anytime, anywhere accessibility of mobile devices. Liao, X., & Tong, Y. (2019). Enhancing EFL speaking performance through mobile learning: A case study using FIF App showed that students' speaking fluency and pronunciation accuracy improved significantly through continuous practice and immediate feedbackThese platforms not only increased student motivation but also had a positive impact on learning attitudes and academic performance.

Hu, Z. (2021). The role of AI in self-correction and enhancement of speaking skills: A study using the FIF App revealed that the FIF App assisted students in self-correcting their pronunciation during the learning process, and the AI's response enhanced their speaking skills. Personalized learning tracks and immediate reporting play a key role in increasing student motivation and autonomy learning.

Several vocational colleges have successfully implemented a blended learning approach, which combines communicative language teaching (CLT) and mobile learning technologies. Tan, Q. (2019). Blended learning and its effect on vocational students' listening and speaking skills: Integrating CLT and mobile learning has shown that this blended learning is especially effective for enhancing students' listening and speaking skills, particularly when provided with highly interactive and contextualized learning tasks that help students to practice English more confidently in autonomous

communication situations Additionally, Wang, F., & Gunaban, R. (2023). Boosting learning interest and attitudes through mobile application integration with the flipped classroom shows that combining the teach-in method of mobile apps with the flipped classroom not only boosts students' interest in learning but also enhances their learning attitudes. Chen, H. (2024). Improving language practice through MALL technology and task-based language teaching in vocational colleges. said such a flexible learning environment provides students with rich resources for language learning and more independent learning opportunities. For students in vocational colleges, MALL technology coupled with task-based language teaching (TBLT) has significantly improved their skills in language practice.

7.2 Overseas research

International studies have also highlighted the potential of mobile learning tools to promote students' English learning. Ta, M., & Nghiem, T. (2024). Enhancing speaking and listening skills through mobile-assisted language learning: A study in Vietnam, found that MALL technology was effective for improving students' speaking and listening skills, and that students' fluency and confidence increased significantly when they performed speaking practice through a mobile platform . This finding suggests that m-learning technology provides more opportunities for learners who lack the opportunity to practice in a genuine speaking environment.

Alzieni, M. (2024). autonomy learning and attitude improvement through MALL applications: A study in the UAE, indicated the MALL application not only improved the students' speaking skills, but also increased their self-autonomy and positive attitude towards learning. It helps students achieve effective language development outside the classroom by offering autonomy learning opportunities and immediate feedback.

Benjamin-Ohwodede, S., Ogunleye, J., & Ezenwa, P. (2024). The impact of mobile applications and blended learning on students' pronunciation skills: Evidence from Nigeria, has shown that students' English pronunciation skills have improved significantly through the use of mobile applications such as Telegram have significantly improved students English pronunciation skills. It also revealed that mobile apps combined with a blended learning approach helped students both master the English-speaking skills and achieve an increase in their learning motivation .

In Kazakhstan, Sagimbayeva, L., Nurbekova, A., & Zhumabayeva, K. (2024). The role of mobile learning in enhancing language readiness and skill development: A case study in Kazakhstan, identified significant benefits of mobile learning tools in raising students' language readiness and skill development. By providing a personalized and flexible learning experience, these apps help students to develop their English-speaking skills according to their requirements .

Similarly, studies in Indonesia found that integrating text-aloud application into the Communicative Language Teaching (CLT) methodology helped students train pronunciation anytime, anywhere, and significantly increased their pronunciation accuracy and effectiveness.

Through the combination of constructivism, communicative language teaching (CLT), mobile learning (MALL) and TPACK theories, this study constructs a comprehensive theoretical framework that explains the effectiveness of FIF applications and CLT methods in enhancing vocational college students' Speaking-English-speaking skills. Constructivism emphasizes the interactive and contextual nature of learning, which provides theoretical support for the design of learning environments; CLT emphasizes the practical and communicative use of language, which strengthens the interactive learning of constructivism; m-learning provides flexible learning styles and instant feedback, which enhances the continuity and personalization of learning; and TPACK theory provides a framework for the integration of technology and pedagogical methods to optimize teaching and learning effects. Through the combination of these theories, this study provides systematic theoretical support for improving students' English-speaking skills.

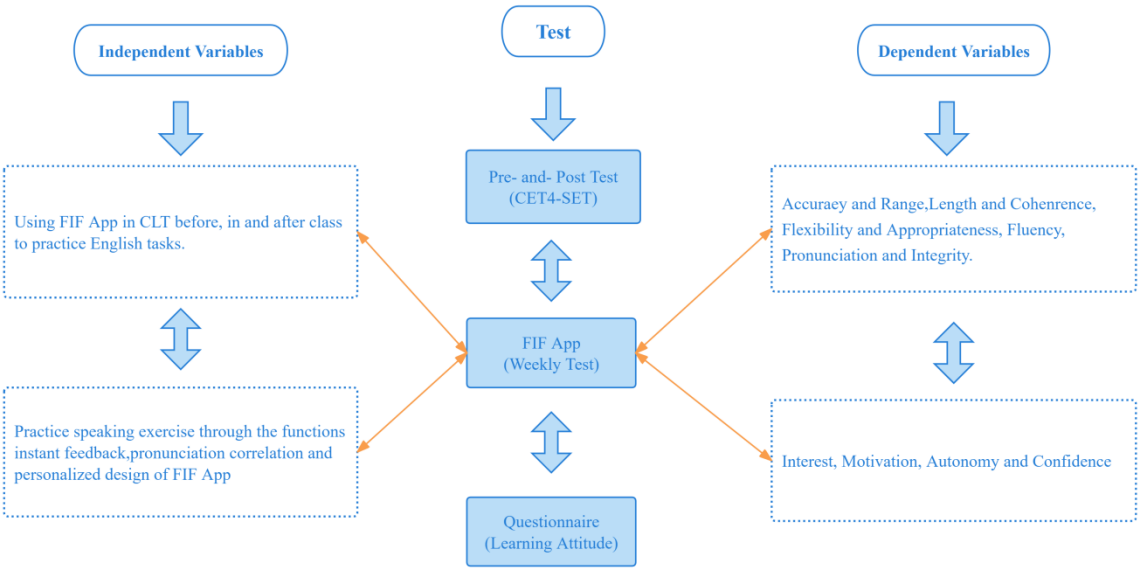


Figure 2 Research Conceptual Framework

CHAPTER III

RESEARCH METHODS

This chapter overviews the research samples, instruments, design, data collection, and analysis methods. It adopts a quantitative approach; the study utilizes pre- and post-speaking tests and weekly assessments through the FIF App to quantify improvements in English-speaking skills and monitor progress throughout the study. A questionnaire complements these assessments by examining changes in students' learning attitudes, focusing on their interest, motivation, autonomy, and confidence. Data analysis uses SPSS to ensure the findings' reliability and validity.

This flowchart offers a clear overview of the entire research process, from planning to completion. It includes detailed documentation and descriptions of each stage. The process is straightforward and well-organized, ensuring the study's smooth implementation according to the established plan. Additionally, it supports the reliability and validity of data collection, analysis, and research conclusions.

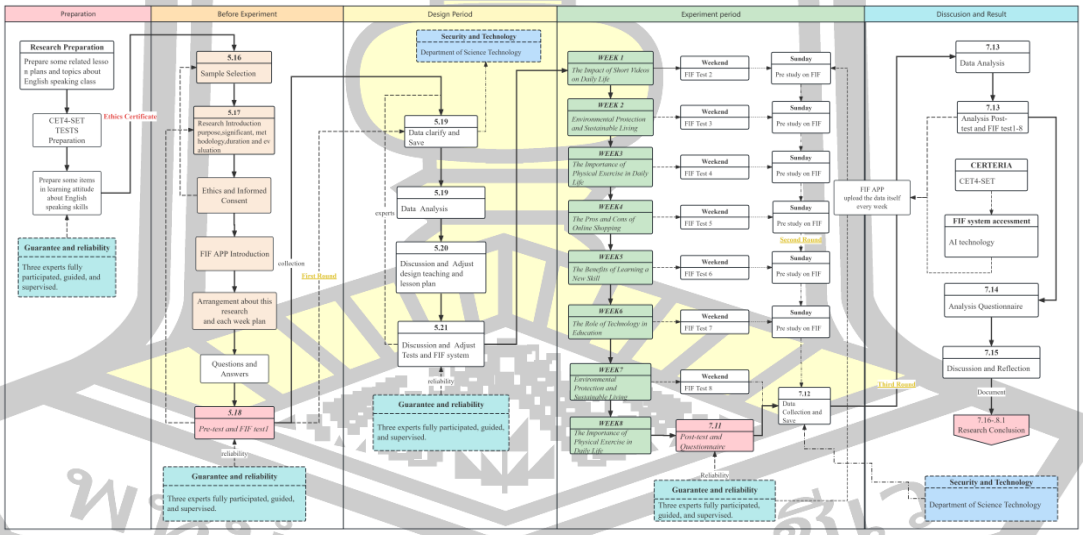


Figure 3 Procedure of the Research

1. Population and Sample

The population of this study is the Vocational College of Health and Rehabilitation. There are some reasons. Firstly, this college's students exhibit diverse English scores, covering low, medium, and high. It provides ideal conditions for

evaluating the adaptability of the FIF APP in the CLT with varying scores but the same education. Secondly, it is a medical college where students are non-English majors and have generally yet to receive systematic oral English training. At the same time, as future medical professionals, good communication is essential for their career development, lending meaning and value to the purpose of this study, which is focused on improving their English-speaking skills. Thirdly.The college features a language lab that promotes mobile-assisted language learning (MALL) as a digital foundation. Additionally, the members play a vital role in ensuring the integrity of data collection and supporting meaningful reflection. Furthermore, the college serves as a representative model for vocational education development in Sichuan Province. This is why it was selected here for this study.

To ensure the scientific validity and reliability of the research findings, the participants were stratified based on their Gaokao English scores. A stratified random sampling method was employed from a population of 1,640 first-year students in the 2023 cohort, with 30 randomly selected to form the experimental class.The procedures as follow:

The sample was selected from a population of 1,640 non-English major first-year students enrolled in the 2023 class at Sichuan Vocational College of Health and Rehabilitation. To ensure the validity and reliability of the research results and the consistency and authority of the quantitative criteria, selection was made of the English score in the college entrance examination as the basis for screening and a stratified random sampling method was adopted. First, the sample size calculation formula was employed to ascertain the requisite total sample size.

$$n = \frac{N \times Z^2 \times p \times (1-p)}{E^2 \times (N-1) + Z^2 \times p \times (1-p)}$$

The total sample size, represented by the variable N, is 1640 individuals. The Z value, represented by Z, corresponds to the confidence level, with a 95 percentage confidence level equating to Z = 1.96. The estimated proportion, represented by p, is typically set to 0.5. The allowable error, represented by E, is set to 0.05. After substituting the requisite values into the formula, the calculated total sample size necessary is approximately 311 individuals.

Given the focus of this study on language skills, it is challenging to meet the needs of the 311 participants with the available resources and staffing. Accordingly, to ensure the study was conducted effectively and in accordance with scientific principles, the research team employed G-Power software to conduct an efficacy analysis to evaluate the validity of the proposed smaller study.

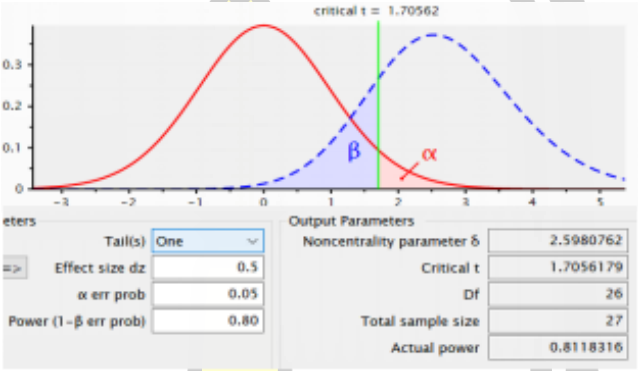


Figure 4 Compute the required sample size - given α, power, and effect.

As this study is an independent experimental class, it is essential to compare the change in speaking performance of the same group of subjects before and after the intervention. Therefore, the most appropriate type of test is the matched pairs test in a t-test. In G-Power, the first step is to select the "Means" option. The next step is to select the option "Difference between two dependent means (matched pairs)." Then, choose "A priori: Compute the required sample size - given α, power, and effect." The " to estimate the required sample size in advance. Ultimately, the effect size was set to 0.5, the significance level to 0.05, the power to 0.80, and a one-tailed test was conducted. According to the results of the calculation, a minimum sample size of 27 is required, corresponding to a non-central parameter of 2.5980762, a critical t-value of 1.7056179, and an actual efficacy of 0.8118316 (approximately 81 percentage).

Considering a 3% attrition rate, the final sample size was determined to be 30 participants.

Subsequently, a division was made of the overall sample into three levels based on the student's scores on the English section of the college entrance examination: the low segment (42-56 points), the medium segment (57-70 points), and the high segment (71-84 points). The final sample consisted of 364 students in the lower band (22.20

percentage), 1,046 in the middle band (63.78 percentage), and 230 in the upper band (14.02 percentage).

During the process of selecting the sample, the number of students to be selected from each band was calculated in a manner consistent with the proportion of each band in the overall sample in order to ensure the representatives and equilibrium of the resulting sample. The calculation is based on the following formula:

$$n = \frac{N}{1+N \cdot e^2}$$

In statistics, the sample size, represented by the variable "n," refers to the number of items selected from a population for analysis; the population size, represented by "N," is the total number of items in the population; and the "e" term represents the allowable error, which is a measure of the expected discrepancy between the observed and true values. The number of samples to be extracted from each group is established according to the proportion of each segment.

Low Level: $n_{low} = 30 \times \frac{364}{1640} \approx 7$

Medium Level: $n_{medium} = 30 \times \frac{1046}{1640} \approx 19$

High Level: $n_{high} = 30 \times \frac{230}{1640} \approx 4$

2. Research instruments

1.Pre and Post-tests

1.1.Selection of Assessment Tools

The College English Test Band 4 Speaking (CET4-SET) as the principal instrument for pretest and post-test assessment. The College English Test (CET) is a national English mastery test developed by the Chinese Ministry of Education to assess the English proficiency of Chinese college students. As a component of the CET, the CET4-SET is specifically designed to assess students' proficiency in spoken English. It

is a widely recognized standardized test that can effectively measure students' oral English expression skills (Liu et al., 2006).

1.2.Advantages and Limitations

The CET4-SET examination process is comprised of multiple components designed to comprehensively assess the candidate's ESS. In the initial phase of the examination, candidates are required to introduce themselves and demonstrate their proficiency in fundamental ESS. Subsequently, the candidates are required to read aloud a short passage in order to assess their accuracy in pronunciation and reading fluency. Subsequently, candidates engage in a conversation based on a picture or situation, with the objective of demonstrating their proficiency in language organization and communication skills in specific contexts. Subsequently, candidates engage in a topic presentation or discussion to further examine their depth of expression, logical thinking skills, and consistency of ideas (Chen, 2012).

The scoring criteria for the CET4-SET are based on multiple dimensions and aim to comprehensively evaluate students' speaking performance. The total score for the examination is 20 points, with the scoring criteria for each component as follows: A portion of the total score is attributed to language correctness and the breadth of language use. This section of the exam primarily assesses students' command of vocabulary and grammatical structures, as well as their skill to utilize complex language structures in conversations (Zhang Xiaohong, 2010). An evaluation of language flexibility and appropriateness enables the assessment of students' capacity to utilize language in diverse contexts and the suitability and acceptability of their linguistic expression. A separate grade is assigned for the Read Aloud session, total score is 5 points.

The assessment focuses on the accuracy of pronunciation and fluency. Trained assessors carry out the scoring process in accordance with established scoring guidelines in order to ensure the objectivity and consistency of the scoring procedure (Sun Yufang, 2015).

By employing the aforementioned testing procedures and assessment criteria, the CET4-SET is capable of providing a comprehensive evaluation of college students' oral English proficiency, thus enabling an accurate understanding of their actual level of proficiency and potential for future improvement in oral expression. These assessment

dimensions are entirely consistent with the objective of this study. A thorough analysis of student performance in the aforementioned areas can facilitate a comprehensive understanding of the impact of the FIF App on students' oral proficiency.

1.3.Diversified Assessment

To address the limitations of CET4-SET, the FIF App was introduced as a supplementary assessment tool to track the student's study progress in the experiment, providing a detailed description of speaking skills changeConstrction process

1.4.Construction process

Stage 1: Learning relevant concepts and standards.

First, the researcher studied theoretical concepts, assessment documents, (Appendix A)English-speaking skill and curriculum standards for higher education students related to English speaking assessments to ensure that the tests were designed to accurately evaluate students' ESS.

Stage 2: Construction of the tests

The pretest and post-test of the speaking English test are based on the standards of Chinese University English Grade 4 or 6 Speaking Examination, and the test design consists of two parts: the comprehensive speaking assessment and the read-aloud test, and the test paper contains five questions, and the scoring criteria are shown in Appendix B. The test design is in line with the English Curriculum Standards for Higher Vocational English and the English-speaking skills requirements for Higher Vocational students.

Stage 3: Expert Assessment

Once the test design was ready, three experts in the field of English language teaching were invited to examine the objectivity and validity of the test items. The experts used the IOC form to rate the content and difficulty of the test, and the Index of Item Objective Coherence (IOC) showed that all the test items were appropriate(Appendix B), so all units were retained.

Stage 4: Pilot study

The pilot study was conducted among the 22nd-grade students of Sichuan Health and Rehabilitation Vocational College, and 1/6 of the students were selected as test subjects. The English skills of these students varied, but their educational backgrounds and learning abilities were similar, guaranteeing the validity of the test results.

Stage 5: Assessment of test quality

The data collected from the pilot study was analyzed for reliability, difficulty and discrimination using SPSS to verify the reliability and validity of the test.

Stage 6: Revise the test instruments

Based on the evaluation results of the pilot study, the test instrument was adjusted as necessary to ensure its accuracy in the formal experiment.

Stage 7: Formal testing

The modified test (APPENDIX E)will be used for pretesting and post-testing in the experiments, which will be performed by three experts before the experiments and at the end of the experiments.

2.FIF App

2.1.Selection of Assessment Tools

Developed by iFlytek, the FIF App is employed in over 1,000 universities across China. It leverages AI to offer students customized learning experiences beyond the classroom. The App features include pronunciation correction, personalized needs, real-time tracking and instant feedback, addressing gaps in traditional teaching. Moreover, its scoring system adheres to CET4 benchmarks , delivering multi-dimensional evaluation.

2.2.Advantages and Limitations

A mobile application for learning English that includes interactive elements such as simulated conversations, pronunciation correction, and real-time feedback. In this study, the FIF App was integrated into the Communicative Language Teaching (CLT) technique to help students improve their English-speaking skills. The students engaged in daily practice with the software throughout the experimental period, subsequently applying the acquired knowledge in authentic, real-world contexts (Wu, 2015). With simulated conversation partners, thereby approximating real-life communication scenarios, the FIF App enables students to engage in virtual conversations (Zhang & Zhou, 2020).

In addition to correction recommendations, the application contains an interactive component for evaluating and providing comments on students' pronunciation. (Wang & Smith, 2013). By means of a series of interactive exercises, the software assists

students in improving a number of key linguistic skills, including voice intonation, pronunciation accuracy, expression fluency, and sentence coherence. Users may track their learning progress and achievement with the application, which boosts their drive to study (Wu, 2015).

The flexibility of the FIF App renders it an optimal instrument for students seeking to enhance their communication skills during the exploratory phase. Students can hone their speaking skills in a simulated linguistic environment, receive immediate feedback, and effectively improve a variety of competencies such as fluency, intonation, pronunciation, expressive fluency, and sentence coherence by using the software on a regular basis (Zhang & Zhou, 2020).

As a result of the aforementioned study methodologies, an accurate and correct assessment of the influence of FIF on the English-speaking skills of vocational college students is achievable. This, in turn, ensures both the scientific validity and the reliability of the research findings.

2.3.Implementation and Evaluation

During the 8-week experiment, a weekly test was conducted to record students' progress. The test content was designed to handle the CET4-SET syllabus and evaluation requirements and was reviewed by experts. The tests were finalised for use after meeting the IOC standards. The FIF system automatically uploaded the test scores, and data was collected, compiled, and stored during the experiment's early, middle, and final stages to ensure data security.

2.4.Construction process

Stage 1: Study of basic concepts and standards

First, the researcher thoroughly studied the relevant content and evaluation criteria of FIF App, a Chinese higher education multimedia learning platform that has cooperated with more than 1,000 universities and colleges, which covers speaking, vocabulary and grammar training in various life and career scenarios, and uses the KDDI Voice Assessment Technology to provide comprehensive evaluation of speaking skills.

Stage 2: Selection of test content

Based on the question bank in the FIF system, test questions were selected to match the content of the CET4-SET and a total of eight sets of tests (APPENDIX E) were created, each with Speaking and Read Aloud.

Stage 3: Expert assessment

Three experts in the field of ELT were invited to assess the quality and difficulty of the selected test items. The experts scored each item based on the content and difficulty of the test and determined the questions to be retained by calculating the item's Index of Objective Congruence (IOC).

Stage 4: Pilot study

A pilot study was also undertaken with 1/6 of the grade 22 students at Sichuan Health Rehabilitation Vocational College. On the basis of the data obtained in the pilot study, the content of the FIF test was revised to make it moderately difficult and applicable to the student's English skill level.

Stage 5: Revision of the instruments

The data from the pilot study was analyzed using SPSS to assess the reliability, difficulty and discriminatory power of the test and ultimately to revise the FIF test instrument.

Stage 6: Formal testing

The final FIF test instrument will be administered during the course of the experiment, with weekly tests planned for a total of eight sessions, and the test data will be used to assess the student's progress in Speaking over the course of the experiment.

3.Questionnaire

3.1.Selection of Assessment Tools

The well-established Likert scale was employed to assess students' attitudes. It underwent pre-testing and revisions to guarantee suitability for this research.

Self-report tools are commonly used to capture students' behavioral, emotional, and cognitive changes. Goldspink and Foster (2013) emphasized the effectiveness of self-report tools in measuring student responses related to learning environments and teaching methods.

3.2.Advantages and Limitations

Likert scales are widely used in educational research due to their simplicity and ease of use, effectively converting subjective data into quantitative data for statistical analysis (Willits et al., 2016; Muhenje, 2023).

It examines changes in students' attitudes across multiple dimensions and reflects students' subjective perceptions and emotional changes through the self-report format. This design helps to capture shifts in students' internal emotions and behavioral tendencies after using the FIF App, particularly in areas like autonomy learning and classroom participation (Goldspink & Foster, 2013). Furthermore, has shown that students' learning interests significantly correlate with their academic performance (Iqbal et al., 2023).

3.3.Implementation and Evaluation

Before the final implementation, the questionnaire had to undergo expert review and pass the IOC (Index of Item Objective Congruence) test. It was then subjected to a pilot test and further revisions based on the pilot results and expert feedback. Only after obtaining expert approval was the questionnaire ready for use.

Darr (2012) emphasized the importance of expert reviews and pilot testing in enhancing the reliability and validity of questionnaires. This approach is efficient and widely applicable, enabling research hypotheses to be verified through quantitative data and providing a solid scientific foundation for research conclusions.

3.4.Construction process

Stage 1: Study of basic concepts and standards

the researcher conducted an in-depth study of the basic concept of learning attitude and combined it with the theoretical literature related to oral English learning to enable the questionnaire design to effectively reflect the impact of learning attitude on speaking skills.

Stage 2: Selection of test content

Based on the study of related literature, a learning attitude questionnaire was developed, which consisted of 12 items. Each item is scored on a five-point Likert scale, where 1 means "strongly disagree" and 5 means "strongly agree," and the higher the score, the more positive the students' attitude towards learning. It will be distributed

after the experimental session in order to assess the changes in the students' attitudes towards learning during the experiment.

Stage 3: Expert assessment

Three experts in the field of English language teaching were invited to evaluate the content of the questionnaire, and the experts rated the questionnaire items according to their objective and content relevance. By calculating the Index of Objective Coherence (IOC) of the items(APPENDIX B), all items achieved reasonable objective coherence and all items were retained.

Stage 4: Pilot study

The pilot study was conducted with 1/6 students in grade 22 at Sichuan Health Rehabilitation Vocational College who had different levels of English skills but similar educational backgrounds and learning abilities. Using the information from the pilot study, the content of the questionnaire was further refined to reflect its adaptability.

Stage 5: Instruments revision

The data from the pilot study were analyzed using SPSS to estimate the reliability, difficulty and item differentiation of the questionnaire. According to the results of the assessment, the content of the questionnaire was revised to be more valid and accurate in the formal survey.

Stage 6: Formal testing

The revised questionnaire will be implemented at the end of the experiment in an attempt to assess the changes in the learning attitudes of the students in the experimental group after using the FIF App. It is planned that the results of the survey will be used to analyze the impact of the FIF App on the students' learning attitudes.

3. Research design

1．Research Type

This study employed a quantitative method to explore the effectiveness of the FIF App integrated with the CLT approach in improving English-speaking skills and fostering positive learning attitudes among vocational college students. The research lasted for 8 weeks, with two sessions per week, and utilized three instruments for assessment.Instruments.

2 . Experimental Procedure

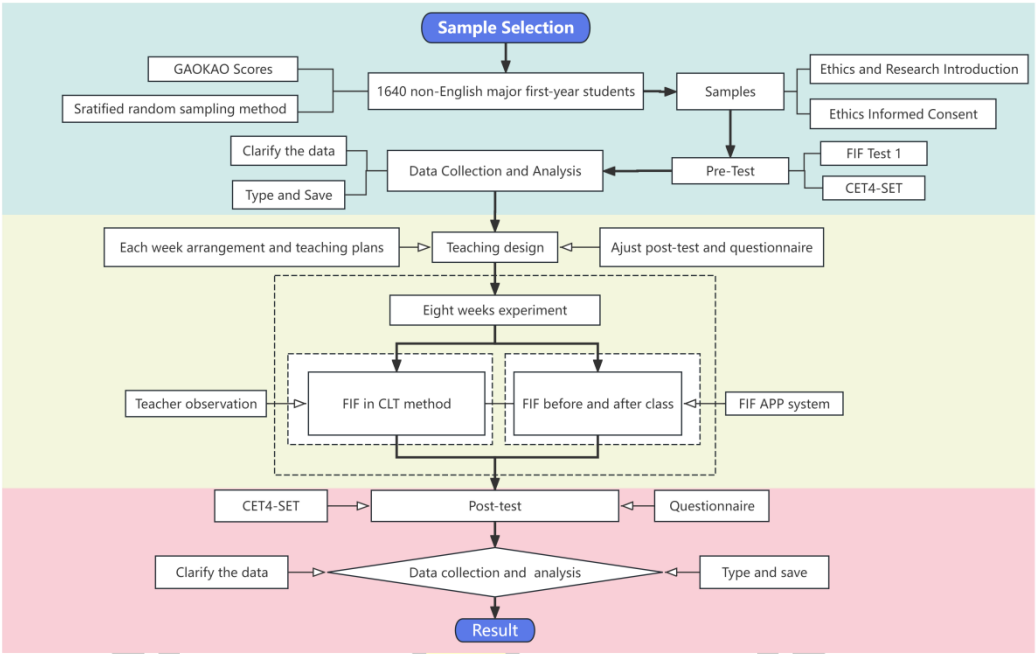


Figure 5 Experimental Procedure

Firstly, after receiving ethics approval, the sample selection process with the informed consent of the pilot institution. Secondly, before the experiment officially began, all selected participants were invited to the language lab, where they were fully informed about the study's content, purpose, relevant ethical considerations, and their rights. Once any concerns were addressed, participants signed informed consent forms to safeguard their ethical standards and rights. Next, the participants completed FIF Test 1 and the pre-test, marking the first data collection stage. Detailed teaching plans and lesson designs were developed and revised based on the initial data results.

To ensure scientific rigour and consistency while minimizing the influence of external variables, the following measures were implemented: Consistent Scheduling: Class times, classrooms, weekly tests, and instructors remained fixed throughout the experiment to ensure uniformity. Progress Tracking : The FIF App recorded students' learning progress during the experiment, providing a reliable basis for data analysis. Background Assessment: Before the experiment began, to know the backgrounds, learning environments, and equipment of each student. Throughout the experiment, counsellors supported students' attendance and task completion.

Also, using a large sample size helped minimize the impact of individual external factors on the overall results.

After the experiment, participants completed a post-test and a questionnaire survey. All collected data were analyzed, and a detailed research report was prepared based on the findings.

3.Lesson Plan

A variety of teaching activities, including group discussions, task completion and speaking practice, were conducted each week. These activities were designed to facilitate gradual progression in learning content, ensuring students' skills to effectively apply their knowledge and skills in real-life scenarios.

Each week Arrangement

Topics		MAY		JUNE				JULY		FIF Test	Preview
		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Saturday	Sunday
1	The Impact of Short Videos on Daily Life									Test 2	FIF
2	Environmental Protection and Sustainable Living									Test 3	FIF
3	The Importance of Physical Exercise in Daily Life									Test 4	FIF
4	The Pros and Cons of Online Shopping									Test 5	FIF
5	The Benefits of Learning a New Skill									Test 6	FIF
6	The Role of Technology in Education									Test 7	FIF
7	Time Management for Students									Test 8	FIF
8	Effective Communication Skills										

Figure 6 Each Week Lesson Plan Arrangement

Teachers provided feedback after each lesson, and three experts evaluated and made adjustments to the teaching strategies. For a comprehensive overview of the instructional design, please refer to the IOC assessment form in Appendix B and the detailed lesson plan and teaching materials in Appendix G.

Table 1 Each Week Objectives of Lesson Plan

Week	Objective
1	Be able to discuss the positive and negative impacts of short videos on daily life Can use English to express vocabulary and sentence guidance related to short videos Be able to describe in English how to balance the use of short videos in one's personal life. Enhance pronunciation, fluency and completeness through FIF App, etc.
2	Be able to discuss the positive impacts of environmental protection measures and sustainable lifestyles Can use key vocabulary and sentence patterns related to environmental protection. Can express how to take action to protect the environment in daily life Enhance pronunciation, fluency and integrity with FIF App.
3	Be able to discuss the positive impact of physical activity on health Apply key vocabulary and sentence patterns related to physical activity. Can describe how to develop physical activity habits from personal experience. Enhance pronunciation, fluency and completeness through FIF App.
4	Discuss the advantages and disadvantages of shopping online Can use core vocabulary and sentence patterns related to online shopping. Be able to express in English how online shopping affects them. Enhance pronunciation, fluency and completeness with FIF App.
5	Be able to discuss the advantages and disadvantages of a new skill. Apply vocabulary and sentence patterns related to learning skills. Can use English to express their opinions about learning new skills. Enhance pronunciation, fluency and completeness through FIF App.
6	Be able to discuss the role of technology in education Be able to express vocabulary and sentence patterns related to technology and education. Be able to describe in English the benefits and challenges of technology. Enhance pronunciation, fluency and completeness through FIF applications.
7	Can discuss the importance of time management Be able to express the vocabulary and sentence patterns related to time management. Be able to express in English how to improve the efficiency of study and life. Enhance pronunciation, fluency and completeness through FIF App.
8	Be able to discuss the role of communication skills in the workplace.

	Apply basic vocabulary and sentence patterns related to communication in the workplace. Be able to express how to improve communication skills in relation to future careers. Enhance pronunciation, fluency and completeness through FIF App.

4.Sample Lesson Plan

Topic: The Impact of Short Videos on Daily Life	
Teaching Goals	1. Help students analyze the positive and negative effects of short videos (like TikTok, Douyin) on daily life. 2. Improve students' skill to express their opinions in English, especially using vocabulary and sentence structures related to short videos. 3. Guide students to reflect on how to balance short video usage with studying or work, and enhance their pronunciation and fluency using the FIF App.
Teaching Tools	IF App :Student devices (phones/computers for using the FIF App); PPT ; lackboard (for summarizing vocabulary and sentence structures)
PreClass Preparation	Task Goal: Using the FIF App, students will study content related to short videos in advance, laying the foundation for the next day's discussion.Reading an Article 1. Students will use the FIF App to read an article about the impact of short videos. The article might discuss learning new skills, enhancing creativity, but also how they can be distracting or waste time. 2. Students will summarize the article in 1-2 sentences, explaining the main points and preparing to present them in class. Example Summary: "The article discussed both the positive and negative effects of short videos, including how they enhance creativity but also lead to addiction."
In Class : (80 minutes)	
5. Review (10 minutes) Objective: Help students review the content they studied the day before, practice brief recaps, and improve their fluency and accuracy in speaking. Steps:Each student will briefly recap the article they read using 1-2 sentences to describe the impact of short videos. Encourage students to use vocabulary they learned from the article.	

Example: "The article talked about how short videos help people learn quickly but can also become addictive."

Teacher Feedback: The teacher will provide brief feedback on the students' recaps, pointing out grammar or pronunciation issues and correcting them as needed.

Introduction to the Topic: Discussing the Impact of Short Videos (3 minutes)

Objective: Use guiding questions to help students think more deeply about the impact of short videos on daily life and spark their interest in the discussion.

Steps:What are some positive effects of short videos like TikTok? What are some negative effects of using short videos?

6. Group Discussion (10 minutes)

Objective: Through group discussions, students will practice collaboration and improve their skill to express their opinions in English fluently.

Steps:Students will pair up and discuss the positive and negative effects of short videos. Each student must come up with at least one positive and one negative point.

Positive Example: "Short videos are great for learning new things quickly, like cooking tips or language skills."

Negative Example: "However, they can be very distracting, especially when you're trying to focus on studying."

Teacher Circulation: The teacher will move between groups, helping students organize their ideas and encouraging them to use the vocabulary and sentence structures learned from the previous day.

7. Presentation Section (10 minutes)

Objective: Students will present their discussion results publicly to practice speaking and improve their presentation skills.

Steps:Each group will select one student to present their discussion results, sharing their views on the positive and negative effects of short videos.

Example: "I think TikTok is great for creativity, but it can also waste a lot of time if you don't manage it well."

Teacher Feedback: The teacher will provide feedback based on the students' presentations, encouraging them to use correct grammar and vocabulary, and offering constructive advice.

"You did well using 'creativity,' but be careful with the verb tense when you talk about effects."

8. Teacher Summary of Vocabulary and Sentence Structures (12 minutes)

Objective: Help students reinforce the key vocabulary and sentence structures discussed during the lesson to improve their expression.

Teacher Summary:For example, creativity, self-expression, entertainment, distraction, addiction, time management issues etc.

One benefit of short videos is that...

A major drawback of using TikTok too much is...

In my experience, short videos... etc.

9. FIF App Practice (15 minutes)

Objective: Reinforce students' grasp of vocabulary and sentence structures using the FIF App to improve their pronunciation and fluency.

Steps: Students will use the FIF App to practice repeating the vocabulary and sentence structures summarized by the teacher, ensuring accurate pronunciation.

Teacher Feedback: Based on students' FIF scores, the teacher will provide personalized advice on improving their pronunciation and intonation.

Discussion: How to Balance Short Videos with Studies or Work (15 minutes)

Objective: Guide students to reflect on how short videos affect their studies or work, and propose solutions, promoting critical thinking.

Teacher Questions:Do you think spending time on short videos affects your studies or work?How do you balance using short videos and focusing on important tasks?

Discussion: Students will discuss how they manage their social media usage to avoid distractions and maintain productivity in their studies or work.

10. Example Presentation:

"In our group, we talked about different ways to manage short videos and still get work or studying done. One student said they only watch videos during lunch breaks to avoid getting distracted. Another likes to watch videos at night, after finishing all their tasks, to relax. Some of us use apps like Forest to block social media while we study or work. For me, I find it helpful to set a rule, like watching videos for 20 minutes only after I finish my homework. We all agreed that these simple habits help us stay on track while still enjoying short videos."

"In our group, we shared different ideas on how to manage short videos and still stay focused. One student said they only watch videos after finishing their daily tasks, like homework, so they don't lose time. Another mentioned that watching short videos is okay during breaks, but only for a few minutes. Some students use timers or phone apps to remind them when it's time to stop. For me, I try to plan my video time, like watching for 10-15 minutes after I complete an assignment. We all agreed that small changes like these make it easier to stay focused and still enjoy videos."

11. Conclusion (5mins)

Objective:Summarize the key points discussed in class to reinforce students' learning.

Encourage students to apply the strategies and knowledge gained to their daily lives.

Teacher Summary:Today, we explored the positive and negative effects of short videos, such as how they can help with creativity and learning new skills, but also cause distractions and

addiction.We also discussed how to balance short videos with studying or work, with strategies like setting time limits, watching videos during breaks, or using apps to manage distractions.I hope you find these strategies helpful and can use them to stay productive while still enjoying your favorite videos.Remember, it's all about balance—enjoying videos while staying on top of your studies and tasks.Next time, we'll continue practicing speaking skills using the FIF App, focusing on how to express opinions clearly in discussions.Before we finish, take a minute to reflect on one takeaway from today's lesson that you'll try to use this week.

12. Homework

Speaking practice :Use the FIF App to do speaking practice, reviewing the vocabulary and sentence structures from class.

Written Assignment (100-150 words) Topic: Do you think TikTok has more positive or negative effects on young people? Students will use the vocabulary and sentence structures discussed in class to write their responses.

5. Some Considerations

To ensure the smooth implementation of the experiment and prevent disruptions caused by unforeseen factors, the researcher has made the following preparations:

5.1.Backup Devices

Before each experimental session, sufficient backup devices (such as tablets, smartphones, or laptops) will be prepared. These are for students without devices or those experiencing device malfunctions, ensuring that all students can participate in the experiment without technical issues.

5.2.Plan B Preparation

To address potential issues such as network disruptions, device malfunctions, or power outages, the researcher has formulated a detailed contingency plan (Plan B), including:Key learning content, tasks, and experiment steps will be printed in advance, ensuring that teaching activities can continue even if online devices are unavailable.Experiment-related listening and speaking materials will be pre-recorded, with Bluetooth speakers or MP3 players prepared for easy playback during class. Lesson outlines and necessary printed learning materials will be prepared, ensuring that teaching activities can proceed smoothly through traditional methods if needed.

5.3.Optimization of Network and Technical Support

Campus Network Support: The WiFi connection in the classroom will be tested beforehand, and mobile hotspots will be available to handle temporary network issues if necessary.College IT staff will provide on-site support during the experiment to promptly address technical or network problems.WiFi Expansion: Additional mobile WiFi devices will be deployed to enhance network coverage and stability, ensuring smooth connectivity for multiple users.

5.4.Data Security and Record Backup

The technical team will be responsible for regularly checking and backing up the experimental data:USB drives and cloud storage will back up the data, ensuring security and preventing loss due to technical failures.Experimental results will be recorded promptly after each session and systematically organized to provide accurate data for later analysis and reporting.

5.5.Participation Assurance and Feedback Mechanism

Counselors will actively collaborate to ensure students participate on time, improving attendance and motivation.Information will be gathered through classroom observation, reflective teaching, and student feedback. After each class, teachers will discuss the outcomes with three experts, adjusting the teaching content and arrangements based on students' performance and feedback to enhance the experiment's teaching quality and effectiveness.

4. Data collection

First, a pretest of English-speaking skills was administered to 30 students in the experimental class before the start of the experiment to assess their basic English-speaking skills. During the 8-week experiment, students conducted daily speaking training through the FIF App and participated in weekly speaking tests. The FIF App automatically recorded the results of each test and rated students' pronunciation, fluency, and linguistic integrity. At the end of the experiment, a CET4-SET post-test was administered to assess the students' improvement in speaking skills. Meanwhile, a

questionnaire survey was conducted to find out the students' speaking skill improvement and their learning attitude changes after using the FIFApp.

5. Data analysis

For the Pre-and Post-Tests, a descriptive analysis was conducted to gain a comprehensive overview. Following this, One-Way ANOVA was applied to identify any statistically significant differences across multiple groups, alongside One-Sample T-tests and Paired-Sample T-tests for further comparisons. Standard Deviation, Effect Size, and Correlation were used to assess whether the differences between the pre-and post-tests were statistically significant.

For the FIF Tests, to verify that the improvement in Post-Test scores was associated with the use of the FIF App and to rule out the possibility that the improvement was merely coincidental, Repeated Measures ANOVA was added alongside Descriptive, Paired-Sample T-tests, Correlation, and Regression analyses on the eight weekly tests. These analyses provided deeper insights into the App's role in enhancing speaking skills over time.

For the Questionnaire, Reliability and Validity analyses were performed to ensure internal consistency, and ANOVA was used to evaluate the completion of individual items. Factor analysis was employed to identify underlying dimensions, while Regression further explored how learning attitudes influenced the development of English-speaking skills.

6. Statistics used in the study

In this study, several statistical methods were used to analyze the data from the pre and post-tests and FIF Tests of 30 students in the experimental class and the relationship between different dimensions of speaking skills and learning attitudes. The following is a brief description and formula of each statistical method:

1. Mean

It is used to measure the overall performance of the student on the pretest and post-test. The calculation formula is as follows:

$$\bar{X} = \frac{\sum X}{n}$$

$\bar{X}$ = Mean.

$\sum X$ =Sum of grades.

n =Number of students (30 in this study).

2. Standard Deviation (S.D.)

It is used to assess the degree of dispersion in student performance. The formula is as follows::

$$S.D. = \sqrt{\frac{\sum(X - \bar{X})^2}{n}}$$

X = each student's grade

$\bar{X}$ =Mean.

n =Number of students. (30 in this study).

3. Paired samples t-test (Paired t-test)

It was used to compare the change in performance of students in the experimental class between the pretest and the post-test. The formula is as follows:

$$t = \frac{\bar{D}}{S_{\bar{D}}}$$

$\bar{D}$ = Mean difference (pretest vs. post-test)

$S_{\bar{D}}$ =Standard errors for differences.

4. One-sample t-test (One-sample t-test)

It is used to compare the student's scores on the post-test with the set standardized values and to assess their significance. The formula is as follows:

$$t = \frac{\bar{X} - \mu}{S/\sqrt{n}}$$

$\bar{X}$ =The sample mean, the

μ = Standard value for comparisonμ = Standard value for comparisonì

,

S =the standard deviation of the sample.

n =Sample size.

5. Factor Analysis

It was used to analyze the underlying structure of the questions in the questionnaire. The KMO test was first performed with the following formula:

$$KMO = \frac{\sum\sum r_{ij}^2}{\sum\sum r_{ij}^2 + \sum\sum u_{ij}^2}$$

The r_{ij} denotes the correlation coefficient between the variables, and u_{ij} denotes the partial correlation coefficient. The weight of each variable in the factor was measured by Factor Loading and the factor structure was optimized using Varimax Rotation to make the factor easier to interpret.

6. Correlation Analysis (CA)

It is used to assess the correlation between the dimensions of speaking skills. The Pearson correlation formula is as follows:

$$r = \frac{\sum(X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum(X_i - \bar{X})^2 \sum(Y_i - \bar{Y})^2}}$$

X_i and Y_i = The observed values of the two variables

$\bar{X}$ and $\bar{Y}$ = the mean of the two variables.

7. Cronbach's alpha reliability analysis

The formula used to assess the internal consistency of the questionnaire is as follows:

$$\alpha = \frac{n}{n-1}\left[1 - \frac{\sum s_i^2}{s_t^2}\right]$$

$n =$ Number of issues.

s_i^2 =The variance of the score for each question, the

s_t^2 =Total Variance.

CHAPTER IV
RESULTS

This chapter, based on the data results from the CET-4 pre-and post-tests, weekly FIF tests, and learning attitude questionnaire, employs descriptive analysis, paired t-tests, ANOVA, factor analysis, correlation, reliability testing, and regression analysis to verify the research objectives of 1) evaluating the comprehensive improvement of students' English-speaking skills, 2) analyzing performance differences among students at varying proficiency levels, 3) tracking students' progress through the FIF App to confirm sustained improvement, and 4) examining changes in students' learning attitudes.

1. Comprehensive Evaluation of English-Speaking Skill Improvement

The CET4-SET pre and post-tests provide a comprehensive assessment of students' ESS, comprising two distinct components: the speaking test and the read-aloud test. (Appendix D) Both tests are designed to evaluate the students' speaking skills in a nuanced and comprehensive manner.

The Speaking Test which consists of three dimensions: Accuracy and Range, Length and Coherence, and Flexibility and Relevance. Each dimension is assigned a value of five points, and the scores are aggregated to obtain a total score of 15 points for the speaking test. The total score is in alignment with the ESS Scale (Appendix C), which is utilized for the assessment of the student's ESS level. The read-test section evaluates students' pronunciation, fluency and integrity of expression with a composite score out of a total of five. It has based on the Ministry of Education's comprehensive quantitative principles, with no detailed criteria.

1 . Overall Performance of English-Speaking Skills

Firstly, in terms of speaking scores (Appendix E) (accuracy and range of language, length and coherence of discourse, flexibility and appropriateness), the mean score of the pretest is 9.33 with a standard deviation of 1.76, which indicates that the distribution of students' speaking scores is more dispersed in the pretest, with the highest score being 11.80 and the lowest score being 6.60. In the post-test, the students' mean scores improved to 11.03. The standard deviation decreased to 1.65, indicating that the

student's scores were more concentrated, the inter-individual differences were reduced, and the highest score increased to 13.70 and the lowest to 8.60. Compared with the pretest, the students' speaking scores increased by an average of 1.70 points, an increase of about 18.2 percentage, which showed a significant improvement in comprehensive speaking skills.

Table 2 Overall Performance of Comprehensive Evaluation of English-Speaking Skill Improvement

	Mean	N	Std. Deviation	Std. Error Mean	t	df	Significance		Cohen's d	Hedges' correction
							One-Sided p	Two-Sided p		
Pretest	9.333	30	1.759	0.321	-12.691	29	0.000	0.000	0.732	0.752
Posttest	11.030	30	1.655	0.302						

The change in standard errors shows that the pretest is 0.32 while the post-test is 0.30, indicating increased stability of the post-test scores and a decrease in the differences in scores between students. Further analyzing the results of the paired samples t-test, the t-value is -12.691, the degree of freedom is 29, and the p-value is less than 0.001, which indicates that there is a statistically significant difference between the speaking scores and the effect size Cohen's d is 0.732, which indicates that the enhancement of the speaking skills has a moderately large effect. It further verifies that the FIF App has a significant effect on the enhancement of speaking skills.

In the Read Aloud section (pronunciation, fluency, integrity), the mean score of the pretest was 3.47 with a standard deviation of 0.19, with the highest score of 3.90 and the lowest score of 3.10, reflecting a relative concentration of students' performance in Read Aloud. In the post-test, the mean score increased significantly to 4.32, and the standard deviation increased to 0.33, showing an increase in students' performance in Read Aloud and greater inter-individual variability. The highest score increased from 3.90 to 4.70, and the lowest score increased from 3.10 to 3.70. Compared to the pretest, students' Read Aloud performance increased by an average of 0.85 points, or 24.5percentage.

Table 3 Read Aloud of Comprehensive Evaluation of English-Speaking Skill Improvement

	Mean	N	Std. Deviation	Std. Error Mean	t	df	Significance		Cohen's d	Hedges' correction
							One-Sided p	Two-Sided p		
Pre ReadAloud	3.47	30	0.188	0.034	-18.213	29	0.000	0.000	0.256	0.262
Post ReadAloud	4.32	30	0.325	0.059						

Although Read Aloud scores (Appendix E)) improved significantly after the experiment, the results of the paired-samples t-test showed a t-value of -18.213 with a degree of freedom of 29 and a p-value of less than 0.001, indicating that the difference between the pre and post-tests was statistically significant. However, the effect size, Cohen's d, was 0.256, indicating that the effect of the enhancement of Read Aloud was small and that the effect of the FIF App on the enhancement of Read Aloud skills was not as pronounced as that on the advancement of speaking skills.

Taken together, students made significant progress in both speaking and Speaking skills. The improvement in speaking scores was more significant, with an average improvement of 1.70 points, an increase of 18.2 percentage, and a large effect size, indicating that the FIF App had a significant effect on the improvement of speaking skills. The improvement in read performance was 0.85 points, an increase of 24.5 percentage. However, the amount of effect was relatively small, indicating that the effect of read skill improvement, although significant, was more moderate in practical application.

2．Dimensions of English-Speaking Skills

The mean accuracy score on the pretest was 3.18 with a standard deviation of 0.57, indicating that students' accuracy skills were more dispersed, with a minimum score of 2.20 and a maximum score of 4.00.The mean score on the post-test was 3.85 with a standard deviation of 0.48, with an improvement in the minimum score to 3.10 and a maximum score of 4.60, showing significant improvement in the accuracy dimension. The difference in mean scores between the pre and post-tests was 0.67 points, an

improvement of 21percentage. The paired t-test showed a t-value of -14.647 with a degree of freedom of 29 and a p-value of less than 0.001, indicating that the difference was statistically significant. The effect sizes Cohen's d was 0.25 and Hedges' correction was 0.26, indicating a moderate boost for this dimension.

Table 4 Accuracy and Range Comprehensive Evaluation of English-Speaking Skill Improvement

	Mean	N	Std. Deviation	Std. Error Mean	t	df	Significance		Cohen's d	Hedges' correction
							One-Sided p	Two-Sided p		
PreAccuracy	3.177	30	0.567	0.103	-14.647	29	0.000	0.000	0.252	0.259
PostAccuracy	3.850	30	0.475	0.087						

On the pretest, the mean score for Length sentences and coherence was 3.09 with a standard deviation of 0.62, with a high of 3.90 and a low of 2.20. The mean score on the post-test improved to 3.62 with a standard deviation of 0.55, with a high of 4.50 and a low of 2.90, indicating a more consistent performance on Length sentences and coherence. The difference between the mean scores of the pre- and post-tests was 0.53 points, an improvement of 17.1percentage. The paired t-test results showed a t-value of -10.590, a degree of freedom of 29, a p-value of less than 0.001, and effect sizes of 0.28 for Cohen's d and 0.28 for Hedges' correction, suggesting that the improvement in this dimension was more significant and the effect was moderate.

Table 5 Length Sentences and Coherence of Comprehensive Evaluation of English-Speaking Skill Improvement

	Mean	N	Std. Deviation	Std. Error Mean	t	df	Significance		Cohen's d	Hedges' correction
							One-Sided p	Two-Sided p		
Pre Length	3.087	30.00	0.624	0.114	-10.590	29	0.000	0.000	0.276	0.283
Post Length	3.620	30.00	0.553	0.101						

Based on the pretest, the mean score for the Flexibility and Appropriateness was 3.07 with a standard deviation of 0.60, the highest score was 4.00 and the lowest score

was 2.10. According to the post-test, the mean score was 3.56 with a standard deviation of 0.66, the highest score was 4.60 and the lowest score improved to 2.50, which shows that the students have better flexibility in their speaking. The difference between the mean pretest and post-test scores was 0.49 points, a 16percentage improvement.

Table 6 Flexibility and Appropriateness of Comprehensive Evaluation of English-Speaking Skill Improvement

	Mean	N	Std. Deviation	Std. Error Mean	t	df	Significance		Cohen's d	Hedges' correction
							One-Sided p	Two-Sided p		
PreFlexible	3.067	30	0.597	0.109	-8.431	29	0.000	0.000	0.320	0.329
PostFlexible	3.560	30	0.656	0.120						

Paired t-test showed a t-score of -8.431 with 29 degrees of freedom and a p-value of less than 0.001, indicating a significant improvement in this dimension. Also, the effect sizes, with Cohen's d of 0.32 and Hedges' correction of 0.33, point to a moderately large enlargement of the dimension and a positive effect of the FIF App in helping students to develop their linguistic flexibility.

The correlation analysis of the three dimensions showed that the correlation coefficients between the pre and post-tests were above 0.87, indicating that the students' performances were highly consistent across the dimensions and the effect sizes between the dimensions were relatively moderate, especially in the accuracy and sentence Coherence dimensions.

3 . ESS Level Transitions

Before the experiment, the student's speaking skill grades (Appendix C) were generally at a low level, with a large number of D-grade students and fewer high-level students at B grade and above, which were distributed as follows: 11 at D grade, 3 at C grade, 8 at C+ grade and 8 at a B grade. It may mean that most of the students can only communicate orally on familiar topics. Although they can participate in communication, they have great difficulties, and some of them cannot even express themselves completely.

After 8 weeks of FIF App training, the number of A-level students increased to 3, the number of B-level students increased to 10 (including B+ students), the C+ level remained at 8, the C level decreased to 7, and D-level students disappeared completely. This shows that most of the students' speaking skills have been greatly improved, especially the proportion of students with high and medium levels has increased significantly.

Compared with the pretest, the number of students with grade B and above increased from 8 to 13, an increase of about 62.5percentage, which further indicates that through the intensive training of FIF App, students are able to break through the language barriers and improve the fluency and accuracy of language expression. Meanwhile, the number of Grade D students decreased from 11 to 0, showing that the FIF App can significantly help students with a weak foundation.

Table 7 ESS Level Transitions of Comprehensive Evaluation of English-Speaking Skill Improvement

Level	A+	A	B+	B	C+	C	D
Pretest				8	8	3	11
Post-test		3	4	8	8	7	
Score	15-14.5	14.4-13.5	13.4-12.5	12.4-11.0	10.9-9.5	9.4-8.0	7.9↓

To summarize, improved fluency and intonation of voice lead to a more natural and coherent expression of ideas. At the same time, increased integrity leads to more organized and logical expression, which in turn improves Accuracy, Length Coherence, Flexibility and Appropriateness, and therefore, comprehensive speaking skill levels, ultimately validating the interrelationships between speaking skills.

2. Analyze performance differences among students at varying proficiency levels

Students were categorized their scores into three groups as higher , medium and lower group, to assessed by comparing pre-test and post-test results. The analysis utilized Levene's test for homogeneity of variances, ANOVA, effect size calculations,

and multiple comparison tests to evaluate the intervention's effectiveness and examine ESS differences among the groups.

For overall skills , the homogeneity of variances across groups showed that the variances were unequal in both the pre-test (Sig. = 0.006) and the post-test (Sig. < 0.001), confirming significant differences in score distribution among the groups. Based on these findings, Tamhane's test, which does not assume equal variances, was utilized for post hoc comparisons to ensure robust analysis.

ANOVA was then conducted to compare the average scores of the high, medium, and low groups for both the pre-test and post-test. The results revealed significant differences among the groups at both time points. In the pre-test, the F-value was 19.773 ($p < 0.001$), indicating varying initial levels of oral proficiency among the three groups. In the post-test, the F-value increased to 36.381 ($p < 0.001$), suggesting that the differences between the groups became more pronounced after the intervention. These findings show that the high-level group improved rapidly, while all students made progress, although the medium and low groups showed comparatively smaller gains.

Table 8 Overall ESS of Analyze performance differences among students at varying proficiency levels

	F	Based on Mean	Eta-squared Point Estimate
PreScore	19.773	0.006118177	0.59426499
PostScore	36.381	0.000111007	0.72935342

To further evaluate the impact of the intervention, effect size calculations were performed. The Eta-Squared value for the pre-test was 0.594, indicating that 59.4% of the total variance was attributed to differences between the groups. In the post-test, the Eta-Squared increased to 0.729, demonstrating that the intervention (e.g., the FIF App) had a substantial impact on students' overall oral proficiency. The increasing effect size suggests that the intervention facilitated progress across all groups and amplified the differences between them over time.

For Read Aloud, it confirmed that the assumption of equal variances was satisfied (Sig. = 0.421 for the mean), indicating no significant difference in variance among the

higher, medium, and lower groups. Meeting this assumption allowed for the application of ANOVA to examine the differences in post-test performance across the three proficiency levels.

The ANOVA results revealed statistically significant group differences in the post-test scores for Read Aloud, with an F-value of 23.117 ($p < 0.001$). These findings indicate that higher, medium, and lower groups exhibited different levels of post-test performance. Specifically, the higher group significantly outperformed both the medium and lower groups, suggesting that students with higher initial proficiency derived greater benefits from the intervention.

Table 9 Read Aloud Comparison of Analyze performance differences among students at varying proficiency levels

	Based on Mean Sig.	Between Groups F	Eta-squared Point Estimate
Post Read Aloud	0.421	23.117	0.631
Pre Read Aloud	0.943	12.991	0.490

The magnitude of the differences among the groups was quantified through effect size measures. The Eta-Squared value for Read Aloud was 0.631, indicating that 63.1% of the variance in students' post-test performance could be attributed to differences among the groups. This large effect size underscores the substantial impact of the intervention on students' oral reading performance, particularly for the higher proficiency group, which demonstrated the most pronounced gains.

To further investigate the differences among the proficiency groups, LSD and Tamhane's post hoc tests were conducted. The results confirmed significant differences in post-test scores across the three groups: The higher group's post-test scores were significantly higher than those of both the medium and lower groups ($p < 0.001$). The mean difference between the higher and lower groups was 0.72857, indicating substantial improvement in the higher group's read performance. The difference between the higher and medium groups was also statistically significant, with a mean difference of 0.55489 ($p < 0.001$). This suggests that the higher group advanced further in their reading aloud ability compared to the medium group. Although the medium group showed improvements over the lower group, the difference was smaller and not

statistically significant in all comparisons. This finding suggests that the lower group's progress was more limited, highlighting the need for further targeted interventions to support these students effectively.

Table 10 Read Aloud Comparison of Analyze performance differences among students at varying proficiency levels

	(I)	(J)	Mean Difference (I-J)	Sig.
LSD	Lower	Medium	-.55489*	0.000
		Higher	-.72857*	0.000
	Higher	Lower	.72857*	0.000
		Medium	0.174	0.135
Tamhane	Lower	Medium	-.55489*	0.000
		Higher	-.72857*	0.000

For the dimensions, Levene's test indicated that accuracy and range in the pre-test met the assumption of homogeneity (Sig. = 0.203), while length and cohenrence and flexibility and appropriateness did not meet this assumption in both the pre-test and post-test (Sig. < 0.05). To ensure the reliability of the results despite these inconsistencies, Tamhane's test was applied for post hoc comparisons.

The ANOVA results demonstrated significant differences across all dimensions among the higher, medium, and lower groups in both the pre-test and post-test:

Table 11 Dimension Comparison of Analyze performance differences among students at varying proficiency levels

	Homogeneity of Variances	Between Groups		Eta-squared
	Sig.	F	Sig.	Point Estimate
PreAccuracy	0.203	22.194	0.000	0.622
PreCohen	0.000	15.208	0.000	0.530
PreFlexible	0.019	21.176	0.000	0.611
PostAccuracy	0.001	32.983	0.000	0.710
PostLength	0.000	25.459	0.000	0.653
PostFlexible	0.001	41.801	0.000	0.756

In the pre-test Accuracy and Range yielded an F-value of 22.194 ($p < 0.001$), revealing significant differences in the ability to produce accurate language. The higher group exhibited superior performance compared to the medium and lower groups, showing a distinct initial advantage. Length and cohenrence, the F-value of 15.208 (p

< 0.001) indicated that the higher group spoke more smoothly and coherently, demonstrating better control of oral delivery than the other two groups. Flexibility and Appropriateness F-value of 21.176 ($p < 0.001$) showed that the higher group had greater proficiency in adapting their language use to diverse communicative situations, outperforming both the medium and lower groups.

In the post-test, the intervention's effects became even more evident, with the higher group making more substantial progress: The Accuracy and Range F-value of 32.983 ($p < 0.001$) indicated that all groups improved, but the higher group achieved the most significant gains, widening the gap between them and the lower group. The Length and Cohenrence yielded an F-value of 25.459 ($p < 0.001$), demonstrating that the higher group made notable progress in producing longer, more coherent utterances. In contrast, the medium and lower groups showed more modest improvements in this area. The most substantial progress was observed in Flexibility and Appropriateness, with an F-value of 41.801 ($p < 0.001$). This suggests that the higher group significantly enhanced their skills to use language adaptively, demonstrating increased versatility and responsiveness compared to the other groups.

These findings indicate that although all students made progress, the higher group exhibited the most significant improvements, particularly in Accuracy and Range, Flexibility and Appropriateness. The intervention was effective across all proficiency levels, and despite differences in the rate of progress among the groups, the overall trend was consistent. This confirms that the FIF App had a positive impact on students of all levels.

3. Track students' progress using the FIF App to validate sustained improvement

During the eight-week experimental period, the FIF Test provided a detailed record of weekly changes in students' speaking, demonstrating the process of improving students' speaking skills through the refinement of three dimensions (fluency, pronunciation, and integrity). Unlike pre and post-tests, the FIF Test does not have a single scoring result but rather shows the details of students' gradual improvement.

1 . Weekly Performance Trends (Weeks 1–8)

The descriptive statistics reveal a clear upward trend in students' performance over the eight weeks. The mean score increased from 212.60 in Week 1 to 261.57 in Week 8, with standard deviations ranging between 23.856 and 38.093. These results indicate that students made steady progress throughout the intervention period.

Table 12 FIF Weekly test of Track students' progress using the FIF App to validate sustained improvement

	Test1	Test2	Test3	Test4	Test5	Test6	Test7	Test8
Mean	212.60	214.10	225.33	234.73	240.57	248.33	256.30	261.57
Std. Deviation	38.093	23.856	29.211	24.847	25.212	26.071	27.332	28.364
N	30	30	30	30	30	30	30	30

The multivariate test results further confirm that the differences in performance across the weeks were statistically significant. Specifically, Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root all returned significant results ($F = 205.271$, $p < 0.001$), indicating that students' performance changed significantly over time. The partial eta squared value of 0.984 suggests that 98.4% of the variance in scores can be attributed to time, demonstrating a strong effect of the intervention across weeks.

Table 13 Multivariate Test of Track students' progress using the FIF App to validate sustained improvement

	Effect	Value	F	Hypothesis df	Sig.	Partial Eta Squared
week	Pillai's Trace	0.984	205.271[b]	7.000	0.000	0.984
	Wilks' Lambda	0.016	205.271[b]	7.000	0.000	0.984
	Hotelling's Trace	62.474	205.271[b]	7.000	0.000	0.984
	Roy's Largest Root	62.474	205.271[b]	7.000	0.000	0.984

2 . Validation of Gradual Progress and Non-Random Improvements

Since Mauchly's test of sphericity indicated a violation of the sphericity assumption ($\chi^2 = 202.117$, $p < 0.001$), adjustments were made using the Greenhouse-Geisser and Huynh-Feldt corrections to ensure reliable results. This adjustment accounts for unequal variances across repeated measures.

Table 14 Mauchly's Test of Track students' progress using the FIF App to validate sustained improvement

Tests of Within-Subjects Effects				Tests of Within-Subjects Contrasts			
week	F	Sig.	Partial Eta Squared	week	F	Sig.	Partial Eta Squared
Sphericity Assumed	205.579	0.000	0.876	Linear	656.096	0.000	0.958
Greenhouse-Geisser	205.579	0.000	0.876	Quadratic	0.129	0.723	0.004
Huynh-Feldt	205.579	0.000	0.876	Cubic	8.557	0.007	0.228
Lower-bound	205.579	0.000	0.876	Order 4	6.484	0.016	0.183

The within-subjects effect test shows that the time factor (week) had a significant impact on student performance ($F = 205.579$, $p < 0.001$, partial eta squared = 0.876). These findings confirm that students' scores improved significantly over the eight weeks, reflecting the effectiveness of the intervention.

The trend analysis through contrasts reveals additional insights into the nature of progress. The linear trend was highly significant ($F = 656.096$, $p < 0.001$), indicating continuous improvement in performance over time. However, the cubic and higher-order trends (e.g., cubic: $F = 8.557$, $p = 0.007$) suggest that students' progress was not perfectly linear, with some fluctuations along the way. This may indicate challenges faced by students at certain points during the intervention.

The pairwise comparisons show that students' scores in the later weeks were significantly higher than in the earlier ones. For example: Test 8 scores were significantly higher than those of Week 1 (mean difference = 48.967, $p < 0.001$), confirming substantial progress over the intervention period. Test 8 scores were also higher than Week 7 (mean difference = 5.267, $p < 0.001$), indicating that improvement continued even in the final stages of the intervention.

Table 15 Pairwise Comparisons Track students' progress using the FIF App to validate sustained improvement

	Test 8						
(J) week	1	2	3	4	5	6	7
Mean Difference (I-J)	48.967*	47.467*	36.233*	26.833*	21.000*	13.233*	5.267*
Sig.[b]	0.000	0.000	0.000	0.000	0.000	0.000	0.000

These comparisons provide strong evidence that the observed progress was incremental and not due to random fluctuations.

The results of the repeated measures ANOVA and pairwise comparisons demonstrate that students achieved significant and continuous improvement in their performance over the eight-week intervention period. The high partial eta squared values (ranging from 0.876 to 0.984) indicate that the time factor played a critical role in students' progress, confirming the effectiveness of the FIF App in driving consistent improvement.

While the overall trend was linear, the presence of higher-order fluctuations suggests that students may have faced some challenges during the process. Nevertheless, the overall findings indicate that students' progress was the result of systematic and sustained learning, rather than random variation. These insights provide valuable guidance for future teaching strategies, demonstrating that the FIF App not only promotes long-term improvement but also ensures steady progress across different stages of learning.

4. Examine changes in students' learning attitudes by analyzing questionnaire results.

Based on the questionnaire results, it offers insights into students' attitudes toward the FIF App in improving their English speaking skills. The analysis highlights key dimensions such as interest, motivation, autonomy, and confidence, reflecting the effectiveness of the App's features in enhancing the learning experience.

1 . Interpretation of Questionnaire Data and Key Findings

Table 16 Reliability of Examine changes in students' learning attitudes by analyzing questionnaire results

Cronbach's Alpha	0.712											
if Item Deleted	0.687	0.666	0.692	0.696	0.691	0.686	0.739	0.709	0.669	0.693	0.698	0.691

The overall reliability coefficient (Cronbach's Alpha) for this questionnaire was 0.712, indicating a moderate level of internal consistency. This suggests the instrument can reliably assess the four core dimensions of interest, motivation, autonomy, and confidence in developing English speaking skills.

The Item-Total Statistics reveal that removing individual items minimally impacts Cronbach's Alpha, with values ranging between 0.66 and 0.74. This indicates that the questionnaire design is sound, with each item contributing positively to the overall reliability.

However, Q7 ("Personalized learning paths help students find suitable learning methods") increased Cronbach's Alpha to 0.739 upon deletion, suggesting potential measurement error or weaker alignment with the other items. In contrast, Q9 ("Real-time feedback promotes oral improvement") displayed a strong corrected item-total correlation of 0.515, indicating that it is critical in assessing students' autonomy learning and progress in English speaking skills.

Moreover, Q2 and Q9 exhibited high item-total correlations (greater than 0.5), demonstrating their importance in enhancing student motivation and autonomy. Conversely, Q7 and Q8 showed low correlations (Q7 = 0.019, Q8 = 0.256), suggesting they may align less effectively with the overall learning experience reflected by other items.

The questionnaire results indicate that students generally responded positively to the FIF App, though there were different responses across items.

Table 17 Items Scores of Examine changes in students' learning attitudes by analyzing questionnaire results

	Q1	Q2	Q3	Q4	Q5	Q7	Q8	Q9	Q10	Q11	Q12
Mean	3.90	3.80	3.30	4.03	3.57	3.87	4.00	4.17	3.60	3.73	3.83
Std.	0.76	0.85	0.88	0.72	0.63	0.78	0.87	0.75	0.50	0.52	0.65

On an item level, Q1 (speech correction) and Q2 (interactive tasks) received high average scores of 3.90 and 3.80, respectively, suggesting that these features effectively engaged students by stimulating their interest in learning English speaking skills. However, Q3 (simulated conversations) received a lower average score of 3.30, with more variability in responses, indicating that the effectiveness of this task differed among students and could benefit from further refinement to enhance motivation.

In terms of motivation, Q4 (speech correction) achieved the highest average score of 4.03, demonstrating its role in encouraging active participation in speaking practices and classroom discussions. Q5 (daily vocabulary tasks), with an average score of 3.57, reflects the tasks' contribution to vocabulary building and participation in English-speaking activities. Q6 (challenge mode) had a lower average score of 3.27, but it still positively impacted motivation by engaging students who thrive on structured challenges.

In the autonomy learning dimension, Q7 (personalized learning paths) and Q8 (independent tasks) were well-received, with average scores of 3.87 and 4.00, respectively. These results indicate that students improved their ability to manage their learning tasks independently and enhance their learning efficiency. Q9 (real-time feedback), with the highest score of 4.17, reflects the importance of feedback in improving English speaking skills and fostering autonomy learning.

The confidence dimension shows moderate progress. Q10 (confidence in using English in various scenarios) received an average score of 3.60, reflecting some improvement in students' comfort with speaking but leaving room for further development. Q11 (confidence in avoiding grammatical errors) and Q12 (confidence in organizing language structures) scored 3.73 and 3.83, respectively, indicating significant improvement in students' fluency and coherence in English speaking.

Table 18 ANOVA of Examine changes in students' learning attitudes by analyzing questionnaire results

	Sum of Squares	df	Mean Square	F	Sig.		Eta-squared	Epsilon-squared	Omega-squared Fixed-effect	Omega-squared Random-effect
Between Groups	25.622	11	2.329	4.292	0.000	Point Estimate	0.119	0.092	0.091	0.009
Within Groups	188.867	348	0.543							
Total	214.489	359								

The ANOVA results indicate significant differences in scores across the 12 items. The F-value was 4.292, with a p-value < 0.001, demonstrating that students responded differently to various tasks, with some features more effective in stimulating interest and participation than others. Levene's test yielded a p-value of 0.320, confirming the homogeneity of variances and validating the reliability of the ANOVA model.

The between-group sum of squares was 25.622, with 11 degrees of freedom and a mean square of 2.329, highlighting significant differences between items. The within-group sum of squares was 188.867, with 348 degrees of freedom, suggesting that individual responses varied, but the item type still significantly impacted overall feedback. Eta-squared (η^2) was 0.119, indicating that 11.9% of the total variance can be attributed to item type. Epsilon-squared (ε^2) was 0.092, showing that even with adjustments for degrees of freedom, 9.2% of the variance remained significant. The Omega-squared fixed-effect value of 0.091 further supports the role of item type in shaping student feedback.

The factor analysis revealed the distinct impact of different FIF App modules on students' learning. The KMO value of 0.511 suggests moderate suitability for factor analysis, while Bartlett's test of sphericity yielded a Chi-square value of 145.340 with $p < 0.001$, confirming strong correlations among items.

Table 19 Component of Examine changes in students' learning attitudes by analyzing questionnaire results

Component	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
1										0.856	0.911	0.894
2				0.661	0.840	0.671						
3	0.827	0.597	0.709									
4							0.689	0.752	0.782			

The rotated factor matrix identified four key factors, explaining 69.944% of the cumulative variance:

Confidence (Q10–Q12): This factor reflects students' progress in developing English-speaking confidence, with improvements in expressing ideas fluently and avoiding errors.

Motivation (Q4–Q6): This factor demonstrates the role of tasks and challenge modes in fostering student participation and motivation in English activities.

Autonomy (Q7–Q9): This factor underscores the importance of personalized learning paths and real-time feedback in promoting student autonomy and active learning.

Interest (Q1–Q3): This factor highlights the impact of speech correction and interactive tasks on students' interest in learning English speaking skills.

Table 20 Model of Examine changes in students' learning attitudes by analyzing questionnaire results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.753[a]	0.566	0.551	2.90185	0.566	36.587	1	28	0.000
2	.864[b]	0.747	0.728	2.25678	0.181	19.294	1	27	0.000
3	.943[c]	0.888	0.876	1.52780	0.141	32.913	1	26	0.000
4	1.000[d]	1.000	1.000	0.00000	0.112		1	25	

The stepwise regression analysis uncovered the sequential nature of students' learning development. Model 1 showed that interest (DIM1) played a crucial role,

explaining 56.6% of the variance ($R^2 = 0.566$). This indicates that features such as speech correction and interactive tasks lay the foundation for student motivation.

In Model 2, the addition of motivation (DIM2) increased the variance explained to 74.7%, reflecting the growing importance of student motivation through tasks and challenges. Model 3 incorporated autonomy learning (DIM3), raising the explanatory power to 88.8%, suggesting that autonomy plays a pivotal role in learning success. Finally, Model 4 included confidence (DIM4), accounting for 100% of the variance, indicating that confidence is the cumulative result of interest, motivation, and autonomy learning.

The coefficient analysis showed that interest ($\beta = 0.753$) had the most decisive impact, followed by motivation ($\beta = 0.459$) and autonomy learning ($\beta = 0.386$). Confidence ($\beta = 0.349$), though numerically lower, reflects the internalization of learning outcomes and self-recognition development.

1. Evaluation of Shifts in Interest, Motivation, Autonomy, and Confidenc

This section assesses the changes in four key dimensions—interest, motivation, autonomy, and confidence—based on the questionnaire results.

Interest (Q1–Q3):The average score for this dimension was 3.67 (SD = 0.80). High scores for pronunciation correction (Q1) and interactive tasks (Q2) indicate that these features successfully engaged students. However, simulated conversations (Q3) received a lower score, suggesting room for improvement in aligning these tasks with students' learning needs.

Motivation (Q4–Q6):With an average score of 3.62 (SD = 0.76), this dimension reflects the positive impact of daily vocabulary exercises (Q5) and challenge modes (Q6) on student motivation. The pronunciation correction feature (Q4) stood out with the highest score (4.03), showing its effectiveness in motivating students to actively participate in speaking tasks and discussions.

Autonomy (Q7–Q9):This dimension achieved the highest average score of 4.01 (SD = 0.79). The data highlight the effectiveness of personalized learning paths (Q7) and independent tasks (Q8) in fostering autonomy learning. Real-time feedback (Q9),

with the highest individual score (4.17), played a critical role in supporting students' autonomy and enhancing their speaking skills.

Confidence (Q10–Q12):The average score for this dimension was 3.72 (SD = 0.56). Confidence in using English in various scenarios (Q10) scored 3.60, indicating moderate progress, while avoiding grammatical errors (Q11) and organizing coherent expressions (Q12) received higher scores, showing improvements in fluency and structured communication.

These results demonstrate that while the intervention positively impacted all four dimensions, autonomy and motivation showed the most substantial improvements, reflecting the success of the personalized learning features and real-time feedback in promoting independent learning and sustained motivation.

Conclusion

The FIF App effectively supports the development of English speaking skills by fostering interest, enhancing motivation, promoting autonomy learning, and building confidence. The App's integration of tasks and feedback mechanisms facilitates a comprehensive learning experience, allowing students to progress through a structured learning path. This sequential development underscores the importance of each dimension, with confidence emerging as the outcome of accumulated growth across interest, motivation, and autonomy.

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter synthesizes the research findings with relevant literature to evaluate the effectiveness of using the FIF App in the CLT to improve students' speaking skills while promoting positive learning attitudes. Besides, the study's limitations offer suggestions for future research and pedagogical practices. It concludes by emphasizing the study's contributions and the importance of optimizing teaching through data-driven approaches.

1. Conclusion

This study validates the effectiveness of using the FIF App in Communicative Language Teaching (CLT) to improve vocational college students' English-speaking skills and positively impact their learning attitudes. Students achieved significant progress across several speaking skills, including accuracy and range, length and coherence, flexibility and appropriateness, and oral read-aloud. The average speaking score increased from 9.33 (SD = 1.76) in the pre-test to 11.03 (SD = 1.65) in the post-test, reflecting an 18.2% improvement. Additionally, students' pronunciation, fluency, and integrity scores in the reading section rose from 3.47 to 4.32, representing a 24.5% increase.

Progress was evident at the individual level and across different proficiency groups. Notably, the D-level dropped to zero by the end of the experiment, while the A-grade increased to three students. This indicates that the FIF App's personalized learning and instant feedback effectively supported students across all proficiency levels.

Over the eight-week intervention, the student's average FIF weekly test scores rose from 212.60 in Week 1 to 261.57. Although there was a brief plateau in Week 6, students quickly recovered and continued to make steady progress. Multivariate analysis (Pillai's Trace = 0.984, $p < 0.001$) confirmed that time significantly influenced students' progress.

Furthermore, every student showed positive changes in learning attitude across multiple dimensions, and above 70% revealed significant. Survey results suggested

improvements in interest, motivation, autonomy, and confidence. Pronunciation correction (mean score = 3.90) and instant feedback (mean score = 4.17) were particularly effective in stimulating interest and promoting autonomy.

Overall, this study demonstrates the significant educational value of combining the FIF App with CLT and provides empirical support for the broader adoption of Mobile-Assisted Language Learning (MALL) in vocational education.

2. Discussion

1. Improvement of English-speaking skills through the FIF App

This study's results demonstrate that using the FIF App in Communicative Language Teaching (CLT) significantly improved students' English-speaking skills. The students' average speaking scores increased from 9.33 to 11.03, reflecting an 18.2% improvement. The t-test results ($t = -12.691$, $p < 0.001$) indicate this improvement is statistically significant. Cohen's $d = 0.732$ shows a moderate to large effect size. These findings align with previous research on the effectiveness of Mobile-Assisted Language Learning (MALL) in improving speaking fluency and accuracy (Alim et al., 2022; Rahimi & Fathi, 2022).

The FIF App enhances students' fluency and coherence by simulating real-life situations and providing frequent practice. Students' fluency and pronunciation accuracy increased from 71.5 to 87.6 and from 65.3 to 79.2, respectively. This corresponds with Liu (2024), who found that real-time feedback from deep learning models can significantly improve pronunciation accuracy, facilitating rapid student progress.

2. Impact of Personalized Learning Paths on Different Proficiency Groups

The personalized learning paths provided by the FIF App produced notable results across higher, medium, and lower groups. After the experiment, the number of D-level students decreased to zero, while the number of A-level students increased from zero to three. This suggests that personalized feedback helps lower-level students make significant progress and unlocks the potential of higher-level students. This result aligns

with Jeong (2022), who found that personalized learning paths and mobile learning tools effectively promote autonomy learning and sustained motivation.

Additionally, the number of students achieving B-level and above increased from 8 to 13, representing a 62.5% improvement. This highlights the importance of differentiated instruction in enhancing performance across different groups (Ta & Nghiem, 2024). However, the relatively slower progress of the lower and medium groups suggests the need for additional feedback and support to help these students overcome learning bottlenecks (Rahimi & Fathi, 2022).

3. Continuous Improvement and Progress Tracking

During the 8-week experiment, students demonstrated continuous improvement, with average scores increasing from 212.60 in Week 1 to 261.57 in Week 8. Multivariate analysis (Pillai's Trace = 0.984, $p < 0.001$) confirmed that time played a critical role in students' progress. These findings align with research supporting the effectiveness of MALL in facilitating long-term learning (Shuanghong et al., 2023). Learning analytics tools further promoted students' progress by enabling real-time tracking and feedback, helping them adjust their strategies effectively (Llerena et al., 2021).

Although the overall trend was linear, inevitable fluctuations—such as a temporary plateau in Week 6—indicated that students might need additional guidance when tackling more complex tasks. However, the steady improvement towards the end of the experiment demonstrates that personalized support provided by the FIF App plays a crucial role in promoting sustained progress. This finding corresponds with Liu (2024), who emphasized the importance of real-time feedback and data analysis in maintaining learning momentum.

4. Positive Changes in Learning Attitudes

The FIF App also positively influenced students' learning attitudes, particularly in terms of interest, autonomy, and confidence. Survey results showed that students appreciated speech correction (Q1, mean = 3.90) and interactive tasks (Q2, mean = 3.80). These results align with Madawistama et al. (2024), who found that gamified

designs and personalized feedback in MALL tools effectively enhance student engagement and motivation.

Furthermore, personalized learning paths (Q7, mean = 3.87) and real-time feedback (Q9, mean = 4.17) significantly boosted students' ability to manage their learning independently and motivated them to engage in extracurricular activities. This finding aligns with Hwang et al. (2024), who emphasized the role of real-time feedback in fostering learner autonomy and confidence within mobile learning environments.

Although technical limitations pose challenges to instruction, this study proactively addressed these issues through device-sharing strategies and network support to ensure all students participated in learning. This approach is consistent with Madawistama et al. (2024), who demonstrated that innovative educational strategies can effectively overcome challenges in resource-limited environments.

Additionally, the temporary plateau in Week 6 indicated that students might need more guidance and support when tackling complex tasks. This observation aligns with Shadiev et al. (2023), who noted that fluctuations in the learning process are normal and that timely instructional adjustments can sustain students' learning momentum.

5. Summary

This study validated the effectiveness of the FIF App in the CLT, improving the English-speaking skills and learning attitudes of vocational college students. Students achieved significant progress in fluency, pronunciation, integrity, accuracy and range, length and coherence, flexibility and appropriateness, and notable improvements in interest, autonomy, motivation and confidence. Personalized learning provided comprehensive support for different proficiency groups, while device-sharing strategies and learning analytics tools effectively addressed technical challenges.

These findings suggest that MALL fosters language skill development, autonomy, and motivation, offering innovative solutions for language education in vocational settings. Future research can further explore the applicability of MALL in various educational contexts and optimize support strategies for lower-level students to ensure more balanced learning outcomes.

3. Implications

This study indicates the multifaceted impact of using the FIF App in Communicative Language Teaching (CLT) in vocational education, providing valuable insights for teaching practice, educational policy, and technology implementation.

Firstly, the findings reveal that teachers can more effectively monitor student progress through real-time feedback systems and adjust teaching strategies promptly based on data, thereby enhancing instructional precision and classroom effectiveness. Technology integration optimizes classroom management and offers students a more flexible learning experience, ultimately improving the overall quality of instruction.

Additionally, the FIF App significantly promotes students' autonomy learning and inclusive development. Personalized learning paths enable students to independently complete tasks and exercises outside class, fostering self-management and reflective skills. Lower-level students demonstrated substantial progress after the experiment, while higher-level students further refined their expressive abilities. These outcomes suggest that differentiated support can meet the diverse learning needs of students, ensuring progress at all proficiency levels. This aligns with previous studies highlighting the role of technology in narrowing achievement gaps among students.

Moreover, this study illustrates the effectiveness of technology-enhanced learning in resource-limited environments. Strategies such as device-sharing and resource backups ensured that students could fully engage in learning, even with limited access to technology. These practices offer replicable solutions for other educational institutions, demonstrating how efficient technology use can be achieved under constrained conditions.

The study also emphasizes that the deep integration of pedagogy and technology fosters more dynamic learning environments. Combining the FIF App with CLT enhances students' language skills and stimulates their interest and motivation to participate actively. Policymakers should actively promote the integration of technology and pedagogy while providing teachers with the necessary training to master new tools, ensuring that instructional innovation continues to thrive.

Finally, the study adopted innovative data collection and analysis methods, such as automated assessment systems and weekly tests, enabling precise monitoring of student progress. These methods provide a valuable framework for future research. The study also underscores the importance of localization, as educational technologies must be tailored to specific educational contexts and students needs to ensure adaptability and sustainability.

To Summary, integrating the FIF App and the CLT demonstrates the broad value of technology-enhanced learning in vocational education. Future research should further explore the application of this model in different educational settings and refine personalized support strategies to ensure that diverse student groups achieve comprehensive development at their respective levels.

4. Limitations

Despite the positive outcomes of this study, several limitations must be considered when interpreting the results. First, the research was conducted in a vocational medical college in Sichuan, which may restrict the generalizability of the findings. Students in different regions and educational settings may encounter distinct learning needs and challenges.

Second, the sample consisted of students at varying levels within the same educational background but did not include beginners or advanced learners. Students at different proficiency levels may experience significant differences in learning paths and progress rates, limiting the results' applicability to learners across all proficiency levels.

Third, a short-term experiment was conducted to balance scientific rigour and control over variables to avoid potential distortions in the results. While both the findings and relevant literature suggest that an eight-week period is sufficient to observe changes in speaking skills, it is essential to acknowledge that the study could not capture students' long-term development, as language proficiency is typically acquired over a more extended period.

Additionally, for consistency, the entire experiment was conducted by a single teacher. Variations in teaching style, experience, or approach could impact students' learning outcomes, highlighting the need for future research involving multiple instructors to account for such differences.

Lastly, this study focused primarily on speaking skills without delving into other language skills such as listening, reading, or writing. As a result, the findings may not comprehensively reflect the overall impact of the FIF App on language development.

In summary, expanding the scope of the research, incorporating learners of different proficiency levels, extending the experimental period, involving multiple teachers, and examining other language skills offer valuable directions for future research and areas for improvement.

5. Recommendations for Further Studies

Based on the findings and limitations of this study, several areas for exploration and improvement can enhance the effectiveness of the FIF App and CLT methodology while expanding their application across diverse educational contexts.

First, broadening the scope of future research is essential. As this study focused on a specific vocational college in one region, the generalizability of the results may be geographically limited. Future studies should be conducted across different regions and various types of institutions to verify the effectiveness of the FIF App and CLT approach in a broader range of educational settings.

Next, incorporating learners at different proficiency levels would enrich the research outcomes. This study primarily targeted non-English majors at vocational colleges, but future research should include both beginner and advanced learners. Investigating how students at various proficiency levels engage with mobile learning tools would provide insights into their progress and help develop more targeted teaching strategies to ensure that learners at all levels benefit from personalized learning.

Additionally, extending the experimental duration is a critical strategy for future research. Although the eight-week experiment demonstrated short-term improvements, it did not allow for assessing long-term learning outcomes. Future studies could span an entire semester or academic year to explore the sustainability and long-term impact

of MALL on English proficiency and monitor students' progress across different stages of development.

Furthermore, involving multiple teachers in future research would enable a more comprehensive understanding of how different teaching styles and instructional approaches influence student outcomes. By comparing results across different instructors, researchers can gain deeper insights into the role of teachers in integrating MALL and CLT, offering valuable guidance for teacher training programs.

Lastly, expanding the focus to other English skills would provide a more holistic perspective on language development. While this study centred on speaking skills, future research should investigate the impact of the FIF App and CLT methodology on the integrated development of multiple skills. This approach would support the creation of more comprehensive teaching strategies to improve students' overall English proficiency.

In conclusion, future research should expand the scope, diversify samples, extend the experimental period, involve multiple instructors, and cover a broader range of language skills. These efforts will further validate the effectiveness of the FIF App and CLT approach, providing more substantial support for practical improvements in vocational English education. They will also contribute to driving innovation in diverse educational contexts.

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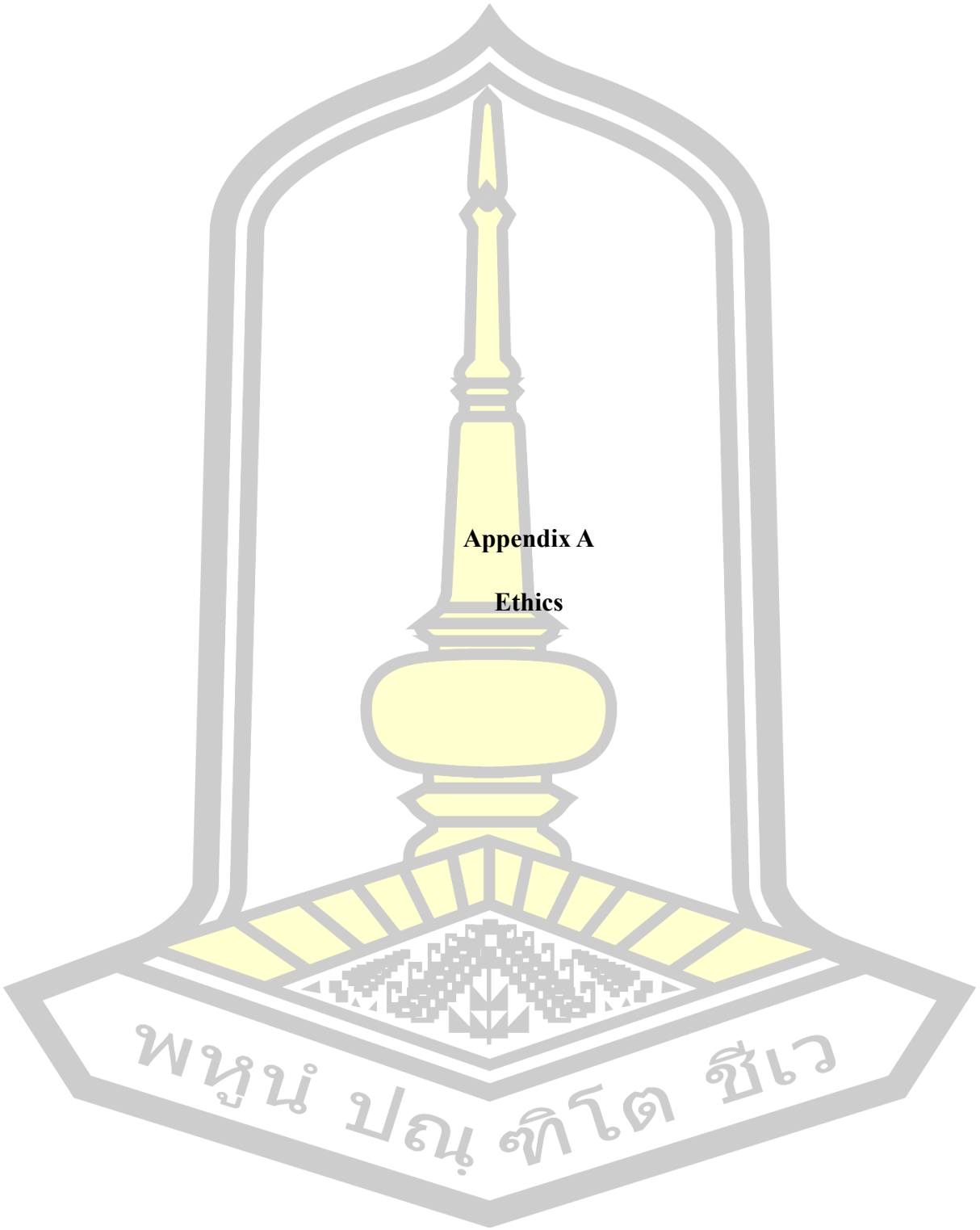
APPENDIX



Appendix A

Ethics

MAHASARAKHAM UNIVERSITY ETHICS COMMITTEE FOR
RESEARCH INVOLVING HUMAN SUBJECTS

Certificate of Approval

Approval number: 305-131/2024

Title : The Use of "FIF" Mobile Application in CLT to Improve English Speaking Skills of Vocational College Students in Sichuan Vocational College of Health and Rehabilitation, China.

Principal Investigator : Jiaqi Cai
Responsible Department : Faculty of Education
Research site : Sichuan Vocational College of Health and Rehabilitation

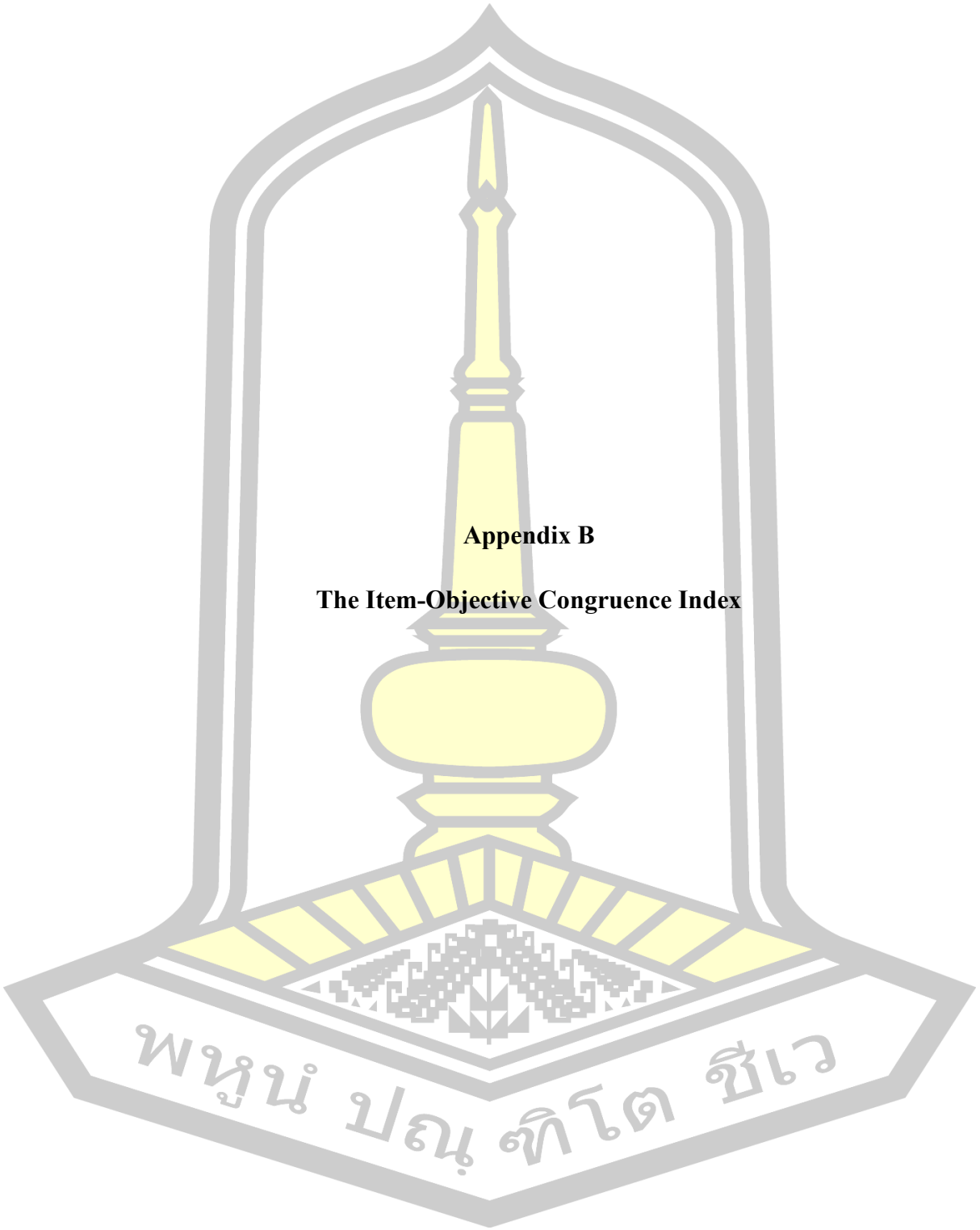
Review Method : Expedited Review

Date of Manufacture : 15 May 2024 **expire : 14 May 2025**

This research application has been reviewed and approved by the Ethics Committee for Research Involving Human Subjects, Mahasarakham University, Thailand. Approval is dependent on local ethical approval having been received. Any subsequent changes to the consent form must be re-submitted to the Committee.

Ratree S.
.....
(Assistant Professor Ratree Sawangjit)
Chairman

Approval is granted subject to the following conditions: (see back of this Certificate)



Appendix B

The Item-Objective Congruence Index

Pre and Post Test about English Speaking Skill

	SECTION 1: Pretest					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	0	1	0.67	Kept
	SECTION 2: Post-Test					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	1	0	0.67	Kept

Item Objective Congruence Questionnaire

	Questionnaire : Items1-12 (Likert Scale)					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
Q1	The pronunciation correction and intonation training in the FIF App have sparked my interest in English pronunciation and spoken expression. .	1	1	1	1	Kept
Q2	The interactive tasks and activities in the FIF App have improved my fluency and interest in learning English.	1	1	1	1	Kept
Q3	Through simulated scenario dialogues in the FIF App, I have developed a strong interest in using different sentence patterns and grammatical structures to express my thoughts	1	1	1	1	Kept

Q4	The pronunciation correction feature of the FIF App has improved my pronunciation and intonation, making me more willing to participate in speaking practice and class discussions.	1	1	1	1	Kept
Q5	The practice tasks in the FIF App have expanded my vocabulary and increased my enthusiasm for participating in English activities.	1	1	1	1	Kept
Q6	The progressive challenge mode of the FIF App has helped me reduce grammatical errors, motivating me to stay actively engaged in various English practices.	1	1	1	1	Kept
Q7	App has helped me find a suitable learning method, encouraging me to independently arrange my study time and tasks.	1	1	1	1	Kept
Q8	Through the self-paced tasks in the FIF App, I can set clear learning objectives and complete tasks independently, improving my learning efficiency.	1	1	1	1	Kept
Q9	The real-time feedback feature of the FIF App has encouraged me to continuously adjust and improve my speaking skills, fostering my habits for autonomy learning.	1	1	1	1	Kept
Q10	The practice exercises in the FIF App have made me more confident in using English in different situations and efficiently handling conversations.	1	1	1	1	Kept
Q11	The training in the FIF App has boosted my confidence in avoiding grammatical errors and expressing myself freely in oral communication.	1	1	1	1	Kept
Q12	Now, I feel more confident in organizing sentence structures, making my expressions more coherent and clear.	1	1	1	1	Kept

Item Objective Congruence of Teaching Plan

Teaching Plan							
Week	Topic	Objectives	Expert Evaluation			IOC Value	Meaning
			A	B	C		
1	The Impact of Short Videos on Daily Life	Be able to discuss the positive and negative impacts of short videos on daily life Can use English to express vocabulary and sentence guidance related to short videos Be able to describe in English how to balance the use of short videos in one's personal life. Enhance pronunciation, fluency and completeness through FIF App, etc.	1	1	1	1	Kept

2	Environmental Protection and Sustainable Living	Be able to discuss the positive impacts of environmental protection measures and sustainable lifestyles Can use key vocabulary and sentence patterns related to environmental protection. Can express how to take action to protect the environment in daily life Enhance pronunciation, fluency and integrity with FIF App.	1	1	1	1	Kept
3	The Importance of Physical Exercise in Daily Life	Be able to discuss the positive impact of physical activity on health Apply key vocabulary and sentence patterns related to physical activity. Can describe how to develop physical activity habits from personal experience. Enhance pronunciation, fluency and completeness through FIF App.	1	1	1	1	Kept
4	The Pros and Cons of Online Shopping	Discuss the advantages and disadvantages of shopping online Can use core vocabulary and sentence patterns related to online shopping. Be able to express in English how online shopping affects them. Enhance pronunciation, fluency and completeness with FIF App.	1	1	1	1	Kept
5	The Benefits of Learning a New Skill	Be able to discuss the advantages and disadvantages of a new skill. Apply vocabulary and sentence patterns related to learning skills. Can use English to express their opinions about learning new skills. Enhance pronunciation, fluency and completeness through FIF App.	1	1	1	1	Kept
6	The Role of Technology in Education	Be able to discuss the role of technology in education Be able to express vocabulary and sentence patterns related to technology and education. Be able to describe in English the benefits and challenges of technology. Enhance pronunciation, fluency and completeness through FIF applications.	1	1	1	1	Kept

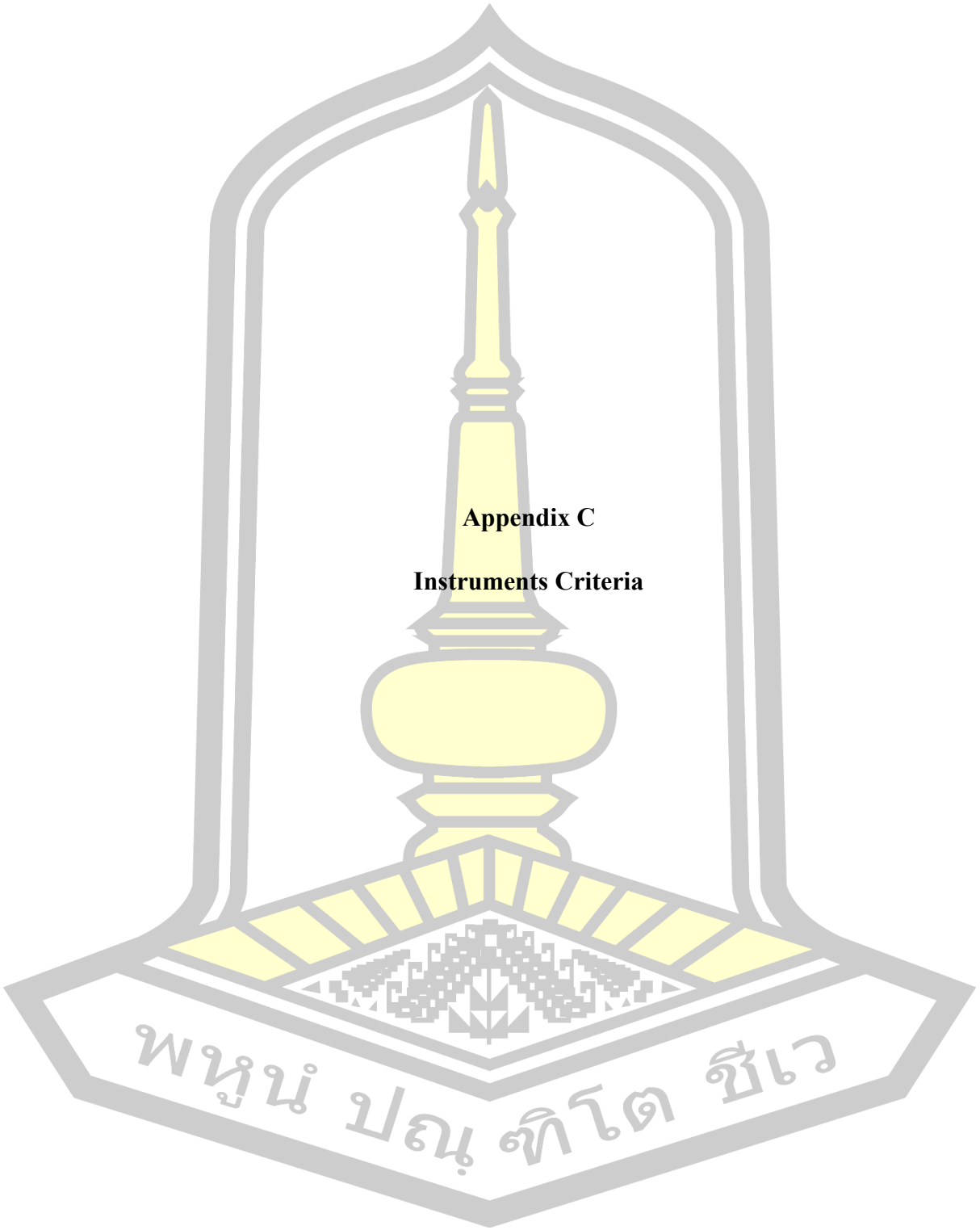
7	Time Management for Students	Can discuss the importance of time management Be able to express the vocabulary and sentence patterns related to time management. Be able to express in English how to improve the efficiency of study and life. Enhance pronunciation, fluency and completeness through FIF App.	1	1	1	1	Kept
8	Effective Communication Skills	Be able to discuss the role of communication skills in the workplace. Apply basic vocabulary and sentence patterns related to communication in the workplace. Be able to express how to improve communication skills in relation to future careers. Enhance pronunciation, fluency and completeness through FIF App.	1	1	1	1	Kept

Item Objective Congruence of FIF Test

FIF Test : 1-8 (CET4-SET)						
	SECTION 1: Test 1					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	1	1	1	Kept
	SECTION 2: Test 2					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	1	1	1	Kept

	SECTION 3: Test 3					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	0	0.67	Kept
5	Communication	1	1	1	1	Kept
	SECTION4: Test 4					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	0	0.67	Kept
5	Communication	1	1	1	1	Kept
	SECTION 5 Test 5					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	0	1	0.67	Kept
	SECTION 6: Test 6					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	1	1	1	Kept
	SECTION 7: Test 7					

No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	0	1	1	0.67	Kept
	SECTION 8: Test 8					
No.	Items	Expert Evaluation			IOC Value	Meaning
		A	B	C		
1	Self-Introduction	1	1	1	1	Kept
2	Read Short Passage	1	1	1	1	Kept
3	Two questions about the Passage	1	1	1	1	Kept
4	Individual Presentation	1	1	1	1	Kept
5	Communication	1	1	1	1	Kept



Appendix C

Instruments Criteria

Standard of the Higher Vocational English Course

1. 职场涉外沟通

职场涉外沟通指学生在职场情境中，能够运用英语语言知识和语言技能比较准确地理解和表达信息、观点、情感，进行有效口头沟通和书面沟通。职场涉外沟通构成英语学科核心素养的基础要素。

2. 多元文化交流

多元文化交流指学生在学习和使用英语的过程中，能够识别、理解、尊重世界多元文化，拓宽国际视野，增强国家认同，坚定文化自信，树立中华民族共同体意识和人类命运共同体意识；在日常生活和职场中能够有效进行跨文化交际，用英语传播中华文化。多元文化交流体现英语学科核心素养的价值取向。

3. 语言思维提升

语言思维提升指学生在系统学习和使用英语的过程中，能够识别和理解英语使用者或英语本族语者的思维方式和思维特点，提升自身思维的逻辑性、思辨性与创新性。语言思维提升体现英语学科核心素养的心智特征。

4. 自主学习完善

自主学习完善指学生基于英语语言学习特点，能够做好自我管理，养成良好的自主学习习惯，多渠道获取学习资源，自主、有效地开展学习，形成终身学习的意识和能力。自主学习完善构成英语学科核心素养的发展条件。

（3）语篇知识

【内容要求】

语篇知识是关于语篇表达的内容、意图和手段的知识。基础模块的语篇知识内容要求包括写作目的、体裁特征、标题特征、篇章结构、修辞手段、衔接与连贯手段、语言特点、语篇成分（句子、句群、段落）之间的逻辑语义关系等。

语篇知识有助于学生有效理解听到、读到或看到的语篇，并在口头和书面表达过程中根据交流需要选择恰当的语篇类型，设计合理的语篇结构，保持语篇的衔接性和连贯性等，从而达到有效交际的目的。

【教学提示】

教师在教学中应培养学生的语篇意识，引导学生观察和分析不同语篇的结构和语言特征，对语言材料句子之间、段落之间的衔接性与连贯性进行分析，帮助学生把握不同语篇的表意功能，提高学生理解语篇和选择恰当语篇表达意义的能力。

（4）语用知识

【内容要求】

语用知识指在不同情境中恰当运用语言的知识。情境的变化会影响语言的使用，如目的、场合、话题和交际者的不同会影响正式和非正式、礼貌和不礼貌、直接和委婉等不同表达方式的选择。学习和掌握一定的语用知识有助于提升学生的语用意识，帮助学生根据不同情境，进行得体、有效的交际。

【教学提示】

教师在教学中应适时创设交际语言环境和职场情境，通过不同的典型案例提升学生的语用意识，使学生意识到语用能力的提高需要在真实情境中进行长期实践。

4. 文化知识

【内容要求】

高等职业教育专科英语课程的文化知识涵盖哲学、经济、科技、教育、历史、文学、艺术、社会习俗、地理概况，以及中外职场文化和企业文化等。中外优秀文化知识的学习有助于学生比较文化异同，汲取文化精华，提高跨文化理解与表达能力，拓宽国际视野，增强处理文化差异的意识和能力，加深对中

【教学提示】

教师在教学中可以运用典型案例创设情境，让学生通过体验、探索、比较等方式，加深对文化异同的理解，正确认识和对待文化差异，帮助学生了解和感悟中外优秀文化的内涵，培养学生用英语讲述中国故事的意识和能力。

4. 提升信息素养，探索信息化背景下教与学方式的转变

教师要树立正确的信息化教学理念，注重现代信息技术在英语教学中的应用，努力实现英语教学与信息技术的深度融合，提高英语教学的实效。教师要充分利用媒体、网络、人工智能、大数据、虚拟仿真等技术，依托慕课、微课、云教学平台等网络教学手段，利用翻转课堂、混合教学模式等构建真实、开放、交互、合作的教学环境。教师要指导学生充分利用各种信息资源，通过自主学习、合作学习和探究式学习提升学生的信息素养。

5. 尊重个体差异，促进学生全面与个性化发展

学生是英语学习的主体，英语教学要以学生为主体，以学习为中心，促进学生的全面发展。教师要根据学生认知特点和能力水平组织教学，尊重生源差异和个体差异，满足学生的不同需求，构建适合学生个性化学习和自主学习的教学模式，鼓励学生开展自主学习、合作学习和探究式学习，促进学生的全面发展和个性化发展。教师要重视对学生学习方法和学习策略的指导，调动学生学习的积极性；组织丰富多彩的英语课外活动，营造良好的英语学习氛围；指

2. 数字化资源

数字化资源的开发和利用是推动信息化教学的有力手段。教师应通过课程资源平台、英语教学类应用程序等获取和使用各类数字化资源（如公开课或教学比赛录像等），支持线上线下混合式教学模式，满足生源多样性及学生个性化学习的需求。高等职业教育专科学校应给予政策和经费支持，鼓励和支持英语教师开发职业教育在线精品课程以及具有校本、区域、国际化特色的课程资源，确保课程目标的实现。

3. 教学设备资源

教学设备资源是保障高等职业教育专科英语课程实施的基础性条件。为英语课程教学配备必需的设备资源（计算机、互联网、智慧教室、语言实验室等），提供相应的软件、互联网宽带访问等智慧教学环境，为英语教师开展教育教学活动、丰富教学手段和方法、开发数字化课程资源创造必要条件。

1. 基于学科核心素养开展学业水平评价

对接本课程标准中明确的学业质量水平要求，运用恰当有效的评价方法，全面、系统地收集并科学分析、处理有关学生学业表现的数据信息，通过多维度的综合分析，全面考查学生英语学科核心素养的达成情况。

2. 建立科学的教学评价体系

体现评价主体、评价方式、评价过程的多元化，将教师评价、学生互评与自我评价相结合，校内评价与校外评价相结合，形成性评价与终结性评价相结合；适当吸纳相关行业、企业和社会组织参与考核评价；完善学生学习过程监测、评价与反馈机制，引导学生自我管理、主动学习，提高学习效率。

3. 充分发挥教学评价的多重功能

发挥评价对英语教学的导向、激励、诊断、改进等作用，促进英语课程建设，提高学生的语言实践应用能力，特别是运用英语处理与未来职业相关业务的能力。根据职业教育特点，强化实践性教学环节的全过程管理与考核评价。鼓励学生获取相关职业英语技能等级证书，培养学生的自主学习与实践能力。

1.5 口头表达

1.5.1 考核的要求

➢ 四级考试：要求考生能用英语就熟悉的话题进行简短但多话轮的交谈；能对一般性事件和现象进行简单的叙述或描述；经准备后能就熟悉的话题作简短发言。语言表达较清楚，语音、语调和语法基本正确。能运用基本的口头表达与交流的策略。

1.5.2 考核的技能

口语部分考核学生就熟悉的话题用英语进行口头表达与交流的能力。口语部分考核的技能如下：

A. 口头阐述

01 陈述事实、理由、观点等

02 描述人物、事件、现象等

B. 口头互动

03 交换意见、交流情感和观点等

04 争辩、解释、比较、论证等

C. 运用口头交际策略

05 运用合适的口头表达与交流的策略帮助表达

2.2 四级口试

2.2.1 考试形式

四级口试采用计算机化考试形式。模拟考官及试题呈现在计算机屏幕上，试题材料采用文字或画面提示(图画、图表、照片等)。考生由计算机系统随机编排为两人一组。考生在计算机上进行考生与模拟考官、考生与考生之间的互动。考试包含四个任务，考试总时间约15分钟。

2.2.2 考试过程

考试按以下步骤进行：

4.3.1 评分方法

四级口语考试的评分分为人工评分部分和计算机自动评分部分。人工评分总分为15分；计算机自动评分(朗读部分)总分为5分。人工评分的分值和计算机评分的分值合成后的考试总分为20分，成绩报道时转换为A、B、C和D四个等级。

六级口语考试全部采用人工评分，总分为15分，成绩报道时转换为A、B、C和D四个等级。

4.3.2 评分标准

1) 人工评分

四级人工评分和六级评分采用相同的评分标准。每次评分时，参照各项评分标准描述分别确定当次四级和六级口试各等级的标准样本。评分员经过培训后参照标准样本对考生的答题表现进行评分。评分基于以下三项标准，每个单项满分为5分。评分标准描述如下：

➢ 准确性和范围："准确性"指考生的语音、语调以及所使用的语法和词汇的准确程度；"范围"指考生使用的词汇和语法结构的复杂度和丰富度。

➢ 话语长短和连贯性："话语长短"指考生对整个考试中的交际所作的贡献、讲话的多少；"连贯性"指考生能进行较长时间的、语言连贯的发言。

➢ 灵活性和适切性："灵活性"指考生应付不同场景和话题的能力；"适切性"指考生根据不同场合选用适当确切的语言的能力。

	准确性和范围	话语长短和连贯性	灵活性和适切性
5分	• 语法和词汇基本正确 • 表达过程中词汇丰富、语法结构较为复杂 • 发音较好，但允许有一些不影响理解的母语口音	• 能进行较长时间的发言，语言连贯，组织思想和搜寻词语时偶尔出现停顿，但不影响交际	• 能自如地应对不同场景和话题 • 能积极地参与讨论 • 语言的使用总体上能与语境、功能和目的相适应
4分	• 语法和词汇有一些错误，但未严重影响交际 • 表达过程中词汇较丰富 • 发音尚可	• 能进行较连贯的发言，但多数发言较简短 • 组织思想和搜寻词语时频繁出现停顿，有时会影响交际	• 能较自如地应对不同场景和话题 • 能较积极地参与讨论 • 语言的使用基本上能与语境、功能和目的相适应

(续表)

	准确性和范围	话语长短和连贯性	灵活性和适切性
3分	• 语法和词汇有错误,且有时会影响交际 • 表达过程中词汇不丰富,语法结构较简单 • 发音有缺陷,有时会影响交际	• 发言简短 • 组织思想和搜寻词语时频繁出现较长时间且影响交际的停顿,但能基本完成交际任务	• 不能积极参与讨论 • 有时不能适应话题或内容的转换
2分	• 语法和词汇有相当多的错误,以致交际时常中断 • 表达过程中因缺乏词汇和语法结构而严重影响交际 • 发音较差	• 发言简短且毫无连贯性,基本不能进行交际	• 不能参与讨论
1分	不描述	不描述	不描述

2) **计算机自动评分**

四级朗读任务采用计算机自动评分,基于准确性、流利度和完整性三项标准,满分为5分。评分标准描述如下:

分数	标准描述
5分	• 意群停顿恰当,语音、语调正确 • 朗读流利,基本没有重复、自我更正 • 内容完整
4分	• 有少量的意群停顿错误,语音、语调有一些错误,但未严重影响听者的理解 • 朗读较流利,有少量重复、自我更正 • 内容基本完整
3分	• 有较多意群停顿错误,语音、语调也有较多错误,且有时会影响听者的理解 • 朗读不够流利,有较多停顿、重复、自我更正 • 内容不够完整
2分	• 意群停顿完全混乱,语音、语调有大量错误,严重影响听者的理解 • 朗读有大量停顿、重复、自我更正 • 内容支离破碎
1分	不描述

任务	任务名称	考 试 过 程	答题时间
热身	自我介绍	根据考官指令，每位考生作一个简短的自我介绍。考试时间约 1 分钟。	每位考生 20 秒（两位考生依次进行）
任务 1	短文朗读	考生准备 45 秒后朗读一篇 120 词左右的短文。考试时间约 2 分钟。	每位考生朗读 1 分钟（两位考生同步进行）
任务 2	简短回答	考生回答 2 个与短文有关的问题。考试时间约 1 分钟。	每位考生 40 秒（两位考生同步进行）
任务 3	个人陈述	考生准备 45 秒后，根据所给提示作陈述。考试时间约 2 分钟。	每位考生 1 分钟（两位考生同步进行）
任务 4	双人互动	考生准备 1 分钟后，根据设定的情景和任务进行交谈。考试时间约 4 分钟。	两位考生互动 3 分钟

考生开始正式答题前先作一个简短的自我介绍，以进入良好的应考状态。正式考试开始后，考生按下列顺序完成各项任务：

➢ 任务 1：要求考生在经过一定准备后朗读一篇 120 词左右的短文。考生的准备时间为 45 秒，答题时间为 1 分钟。

➢ 任务 2：要求考生回答模拟考官提出的 2 个问题，第 1 个问题与朗读短文的内容相关，第 2 个问题与朗读短文的主题相关。每题的答题时间为 20 秒。

➢ 任务 3：要求考生经过准备后根据所给提示发言。考生的准备时间为 45 秒，答题时间为 1 分钟。

➢ 任务 4：要求两位考生根据所给的情景和任务进行互动。考生的准备时间为 1 分钟，双人互动时间为 3 分钟。

Process and Content of the CET4-SET (Pre/Post-Test)

Task	Task Name	Procedure	Time
Warm-up	Self-Introduction	At the examiner's request, each candidate gives a brief introduction. The test lasts approximately one minute.	Candidates speak for 20s
Task 1	Read Aloud	Candidates have 45 seconds to prepare before read a short text of about 120 words. The test takes approximately 2 minutes.	Candidates speak for 1min
Task 2	Questions	The candidate answers 2 questions related to the read of a short text. The test takes about 1 minute.	Candidates speak for 40s
Task 3	Individual Presentation	After 45 seconds, the candidate will make a statement based on the given prompt. The exam takes approximately 2 minutes.	Candidates speak for 1min
Task 4	Pair work	After 1 minute of preparation, the candidate conducts a conversation based on a given scenario and task. The test takes approximately 4 minutes to complete.	Candidates speak for 3 mins

Evaluation Standard of CET4-SET (Comprehensive Speaking)

Score	**Accuracy & Range**	**Length&Coherence**	**Flexibility & Relevance**
5	Grammar and vocabulary are essentially correct.Expression is rich in vocabulary and the grammatical structure is relatively complex.Pronunciation is good, some native accent is permitted, provided it does not affect comprehension.	Be able to produce a relatively long, coherent speech on a topic when discussing related issues, although occasional pauses due to the inability to find the right words are permitted.	Be able to participate in discussion in a natural and active manner, and their language usage is generally appropriate to the context, function, and purpose.
4	A few instances of grammatical and lexical errors, but they do not significantly impact communication.Process in question has a relatively rich vocabulary. Pronunciation is satisfactory.	Be able to make relatively coherent statements, although most statements are relatively short. There are instances when pauses are taken when organizing thoughts and searching for words, which can affect communication.	Able to contribute more effectively to discussions, although occasionally the content is irrelevant or fails to communicate directly.Language used is generally appropriate to the context, function, and purpose.
3	Some errors in grammar and vocabulary, which can sometimes	Short bursts.Frequent long pauses when organizing	Inability to actively engage in discussions and

	impede communication.Lack of vocabulary and simple grammatical structures in the expression process. Defective pronunciation, which may also affect communication.	thoughts and searching for words affect communication, but the communicative task can be basically completed	occasionally difficulty adapting to new topics or changes in discussion content.
2	Many errors in grammar and vocabulary to allow for effective communication.Limited vocabulary and grammatical structures impede the expression process, which in turn impedes communication.	Short, incoherent sentences, making communication difficult	Unable to participate in discussions at this time.
1	Not described.	Not described.	Not described.

Evaluation Standard of CET4-SET Read Aloud

Score	Description
5	Appropriate pauses, correct pronunciation, and intonation. Read fluently, with few repetitions and self-corrections, and present a complete and coherent discourse.
4	Some errors in pausing, pronunciation and intonation, little to affect the listener's understanding. Read is fluent, with some repetition and self-correction. Content is basically complete
3	Many pauses and errors in speech and intonation, sometimes affecting the listener's understanding. Read with many pauses, repetitions and self-corrections is not fluent. Insufficiently complete
2	Unintentional group with many errors in speech and intonation that seriously affect the listener's understanding. Read with many pauses, repetitions and self corrections. Content fragmented.
1	Not described.

The maximum score of five is awarded based on the evaluation of the three fundamental criteria: accuracy, fluency, and Integrity

Score Explanation of CET4-SET

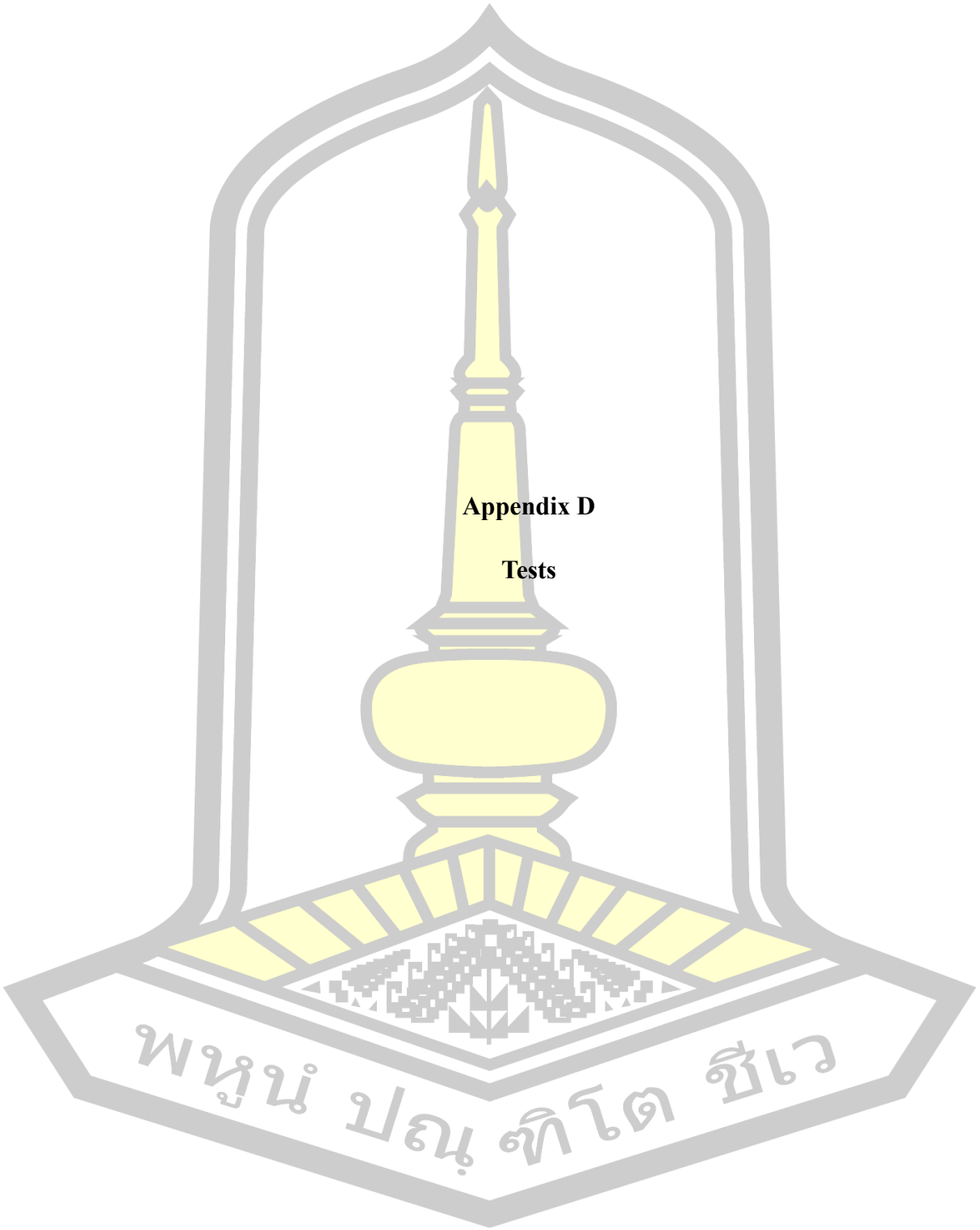
Level		Description
14.5—15	A+	Can converse in English on general topics in depth.
13.5—14.4	A	Can express personal opinions, feelings and viewpoints clearly and with fluency. Can give detailed accounts of what happened and why, and describe events and phenomena.
12.5—13.4	B+	Can converse in detail about general topics in English.
11—12.4	B	Can express personal opinions, feelings and views clearly and with fluency. Can describe facts, reasons, events, phenomena etc. accurately.
9.5—10.9	C+	Can converse in English on simple general topics.
8—9.4	C	Can express personal opinions, feelings, points of view, etc. in simple terms. Can provide a simple narrative of facts, reasons and describe events, phenomena, etc.
7.9 以下	D	Cannot communicate in spoken English

Explanation of FIF test

FiF APP	CEFR	Common Test			
		CET	TEM	ILETS	TOEFL
Elementary	A2				
Upper Elementary	A2+	CET4		4-5	30-60
ntermediate	B1				
Upper Intermediate	B1+	CET6	TEM4	5.5-6.5	60-90
Advanced	B2				
Expert	B2+		TEM8	7-8	90-110

Dimensions of the FIF APP evaluation system

Skills	Dimension
Pronunciation	Pronunciation accuracy refers to the accuracy and clarity of the pronunciation of phonetic symbols, syllables, and words, as well as the handling of stress and liaison.
Fluency	Read aloud fluency refers to whether sentences' intonation, rhythm, and pauses are natural and appropriate, as well as how stress and liaison are handled in sentences, etc. Vocabulary and grammar
Accuracy and Range	Accuracy and richness refer to the range of the vocabulary and the accuracy, appropriateness, and richness of the use of words, including words and fixed expressions.The accuracy, richness, and complexity of grammatical structures are important considerations.
Length and coherence of discourse	This refers to the length of continuous discourse, speaking speed, whether natural pauses are possible, the use of connecting devices such as related words, and the coherence of the meaning of previous and subsequent sentences.
Flexibility and appropriateness of communication	The ability to use oral communication strategies and the appropriateness of language use in relation to context, communicative function, and communicative intention are key components of oral communication activities.



Appendix D

Tests

Pretest

Part 1 Self-Introduction :

Now candidate please introduce yourself. You have 20 seconds to speak.

Part2 Read Aloud :

In this task, you will read aloud a short passage. You will have 45 seconds to go over the passage and one minute to read it aloud. Here is the passage.

Many people would list San Francisco as one of the most delightful cities in the world. Sitting on the Pacific coast, it gives you a feeling of the sea. The sea breezes wake you up and make you eat well and sleep well. The city was planned with straight roads, and these roads cross each other at right angles, making squares as they do in many American cities. Very often you can find yourself on top of a hill in the city, looking down one of these straight roads as it rises and falls on its journey through the town. A good way to travel these roads is by cable car. These are buses that run on rails in the ground up and down the steep hills.

Part 3 Question :

In this task, you will answer two questions. For each question, you will have 20 seconds to respond.

1: what would many people think of San Francisco according to the passage? (20 seconds)

2: which city in China do you like most? And why? (response time: 20 seconds)

Part 4 Individual Presentation

In this task, you will talk about the topic. You will have 45 seconds to prepare and one minute to talk about it.

No climbing on ancient trees.

Part 5 Pair work

Suppose you have three days to go sightseeing together. Talk with each other and make a plan for your trip. You plan may include:

1.Place(s) to visit

2.Means of transportation

3.Schedule

Post-test

Part 1 Self-Introduction :

Now candidate please introduce yourself. You have 20 seconds to speak.

Part2 Read Aloud :

In this task, you will read aloud a short passage. You will have 45 seconds to go over the passage and one minute to read it aloud. Here is the passage.

Passage:

There are not too many of us who haven't at some stage of our lives had some unhealthy or bad habits. Probably the most common one that can severely impact on our health is, of course, smoking. May people who start smoking think that they will be able to stop whenever they want, but it's not that easy. It is an unhealthy habit that takes great willpower to break. Without question, your mind plays the biggest part in any change you want to make. If you are tempted to smoke, or have already started smoking, say to yourself that quitting smoking is a challenge. It will help you brave it, and after beating this challenge you'll be ready to take on other challenges.

Part 3 Questions :

In this task, you will answer two questions. For each question, you will have 20 seconds to respond.

1: What is the most decisive factor in quitting smoking according to the passage?

2: Do you approve of smoking? Why or why not?

Part 4 Individual Presentation

In this task, you will talk about the topic. You will have 45 seconds to prepare and one minute to talk about it.

Maintaining a Healthy Lifestyle

Part5 Pair work

Talk with each other and make a plan to take physical exercise in your summer vacation. Your plan may include.

1.Ways of exercise

2.Time of exercise

3.Frequency of exercise

Questionnaire

Questionnaire on Changes in Learning Attitudes after Using the FIF App in CLT to Improve English Speaking Skills among vocational college students

Scale:

1 - Strongly Disagree 2 - Disagree 3 - Neutral 4 - Agree 5 - Strongly Agree

Interest

Q1 The pronunciation correction and intonation training in the FIF App have sparked my interest in English pronunciation and spoken expression.

Q2 The interactive tasks and activities in the FIF App have improved my fluency and interest in learning English.

Q3 Through simulated scenario dialogues in the FIF App, I have developed a strong interest in using different sentence patterns and grammatical structures to express my thoughts.

Motivation

Q4 The pronunciation correction feature of the FIF App has improved my pronunciation and intonation, making me more willing to participate in speaking practice and class discussions.

Q5 The practice tasks in the FIF App have expanded my vocabulary and increased my enthusiasm for participating in English activities.

Q6 The progressive challenge mode of the FIF App has helped me reduce grammatical errors, motivating me to stay actively engaged in various English practices.

Autonomy

Q7 App has helped me find a suitable learning method, encouraging me to independently arrange my study time and tasks.

Q8 Through the self-paced tasks in the FIF App, I can set clear learning objectives and complete tasks independently, improving my learning efficiency.

Q9 The real-time feedback feature of the FIF App has encouraged me to continuously adjust and improve my speaking skills, fostering my habits for autonomy learning.

Confidence

Q10 The practice exercises in the FIF App have made me more confident in using English in different situations and efficiently handling conversations.

Q11 The training in the FIF App has boosted my confidence in avoiding grammatical errors and expressing myself freely in oral communication.

Q12 Now, I feel more confident in organizing sentence structures, making my expressions more coherent and c

Thanks for participating!

Test 1

Task 1 Read Aloud

Preparation Time: 45 seconds

Response Time: 1 min

China was one of the first countries to have a medical culture. In comparison with Western medicine, the Chinese method takes a far different approach. The doctors of traditional Chinese medicine believe that the human body's life is the result of the balance of yin and yang. Yin is the inner and negative principles, and yang, the outer and positive. The key reason why there is sickness is because the two aspects lose their harmony. Seen from the recovery mechanism of organs, yang functions to protect from outer harm, and yin is the inner base to store and provide energy for its counterpart. Today, though western medicine has been adopted, traditional treatments are still playing an important role and have raised great attention and interest.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

How could people recover from illness, according to the traditional Chinese medicine?

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

What do you think is a healthy lifestyle?

Task 3 Individual Presentation

Preparation Time: 45 seconds
Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min
Response Time: 3 mins

Suppose you plan to lose some weight. Talk with each other and make a weight-loss plan. Your plan may include:

1. goal
2. diet
3. exercise

FIF Test2

Task 1 Read Aloud

Preparation Time: 45 seconds
Response Time: 1 min

Have you ever felt that older people didn't understand your problems? Do you feel like younger people have no sense of what's really important? That's probably because there's a generational gap of experience. Because they're older, or younger, it seems you share no common ground. Actually, each generation, when interacting with each other, has a wealth of information to pass on to the others. For instance, older generations can offer great life experience and general knowledge about society to younger generations, while younger generations can update the older generations with current fashion and technology trends. This is, of course, not always the case: sometimes the older people can be very familiar with current trends, while the young people can be fascinated by old music and culture.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

According to the passage, how can different generations interact with each other?

Task 2 Question and Answer

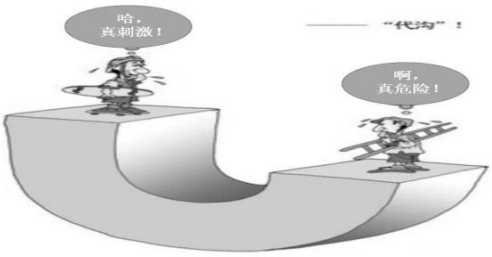
Response Time: 20 seconds

Question 2

When do you feel bothered by the generation gap?

Task 3 Individual Presentation

Preparation Time: 45 seconds
Response Time: 1 min



Task 1 Read Aloud

Preparation Time: 45 seconds

Response Time: 1 min

There are not too many of us who haven't at some stage of our lives had some unhealthy or bad habits. Probably the most common one that can severely impact on our health is, of course, smoking. Many people who start smoking think that they will be able to stop whenever they want, but it's not that easy. It is an unhealthy habit that takes great will-power to break. Without question, your mind plays the biggest part in any change you want to make. If you are tempted to smoke, or have already started smoking, say to yourself that quitting smoking is a challenge. It will help you brave it, and after beating this challenge you'll be ready to take on other challenges.

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

Do you approve of smoking? Why or why not?

Task 3 Individual Presentation

Preparation Time: 45 seconds

Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min

Response Time: 3 mins

Talk with each other and make a plan to take physical exercise in your summer vacation. Your plan may include:

1. ways of exercise
2. time of exercise
3. frequency of exercise

Test4

Task 1 Read Aloud

Preparation Time: 45 seconds

Response Time: 1 min

There are a substantial number of expectations we have when starting a new program or joining a specific event. One example is college. There are so many expectations that an individual has before entering college life. For example, I had an idea in my head that college would be extremely difficult. I proved myself wrong because I am doing fine in college and have an above-average grade point average. Since I am doing well in college, I realize that it is not as difficult as I expected. If I study a decent amount of material for a test, I can usually pass an exam with an A or B, and I am not studying to the point where I have no social life either.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

How does the writer of this passage think about his college life?

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

Do your expectations of college life match up to what it turns out to be?

Task 3 Individual Presentation

Preparation Time: 45 seconds

Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min
Response Time: 3 mins

Suppose you just started your third year in college. Talk with each other and make a study plan for your junior and senior years in college. Your plan may include:

1. academic study
2. work-related practice
3. English learning

FIF Test5

Task 1 Read Aloud

Preparation Time: 45 seconds
Response Time: 1 min

Between 1800 and 1900, the way Americans moved around their world changed greatly. In 1800, the only practical way to travel and trade across long distances was along the nation's natural waterways. One hundred years later, railroads sped along thousands of miles of track. Large ships moved passengers and freight across the oceans and smaller boats plied the nation's rivers, lakes and canals. Bicycles, carriages and wagons rolled over thousands of miles of roads. One of the fastest growing of these young cities was Chicago. By 1900, the city was an economic powerhouse with over 1.6 million residents. Located at the intersection of river, lake and railroad routes, Chicago's industrial, manufacturing and commercial life depended on the boats and trains traveling into and out of the city.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

What happened to transportation in the US between 1800 and 1900?

Task 2 Question and Answer

Response Time: 20 seconds

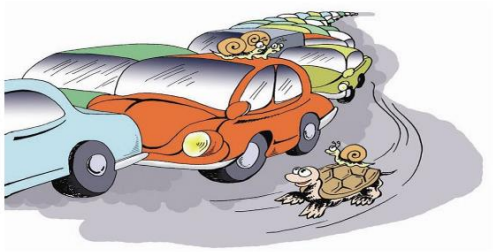
Question 2

What is your favorite type of transportation?

Task 3 Individual Presentation

Preparation Time: 45 seconds

Response Time: 1 min



Task 4 Pair Work

Preparation Time: 1 min

Response Time: 3 mins

Suppose you are taking an airplane for the first time. Talk with each other and make a preparation plan for your flight. Your plan may include:

1. booking tickets
2. packing luggage
3. check-in at the airport

FIF Test6

Task 1 Read Aloud

Preparation Time: 45 seconds

Response Time: 1 min

It is widely acknowledged that a thorough reform of college English education should be carried out. As the defects that exist in the current college English education system are open to more criticism. On the one hand, the curriculum adopted by English education system is exam-oriented. Under this curriculum, students focus more on test scores and test-taking tips instead of improving their English skills. Therefore, their English competence is not satisfactory. On the other hand, the current curriculum only offers general English course, while college students need more training in specialized English. For example, English for academic purpose. As a result, many students find they are not able to use English well under certain circumstances, such as writing thesis, and taking interviews for positions in foreign companies. Now education authorities rolled out a series of reforms targeting college English courses in 2013. And the effects of the intended reforms are still to be explored.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

Why do people think the reform of college English education should be carried out according to the passage?

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

Do you have some suggestions for English teaching reform?

Task 3 Individual Presentation

Preparation Time: 45 seconds
Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min
Response Time: 3 mins

Suppose you will attend the CET 4 examination next term and you now have a one-month summer holiday to prepare for that. Talk with each other and make a plan for your English study in the summer holiday. Your plan may include:

1. schedule
2. emphasis of the study
3. ways of learning

FIF Test7

Task 1 Read Aloud

Preparation Time: 45 seconds

Response Time: 1 min

Thanks to the continued improvement of mobility, more and more people find it an easy and, more often than not, rewarding experience to travel. First, they travel for further studies. For instance, in order to find a better job after graduation, many Chinese students even feel obliged to pursue studies in foreign countries that can be several thousand miles from their hometown. Second, they travel for business opportunities. As the process of globalization is gaining speed, resources need to be allocated and optimized in a global context, which inevitably involves frequent travel. Third, they travel for pleasure. Coupled with the improvement of living standards, people tend to spend their holidays or annual leaves by traveling to other places within their countries or even to a faraway foreign land. As found by many, a pleasant journey often ends up as a learning process also.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

Why do people travel according to the passage?

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

What kind of places would you like to travel to?

Task 3 Individual Presentation

Preparation Time: 45 seconds

Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min
Response Time: 3 mins

Suppose you and your partner are assigned to help a new foreign teacher from the United States to adapt to the local life as soon as possible. Talk with each other and make a plan for your reception. Your plan may include:

1. campus environment and campus culture
2. local tourist sites
3. Chinese food

FIF Test8

Task 1 Read Aloud

Preparation Time: 45 seconds
Response Time: 1 min

Today, there is more contact than ever between countries and, consequently, most of us need skills which enable us to communicate with people from different countries. To do this successfully, we not only need to speak a mutually understandable language, but much also need to have an understanding of how people in other countries work. *English Plus* courses provide a means of gaining these skills by combining English lessons with training in work-related or practical skills. These courses are offered by a wide range of schools and institutions, but in Britain you may benefit more from taking one of these courses at a college. These classes specialize in practical skills and academic skills for local students who are usually aged between 16 and 23.

Task 2 Question and Answer

Response Time: 20 seconds

Question 1

What can students gain from *English Plus* courses according to the passage?

Task 2 Question and Answer

Response Time: 20 seconds

Question 2

What do you expect to gain from an ideal training program?

Task 3 Individual Presentation

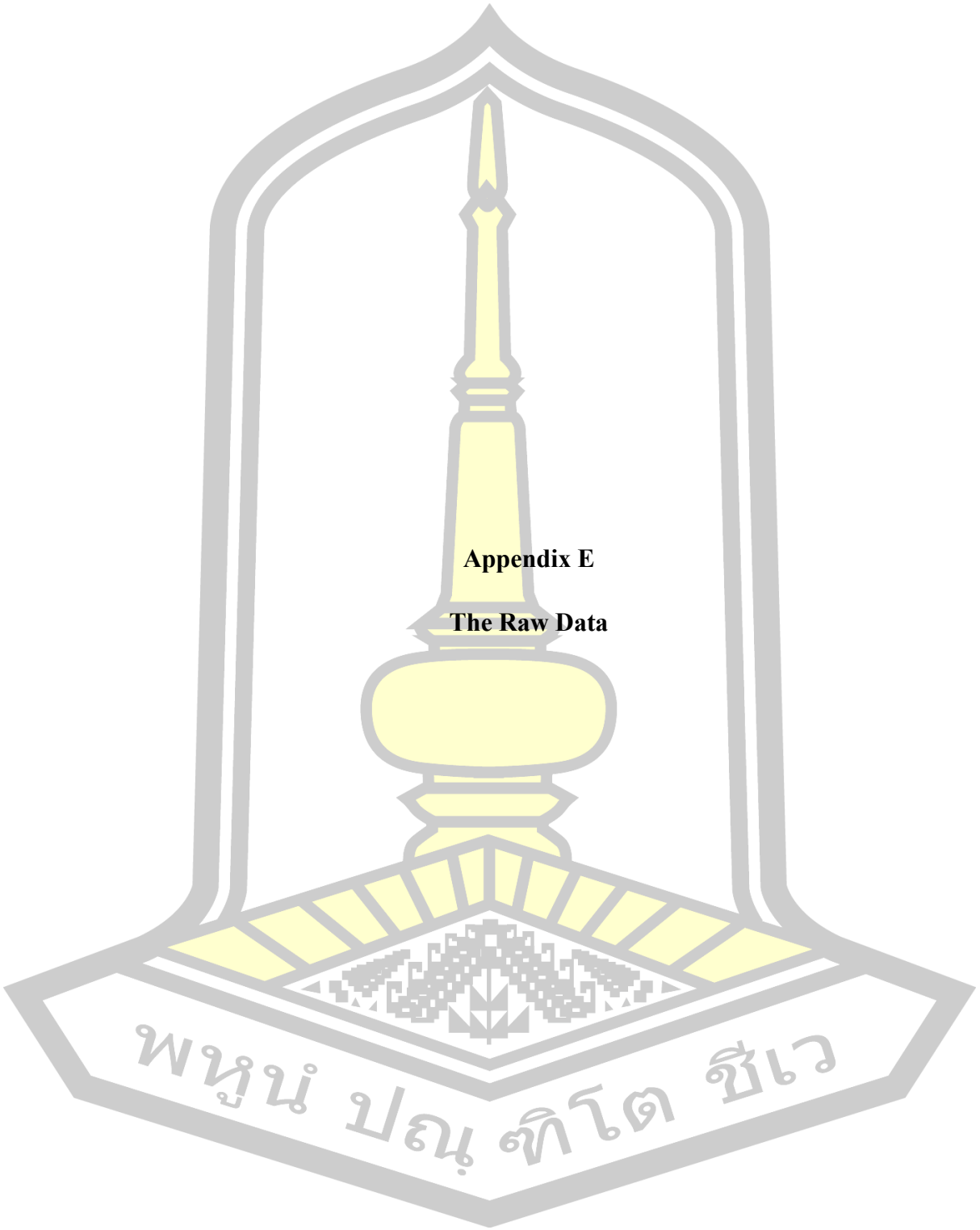
Preparation Time: 45 seconds
Response Time: 1 min

Task 4 Pair Work

Preparation Time: 1 min
Response Time: 3 mins

Suppose you and your partner are juniors who have accumulated enough academic knowledge in your major, and you want to gain work-related skills and competence you need for your future job. Talk with each other and make a plan for improving relevant skills and competence. Your plan may include:

1. acquiring certificates
2. finding internship opportunities
3. taking training programs for work-related skills and competence



Appendix E

The Raw Data

Nationwide Unified Examination for Admissions to General Universities and Colleges of 1640 Students

ID	Scores	ID	Scores	ID	Scores	ID	Scores	ID	Scores	ID	Scores
1	62.5	275	62	549	55.5	823	64	1097	59	1371	58.5
2	59.5	276	56.5	550	57.5	824	64.5	1098	55	1372	66
3	69.5	277	53	551	66.5	825	69.5	1099	49.5	1373	67
4	54	278	61.5	552	62	826	54.5	1100	64.5	1374	62
5	67.5	279	54.5	553	67.5	827	48	1101	64.5	1375	43
6	56	280	52.5	554	46	828	75	1102	61	1376	68.5
7	62.5	281	65.5	555	58	829	83	1103	53.5	1377	83.5
8	64	282	74.5	556	74	830	49.5	1104	58.5	1378	48
9	51	283	43	557	80	831	67.5	1105	66.5	1379	75
10	57	284	58	558	61	832	58	1106	59	1380	43.5
11	67.5	285	66.5	559	68.5	833	62	1107	45.5	1381	73
12	66	286	60	560	69	834	60	1108	65	1382	68.5
13	76	287	64	561	76.5	835	68.5	1109	65	1383	77.5
14	51.5	288	67.5	562	59.5	836	57	1110	61	1384	59
15	59	289	76	563	62	837	62.5	1111	59.5	1385	62.5
16	67	290	72	564	69	838	78.5	1112	74.5	1386	53.5
17	67	291	58	565	56	839	66.5	1113	45.5	1387	84
18	75	292	68	566	71.5	840	57.5	1114	60	1388	63
19	56.5	293	49	567	62.5	841	63	1115	58	1389	44
20	81.5	294	48	568	54	842	49	1116	69	1390	49
21	79.5	295	53	569	69	843	46	1117	69	1391	46
22	51	296	67	570	53.5	844	69	1118	65.5	1392	62.5
23	56.5	297	50.5	571	69	845	62	1119	58.5	1393	53
24	65.5	298	66	572	54	846	68	1120	44	1394	62.5
25	61.5	299	77.5	573	70.5	847	55	1121	65.5	1395	65
26	69	300	51.5	574	68	848	56	1122	61.5	1396	66.5
27	79.5	301	55.5	575	66.5	849	59.5	1123	63	1397	56.5
28	48	302	67.5	576	74.5	850	47.5	1124	50	1398	64
29	58.5	303	68.5	577	67	851	61	1125	66	1399	65
30	63.5	304	47	578	66	852	63	1126	60	1400	55
31	54.5	305	58.5	579	65	853	59.5	1127	47.5	1401	44.5

32	57	306	65	580	61	854	57.5	1128	64	1402	49.5
33	45.5	307	84.5	581	82.5	855	57.5	1129	50.5	1403	42
34	60.5	308	65.5	582	59.5	856	62.5	1130	54	1404	58.5
35	55.5	309	54	583	68	857	67	1131	66.5	1405	52.2
36	50	310	66.5	584	59	858	62.5	1132	80.5	1406	44.5
37	66.5	311	63.5	585	72	859	49	1133	59.5	1407	72
38	57.5	312	75.5	586	45	860	48.5	1134	58.5	1408	69.5
39	82.5	313	52	587	44.5	861	63	1135	81.5	1409	50.5
40	67.5	314	66.5	588	63	862	64.5	1136	56.5	1410	59.5
41	64	315	66.5	589	60.5	863	66.5	1137	54.5	1411	65.5
42	57.5	316	65.5	590	55	864	66.5	1138	61	1412	67
43	80.5	317	45.5	591	52	865	67.5	1139	67	1413	53
44	48.5	318	77	592	64.5	866	57.5	1140	67	1414	64.5
45	58	319	62	593	65	867	47.5	1141	65.5	1415	75
46	46.5	320	61	594	69	868	59.5	1142	76.5	1416	50
47	84	321	71.5	595	59	869	58.5	1143	69.5	1417	65
48	46	322	66.5	596	61	870	68.5	1144	71	1418	59
49	56	323	60	597	79	871	59	1145	48.5	1419	84.5
50	42.5	324	80	598	68	872	63.5	1146	72.2	1420	82.5
51	62.5	325	64.5	599	42	873	49	1147	57.5	1421	59.5
52	55	326	65.5	600	64	874	59	1148	66.5	1422	77
53	56	327	63	601	62	875	44.5	1149	60.5	1423	48
54	51	328	58	602	51	876	67	1150	53	1424	44
55	54	329	60.5	603	60.5	877	58.5	1151	43	1425	61.5
56	82	330	62.5	604	66.5	878	62.5	1152	80	1426	70.5
57	50	331	51	605	60.5	879	58.5	1153	58	1427	56
58	50.5	332	65	606	64	880	58	1154	64.5	1428	76.7
59	69.5	333	65	607	65	881	82.5	1155	71.5	1429	60.5
60	62.5	334	65.5	608	76.5	882	58	1156	67	1430	82.5
61	68	335	78	609	42.5	883	65.5	1157	66.5	1431	67.5
62	66.5	336	58	610	62.5	884	63.5	1158	66.5	1432	59
63	82	337	77.5	611	62	885	72	1159	75.5	1433	56
64	65	338	56.5	612	46	886	67	1160	48	1434	56
65	72.5	339	66	613	51	887	44.5	1161	46.5	1435	56

66	83	340	57	614	74.5	888	45.5	1162	47	1436	56.5
67	58.5	341	55	615	56.5	889	47	1163	54.5	1437	63.5
68	57	342	84.5	616	54.5	890	46.5	1164	61	1438	76
69	84	343	58.5	617	56.5	891	57	1165	69.5	1439	61.5
70	61.5	344	45.5	618	59.5	892	67	1166	67	1440	61
71	68	345	51.5	619	51.5	893	82	1167	69.5	1441	55.5
72	66.5	346	48.5	620	69	894	65.5	1168	62	1442	64
73	82.5	347	66.5	621	45.5	895	58	1169	47.5	1443	55
74	61.5	348	57.5	622	77	896	43.5	1170	42.5	1444	63
75	83	349	54	623	66	897	45	1171	43	1445	66
76	65	350	60.5	624	74	898	66.5	1172	58.5	1446	61
77	57	351	62.5	625	67	899	68	1173	83.5	1447	43
78	52	352	57	626	44.5	900	67.5	1174	84.5	1448	62.5
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80	53	354	68.5	628	57.5	902	63	1176	66.5	1450	58
81	46	355	82.5	629	71	903	59	1177	63	1451	76
82	49.5	356	46.5	630	63.5	904	62.5	1178	63	1452	48.5
83	65	357	67	631	64	905	63.5	1179	62	1453	62
84	69	358	73.6	632	50.5	906	62.5	1180	50	1454	64
85	64.5	359	60.5	633	42	907	65.5	1181	47	1455	62.5
86	49	360	64	634	56.5	908	68.5	1182	57.5	1456	60.5
87	66	361	50	635	43	909	55.5	1183	59	1457	57
88	66.5	362	58.5	636	65	910	54	1184	59	1458	60
89	65.5	363	64	637	57.5	911	46	1185	63	1459	56.5
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91	62	365	77.5	639	61	913	55.5	1187	58.5	1461	67
92	81	366	59	640	63	914	56.5	1188	61	1462	69.2
93	54.5	367	62.5	641	68	915	59.5	1189	77	1463	48.5
94	66.5	368	58.5	642	68	916	44.5	1190	63	1464	63.5
95	64	369	77	643	45	917	59	1191	62	1465	64.5
96	68.5	370	66	644	60.5	918	78.5	1192	72.5	1466	45.5
97	81	371	67	645	66.5	919	43	1193	47.5	1467	55.5
98	60.5	372	56.5	646	67.5	920	60.5	1194	68	1468	48.5
99	56.5	373	67	647	57	921	53.5	1195	57	1469	56

100	70	374	47	648	62	922	68.5	1196	69.5	1470	57.5
101	67	375	80	649	68.5	923	58	1197	59.5	1471	66.5
102	69.5	376	56.5	650	65	924	68	1198	45.5	1472	54.5
103	62	377	60	651	59	925	55	1199	46	1473	59.5
104	69.5	378	60.5	652	56.5	926	55.6	1200	65	1474	79
105	68	379	74.5	653	51	927	62.5	1201	62.5	1475	57.5
106	46.5	380	64.5	654	59	928	61	1202	43.7	1476	56.5
107	65	381	68	655	58	929	65.5	1203	64	1477	46
108	68.5	382	83.1	656	66	930	55.5	1204	74.5	1478	59
109	44	383	66.5	657	78.5	931	46	1205	69.4	1479	81
110	45	384	69	658	60.5	932	80.5	1206	59	1480	77
111	69	385	62.5	659	57.5	933	73.5	1207	68.5	1481	68
112	51	386	67.5	660	65.5	934	60.5	1208	80	1482	63.5
113	49	387	56	661	48.5	935	64.5	1209	69	1483	49
114	67.5	388	64.5	662	61	936	69.5	1210	77.5	1484	50.5
115	62.5	389	50.5	663	53.5	937	65.5	1211	63	1485	56
116	74	390	44.5	664	80	938	65.5	1212	65.5	1486	77.5
117	56.5	391	68	665	61.5	939	73	1213	50	1487	53.5
118	65	392	52.5	666	52.5	940	77.5	1214	65.5	1488	72
119	50	393	46	667	67.5	941	62.5	1215	49.5	1489	66.5
120	66	394	60	668	66	942	75.5	1216	62.5	1490	69
121	55.5	395	59	669	63.5	943	47.5	1217	43.6	1491	47
122	58	396	62	670	48.5	944	59	1218	56.5	1492	60.5
123	62.5	397	78	671	67	945	61.5	1219	59	1493	54.5
124	62	398	46	672	62	946	51.5	1220	69	1494	67.5
125	67.5	399	55	673	64	947	60	1221	68	1495	82
126	58	400	56.5	674	72.5	948	55.5	1222	65	1496	57.5
127	54.5	401	49	675	71.5	949	74.5	1223	61.5	1497	52.5
128	66	402	61	676	60	950	64.5	1224	56.5	1498	67
129	62	403	45	677	66	951	80	1225	63.7	1499	71.5
130	66.5	404	66	678	58	952	63	1226	81.5	1500	42.5
131	60	405	60.5	679	48.5	953	65.5	1227	49	1501	80.5
132	69.5	406	42.5	680	77.5	954	64.5	1228	59	1502	83
133	52	407	63	681	42.2	955	61	1229	49	1503	47

134	83.5	408	60	682	51.5	956	61.5	1230	47.5	1504	66.5
135	47	409	78.5	683	66.5	957	54.5	1231	49	1505	58.5
136	69.2	410	49	684	60	958	77	1232	63.5	1506	70
137	47	411	61.5	685	54	959	62	1233	54	1507	76
138	59.5	412	49	686	56	960	68.5	1234	46	1508	50.5
139	51	413	59	687	60.5	961	65	1235	56.5	1509	64.5
140	60.5	414	56.5	688	58.5	962	43.5	1236	62.5	1510	56.5
141	82.5	415	51.5	689	46.4	963	81	1237	68.5	1511	64
142	80.5	416	65.5	690	69.5	964	56.5	1238	69	1512	47
143	78	417	64.5	691	49	965	50	1239	57	1513	61.5
144	76.7	418	62	692	50.5	966	48.5	1240	53.5	1514	67.5
145	69.5	419	58	693	67.5	967	62.5	1241	63	1515	54
146	76.5	420	57.5	694	74.5	968	51	1242	59	1516	64
147	71	421	82.2	695	65	969	60.5	1243	83.5	1517	75
148	71	422	60.5	696	47	970	63	1244	65.5	1518	52
149	74	423	75	697	53	971	49	1245	56	1519	63.5
150	83	424	44.5	698	68	972	57.5	1246	42	1520	46.5
151	68	425	58.5	699	53.5	973	55.5	1247	65.5	1521	62
152	80.7	426	62.5	700	66.5	974	61	1248	66	1522	78.5
153	52.5	427	57	701	43	975	62	1249	55	1523	51.5
154	60.5	428	46.2	702	48.5	976	58	1250	67	1524	47
155	42	429	68.5	703	59.5	977	61	1251	68.5	1525	66
156	67.5	430	66	704	62.5	978	64.5	1252	44.5	1526	64
157	60	431	58	705	63	979	74	1253	58.5	1527	56
158	65.5	432	46.5	706	77	980	65	1254	60.5	1528	69.5
159	62.5	433	58.5	707	70.7	981	63.5	1255	55.5	1529	77.5
160	82	434	68.5	708	58.5	982	62.5	1256	63	1530	59.5
161	57.5	435	56.5	709	65	983	53	1257	58	1531	64
162	62	436	76.5	710	64.5	984	55	1258	69	1532	59.5
163	60.5	437	67	711	56.5	985	45.5	1259	59.5	1533	60
164	48.5	438	59	712	56.5	986	44	1260	56.5	1534	62
165	63	439	65	713	62	987	58.5	1261	60	1535	60
166	65.5	440	63	714	77	988	52	1262	75	1536	58
167	62.5	441	79	715	58.5	989	78	1263	42	1537	72.5

168	58.5	442	67.5	716	69.5	990	47	1264	64	1538	72.5
169	65.5	443	62	717	58	991	49	1265	60.5	1539	56.5
170	59.5	444	76	718	45	992	59	1266	64	1540	46.5
171	82	445	64.5	719	72.5	993	76	1267	75	1541	65
172	54.5	446	67.5	720	69.5	994	64	1268	56.5	1542	68.5
173	73.5	447	51	721	63	995	50.5	1269	48.5	1543	58.5
174	42.5	448	64	722	64.5	996	80.5	1270	63.5	1544	66.5
175	82.5	449	49.5	723	72.5	997	60	1271	52.5	1545	82
176	58.5	450	58	724	52	998	52	1272	55.5	1546	55.5
177	57.5	451	77	725	68	999	66	1273	65	1547	49.5
178	60	452	48.5	726	64	1000	65	1274	48.5	1548	46
179	64.5	453	68	727	61.5	1001	69.5	1275	68.5	1549	62.5
180	52.5	454	48	728	48	1002	60.5	1276	47.5	1550	62.5
181	64.5	455	73.5	729	77	1003	53.5	1277	82	1551	58.5
182	47	456	57.5	730	74.5	1004	56.5	1278	52.5	1552	68
183	68	457	53.8	731	48	1005	78	1279	60.5	1553	66
184	60.5	458	64.5	732	60	1006	57	1280	66	1554	62.5
185	60	459	64	733	79	1007	55	1281	59	1555	55
186	56.5	460	59	734	66	1008	66.5	1282	62.5	1556	65
187	79.5	461	70	735	62	1009	62	1283	65	1557	59.5
188	68.5	462	44	736	65	1010	57	1284	84.5	1558	75.5
189	83	463	63	737	63.5	1011	59.5	1285	45	1559	59.5
190	54	464	68	738	61.5	1012	70.5	1286	61.5	1560	62
191	63	465	66	739	60.5	1013	58	1287	77	1561	62.5
192	60	466	76	740	59.5	1014	64.5	1288	82.5	1562	66.5
193	63.5	467	58.5	741	62.5	1015	75	1289	67	1563	50
194	63.5	468	63	742	56	1016	53.5	1290	56	1564	63
195	59	469	56.5	743	61.5	1017	48.5	1291	62	1565	45.5
196	68.5	470	58	744	66	1018	54	1292	49	1566	44.5
197	46	471	83.5	745	66	1019	68	1293	78.5	1567	68.5
198	61.5	472	76.5	746	67	1020	61	1294	72	1568	58
199	62	473	66	747	67.5	1021	57	1295	56.5	1569	65
200	58.5	474	49	748	45	1022	66	1296	68.5	1570	56
201	65	475	56.5	749	47	1023	62	1297	46.5	1571	68

202	57.5	476	51	750	44	1024	63.5	1298	70.5	1572	61
203	83.5	477	62.5	751	65	1025	65	1299	81	1573	61
204	58.5	478	49	752	65.5	1026	61.5	1300	61.5	1574	46.5
205	58.5	479	62.5	753	59	1027	47.5	1301	68.5	1575	66
206	48.5	480	62.6	754	52.5	1028	59.5	1302	67	1576	63.5
207	44	481	53	755	68	1029	42.5	1303	56.5	1577	51
208	52	482	63	756	50.5	1030	66.5	1304	62.5	1578	63
209	60.5	483	64	757	57	1031	56	1305	82.5	1579	51.7
210	53	484	64.5	758	62.5	1032	83.5	1306	66	1580	65
211	67	485	59	759	71	1033	55	1307	57.5	1581	58.5
212	42	486	45.5	760	54.5	1034	49	1308	60	1582	58
213	68.5	487	45.5	761	69.5	1035	67.5	1309	50.5	1583	63
214	83.5	488	52	762	65	1036	66.5	1310	59.5	1584	82.5
215	69.5	489	48	763	51.5	1037	45	1311	57	1585	73.5
216	56	490	76.5	764	51	1038	60	1312	82	1586	78.5
217	51.5	491	55.5	765	66	1039	60	1313	50.5	1587	64
218	64	492	56.5	766	69.5	1040	69.5	1314	67	1588	55
219	65	493	50	767	42	1041	62	1315	58.5	1589	65
220	73.5	494	47.5	768	56.5	1042	58.5	1316	48.5	1590	46.5
221	69	495	57.5	769	68.5	1043	58.5	1317	69	1591	69.5
222	60.5	496	42	770	48.5	1044	61	1318	69.5	1592	73.5
223	55.5	497	84.5	771	65	1045	68	1319	50	1593	81
224	43.5	498	53.5	772	62	1046	60.5	1320	57	1594	62.5
225	61.5	499	67.5	773	71	1047	62.5	1321	66	1595	57
226	69.5	500	57.5	774	68.5	1048	81.5	1322	58	1596	58
227	58.1	501	69.5	775	61	1049	66	1323	54.5	1597	69
228	59	502	68.5	776	58	1050	60.5	1324	66.5	1598	58
229	65.5	503	84.5	777	68.5	1051	43.5	1325	60.5	1599	62
230	58.5	504	44	778	68.5	1052	64	1326	60.5	1600	60.3
231	63	505	83.5	779	70.5	1053	64.5	1327	62	1601	63
232	52	506	63.5	780	51.5	1054	64	1328	68.5	1602	45
233	81.2	507	64	781	75	1055	80	1329	57.5	1603	80.5
234	69.5	508	68.5	782	57.5	1056	59.5	1330	56.5	1604	65.5
235	50.5	509	46	783	51	1057	47.5	1331	60.5	1605	60

236	67.5	510	55.5	784	59	1058	60	1332	57	1606	51
237	64.5	511	61.5	785	57	1059	62.5	1333	42.5	1607	60.5
238	65	512	64.5	786	58.5	1060	59.5	1334	71.5	1608	76.5
239	56	513	82.5	787	55	1061	73.5	1335	43.5	1609	78
240	69	514	76	788	56.5	1062	50	1336	42	1610	55.5
241	56.5	515	56.5	789	59.5	1063	56.5	1337	58	1611	49
242	56.5	516	61.5	790	57	1064	77	1338	62.5	1612	62.5
243	83	517	66.5	791	80.5	1065	63	1339	46	1613	44.5
244	57.5	518	68	792	44	1066	52	1340	83.5	1614	43
245	66.5	519	42.5	793	66.5	1067	67.5	1341	61	1615	65
246	57.5	520	43.5	794	66.5	1068	69	1342	79.5	1616	66
247	53.5	521	63.5	795	52.5	1069	63	1343	81	1617	67.5
248	43	522	81	796	45.5	1070	64	1344	63	1618	58.5
249	58.5	523	69.5	797	55.5	1071	64.5	1345	45	1619	58.5
250	48	524	71	798	63.5	1072	56	1346	58.5	1620	55
251	51	525	68	799	53	1073	58.5	1347	58.5	1621	83
252	57	526	59	800	57	1074	69.5	1348	43	1622	82
253	48.5	527	61	801	75	1075	66	1349	65.5	1623	66
254	56	528	64.5	802	45	1076	77.5	1350	69	1624	53
255	69.5	529	56.5	803	49.5	1077	50.5	1351	43.5	1625	55
256	59.5	530	54	804	48	1078	61.5	1352	68.5	1626	67
257	58.5	531	72.5	805	63	1079	60	1353	64	1627	68.5
258	69	532	66.5	806	56.5	1080	66.5	1354	60.5	1628	52.5
259	62	533	58	807	61.5	1081	68.5	1355	62.5	1629	65
260	50.5	534	69	808	48	1082	76	1356	54.5	1630	56.5
261	53.2	535	61	809	60	1083	67	1357	57.5	1631	72
262	62.5	536	60	810	66.5	1084	57	1358	44	1632	68.5
263	51	537	61	811	59	1085	59.5	1359	61	1633	61.5
264	49	538	61	812	66	1086	60	1360	65	1634	43.5
265	48	539	62.5	813	59	1087	56.5	1361	61.5	1635	73.5
266	67.5	540	51	814	64	1088	60	1362	54.5	1636	54.5
267	60	541	67	815	48.5	1089	48	1363	77.2	1637	49
268	62.5	542	69	816	66.5	1090	80	1364	58.5	1638	63
269	56.5	543	80.5	817	58.5	1091	50	1365	62	1639	53

270	65.5	544	53.5	818	68	1092	60	1366	68	1640	61
271	55.5	545	56	819	62.5	1093	59.5	1367	60		
272	59.5	546	58.5	820	58	1094	48	1368	55		
273	68.5	547	64.5	821	43	1095	62.5	1369	60.5		
274	78	548	63	822	77.5	1096	58	1370	67.5		

Pre and Post-test Score

Pretest

Accuracy &Range			**Length&Coherence**			**Flexibility&Appropriate**			**Read Aloud**		
Judge A	Judge B	Judge C	Judge A	Judge B	Judge C	Judge A	Judge B	Judge C	Judge A	Judge B	Judge C
2.1	2.3	2.3	2.2	2.4	2.1	2.1	2.3	2	3.0	3.2	3.1
2.4	2.2	2.2	2.3	2.5	2.3	2.2	2.4	2.4	3.2	3.4	3
2.2	2.1	2.4	2.3	2.4	2.4	2.3	2.5	2.5	3.4	3.3	3.1
2.3	2.5	2.5	2.5	2.3	2.6	2.2	2.3	2.1	3.5	3.2	3.2
2.6	2.4	2.7	2.2	2.4	2.1	2.3	2.4	2.3	3.3	3.1	3.2
2.8	2.7	2.6	2.3	2.5	2.4	2.6	2.8	2.4	3.6	3.4	3.4
2.7	2.6	2.8	2.6	2.4	2.4	2.4	2.6	2.5	3.5	3.2	3.6
2.9	2.7	2.5	2.4	2.3	2.3	2.5	2.3	2.6	3.4	3.5	3.5
2.8	2.9	2.7	2.6	2.5	2.3	2.7	2.4	2.5	3.5	3.6	3.6
2.7	2.8	2.8	2.5	2.7	2.4	2.6	2.7	2.4	3.7	3.4	3.8
3.3	3.5	3	3.2	3.3	3.1	3.1	3.3	2.9	3.3	3.4	3.6
3.2	3.4	3.1	3	3.2	2.9	3.1	3.2	2.9	3.0	3.2	3.4
3.4	3.5	3.2	3.2	3.1	3	3	3.3	3.1	3.2	3.3	3.1
2.5	2.7	3	2.5	2.8	2.3	2.6	2.4	2.7	3.4	3.5	3.3
2.8	2.9	3.1	2.6	2.9	2.5	2.8	2.7	2.9	3.6	3.4	3.5
3	3.2	3.3	2.4	2.7	2.6	2.6	2.7	2.7	3.2	3.5	3.4
3.5	3.4	3.7	3.7	3.4	3.8	3.7	3.5	3.7	3.5	3.3	3.7
3.4	3.3	3.6	3.6	3.7	3.8	3.4	3.6	3.6	3.3	3.4	3.5
3.2	3.5	3.3	3.6	3.3	3.7	3.2	3.1	3.2	3.4	3.6	3.6
3.2	3.5	3.5	3.2	3.1	3.4	3.1	3	3.4	3.5	3.7	3.4
3	3.4	3	3.4	3.2	3.5	3.2	3.4	3	3.6	3.4	3.4
3.4	3.6	3.8	3.5	3.7	3.9	3.3	3.5	3.5	3.8	3.6	3.7
3.5	3.8	3.7	3.6	3.8	3.8	3.5	3.7	3.6	3.9	3.7	3.5

3.9	3.7	4.1	3.7	3.8	4	3.7	3.9	4	3.7	3.6	3.3
3.8	4	4.1	3.9	3.7	4.0	3.8	3.7	3.7	3.5	3.4	3.2
3.9	4	4	3.7	3.8	4	3.8	3.9	4	3.8	3.9	3.4
3.6	3.5	3.8	3.7	3.6	3.9	3.6	3.7	3.7	3.9	3.7	3.6
3.7	3.6	3.8	3.8	3.9	4	3.7	3.8	4	3.6	3.8	3.7
3.9	4.1	4	3.8	4	3.8	3.8	4.1	4	3.7	3.7	3.5
3.9	4	4	3.7	3.9	3.9	3.8	4	4	3.9	4	3.7

Post-Test

Accuracy&Range			**Length&Coherence**			**Flexibility&Appropriate**			**Read Aloud**		
Judge A	Judge B	Judge C	Judge A	Judge B	Judge C	Judge A	Judge B	Judge C	Judge A	Judge B	Judge C
3.1	3.1	3.3	3	3.1	2.8	2.5	2.6	2.8	3.7	3.8	3.6
3.4	3.2	3.4	3.1	3.2	2.9	2.8	2.4	2.6	3.8	3.5	3.7
3	3	3.2	2.9	3.1	2.8	2.6	2.5	2.7	3.9	3.6	3.8
3.1	3.1	3.3	3.3	2.9	2.8	3	2.6	2.8	3.9	3.7	3.8
3.2	3.3	3.5	3	2.8	3	2.6	2.7	2.9	4.3	4	4.2
3.4	3.5	3.5	3.1	2.7	2.9	2.7	2.3	2.5	4	3.7	3.9
3.3	3.4	3.4	3	3	3.2	3	2.6	2.8	4.1	3.8	4.1
3.5	3.6	3.6	2.9	3.1	3.3	3.1	3	3.2	4	3.7	4.1
3.4	3.5	3.5	3.2	3	3	3.1	3.4	3.4	4.5	3.9	4.6
3.3	3.4	3.8	3.3	3.2	3.2	3.2	3.5	3.3	4.2	4	4.3
3.5	3.5	3.9	3.4	3.3	3.3	3	3.3	3.1	4.4	4.2	4.5
3.4	3.5	3.9	3.5	3.4	3.3	2.8	3.8	3.6	4.1	3.9	4.2
4	3.6	3.5	3.4	3.5	3.4	3.1	3.3	3.1	4.3	4.1	4.3
3.3	3.7	3.7	3.3	3.6	3.5	3.2	3.6	3.6	4.5	4.3	4.4
3.6	3.9	3.9	3.5	3.4	3.3	3.4	3.5	3.5	4.4	4.3	4.3
3.8	4.1	4.1	3.2	3.5	3.4	3	4	3.8	4.7	4.6	4.6
4.6	4.5	4.1	4.4	4.6	4.2	4.3	4.4	4	4.5	4.4	4.4
3.8	4	3.7	3.2	3.8	3.8	3.4	4	3.9	4.7	4.8	4.6
3.8	4.2	4	3.4	3.9	3.8	3.6	4.1	3.9	4.5	4.6	4.6
4.4	4.6	4.3	4.5	4.4	4.1	4.7	4.5	4.2	4.6	4.6	4.7
3.8	3.8	3.9	3.6	4	3.9	3.8	4.1	4	4.7	4.7	4.6
3.9	4	3.8	3.7	4	3.9	3.9	4.3	4.1	4.6	4.6	4.5

4.3	4.5	4.2	3.8	4.2	4	3.6	4	4	4.5	4.5	4.3
4.2	4.5	4.2	4	4	4.1	3.8	3.8	4	4.8	4.7	4.6
4.1	4.3	4.1	3.9	4.2	4.2	3.7	4	4	4.5	4.4	4.4
4.2	4.2	4.3	4.1	4.3	4.1	4.1	4.2	4.1	4.7	4.6	4.6
4.5	4.7	4.5	4.3	4.6	4.3	4.4	4.5	4.4	4.5	4.5	4.6
4.4	4.8	4.6	4.5	4.6	4.4	4.6	4.7	4.5	4.5	4.5	4.6
4.5	4.7	4.5	4.4	4.6	4.4	4.3	4.5	4.5	4.7	4.7	4.8
4.6	4.7	4.6	4.4	4.7	4.3	4.5	4.8	4.3	4.8	4.8	4.6

The final grade is the mean of the three experts' scores.

Pretest						**Post-test**					
Accuracy	Length	Flexible	Total	Read **Aloud**	Level	Accuracy	Length	Flexible	Score	Read **Aloud**	Level
2.2	2.2	2.1	6.6	3.1	D	3.1	3	2.6	8.7	3.7	C
2.3	2.4	2.3	7	3.2	D	3.3	3.1	2.6	9	3.7	C
2.2	2.4	2.4	7	3.3	D	3.1	2.9	2.6	8.6	3.8	C
2.4	2.5	2.2	7.1	3.3	D	3.2	3	2.8	9	3.8	C
2.6	2.2	2.3	7.1	3.2	D	3.3	2.9	2.7	9	4.2	C
2.7	2.4	2.6	7.7	3.5	D	3.5	2.9	2.5	8.9	3.9	C
2.7	2.5	2.5	7.7	3.4	D	3.4	3.1	2.8	9.2	4	C
2.7	2.3	2.5	7.5	3.5	D	3.6	3.1	3.1	9.8	3.9	C+
2.8	2.5	2.5	7.8	3.6	D	3.5	3.1	3.3	9.8	4.3	C+
2.8	2.5	2.6	7.9	3.6	D	3.5	3.2	3.3	10.1	4.2	C+
3.3	3.2	3.1	9.6	3.4	C+	3.6	3.3	3.1	10.1	4.4	C+
3.2	3	3.1	9.3	3.2	C	3.6	3.4	3.4	10.4	4.1	C+
3.4	3.1	3.1	9.6	3.2	C+	3.7	3.4	3.2	10.3	4.2	C+
2.7	2.5	2.6	7.8	3.4	D	3.6	3.5	3.5	10.5	4.4	C+
2.9	2.7	2.8	8.4	3.5	C	3.8	3.4	3.5	10.7	4.3	C+
3.2	2.6	2.7	8.4	3.4	C	4	3.4	3.6	11	4.6	B
3.5	3.6	3.6	10.8	3.5	C+	4.4	4.4	4.2	13	4.4	B+
3.4	3.7	3.5	10.7	3.4	C+	3.8	3.6	3.8	11.2	4.7	B
3.3	3.5	3.2	10	3.5	C+	4	3.7	3.9	11.6	4.6	B
3.4	3.2	3.2	9.8	3.5	C+	4.4	4.3	4.5	13.2	4.6	B+
3.1	3.4	3.2	9.7	3.5	C+	3.8	3.8	4	11.6	4.7	B
3.6	3.7	3.4	10.7	3.7	C+	3.9	3.9	4.1	11.9	4.6	B
3.7	3.7	3.6	11	3.7	B	4.3	4	3.9	12.2	4.4	B

3.9	3.8	3.9	11.6	3.5	B	4.3	4	3.9	12.2	4.7	B
4	3.9	3.7	11.6	3.4	B	4.2	4.1	3.9	12.2	4.4	B
4	3.8	3.9	11.7	3.7	B	4.2	4.2	4.1	12.5	4.6	B+
3.6	3.7	3.7	11	3.7	B	4.6	4.4	4.4	13.4	4.5	B+
3.7	3.9	3.8	11.4	3.7	B	4.6	4.5	4.6	13.7	4.5	A
4	3.9	4	11.8	3.6	B	4.6	4.5	4.4	13.5	4.7	A
4	3.8	3.9	11.7	3.9	B	4.6	4.5	4.5	13.6	4.7	A

FIF Test Score 1-8

Flue 1	Pron 1	Inte 1	T1	Flue 2	Pron 2	Inte 2	T2	Flue 3	Pron 3	Inte 3	T3	Flue 4	Pron 4	Inte 4	T4
42	44	39	125	49	51	46	147	54	52	45	151	58	57	51	166
69	68	66	203	72	72	69	213	78	76	74	228	81	77	75	233
87	61	84	232	80	67	77	224	87	73	77	237	91	74	84	248
91	74	88	253	79	76	76	231	86	80	88	254	88	83	83	254
52	53	49	154	62	62	59	184	67	69	58	194	73	67	64	204
69	54	66	189	80	63	77	220	87	68	54	209	88	68	84	240
83	82	80	245	76	72	73	220	85	80	87	253	86	82	82	250
68	74	65	207	67	75	64	206	75	79	69	224	78	79	72	228
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50	46	47	143	58	53	55	165	66	54	47	167	66	57	63	186
83	70	80	233	78	70	75	223	85	73	78	236	91	76	82	248
53	63	50	166	57	66	54	177	64	72	55	192	63	72	61	197
84	72	81	237	79	71	76	226	85	75	85	245	88	75	82	245
81	68	78	227	79	67	76	221	85	74	81	240	87	77	82	245
88	86	85	259	80	79	77	235	82	87	90	259	87	86	79	253
62	47	59	168	76	54	73	203	80	59	53	192	81	63	77	221
76	67	73	216	78	72	75	224	85	75	71	230	87	79	82	249

56	57	53	166	66	66	63	196	71	69	64	204	72	76	68	216
84	81	81	246	78	77	75	231	83	79	88	251	89	84	80	253
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80	77	77	234	78	72	75	225	86	78	85	249	90	80	83	252
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68	71	65	204	75	78	72	224	79	81	66	227	82	84	76	242
69	50	66	185	73	53	70	197	79	58	57	194	80	60	76	216
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49	60	46	155	57	63	54	174	60	65	46	171	60	68	57	184
85	74	82	241	81	77	78	236	86	80	83	248	91	85	83	259
Flue 5	Pron 5	Inte 5	T5	Flue 6	Pron 6	Inte 6	T6	Flue 7	Pron 7	Inte 7	T7	Flue 8	Pron 8	Inte 8	T8
56	58	55	169	58	56	55	170	62	62	59	183	62	62	59	182
80	79	78	236	82	82	79	244	83	87	80	250	85	87	82	253
90	76	88	254	93	77	90	259	96	77	93	267	97	80	94	272
93	83	85	260	95	88	92	274	97	91	94	282	99	89	96	285
74	73	70	216	77	72	74	223	77	72	74	224	78	77	75	229
91	72	85	247	94	71	91	255	96	75	93	265	94	74	91	260
89	86	83	258	92	85	89	265	95	86	92	273	94	91	91	275
75	82	75	231	77	83	74	234	79	85	76	241	84	88	81	253
89	83	87	258	92	84	89	264	93	90	90	274	96	91	93	281
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89	78	85	251	95	78	92	264	94	82	91	268	98	83	95	277
90	73	88	251	93	76	90	258	95	75	92	263	96	79	93	269
63	72	57	192	64	73	61	199	64	76	61	202	68	77	65	209
89	84	88	261	91	90	88	268	94	89	91	275	97	93	94	285

Flue for Fluency, Pron for Pronunciation and Inte for Integrity.

Questionnaire Score

ID	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Total
1	3	2	4	4	2	2	2	3	3	3	4	4	36
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3	4	2	3	3	4	3	4	3	3	3	3	3	38
4	3	3	3	4	3	2	3	5	4	4	4	4	42
5	4	3	1	3	3	3	4	3	4	3	3	3	37
6	3	4	3	4	4	3	3	4	3	4	4	4	43
7	4	3	4	4	4	4	5	4	4	4	4	5	49
8	3	3	3	5	3	3	4	3	3	4	4	4	42
9	4	4	4	4	4	4	3	5	3	4	4	4	47
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14	4	4	3	4	4	4	5	4	5	3	3	3	46
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17	5	4	4	5	3	3	4	3	5	4	4	4	48
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19	4	5	4	3	3	3	4	5	4	4	4	4	47
20	5	4	2	5	4	3	5	5	5	3	3	3	47
21	4	5	3	4	3	2	4	4	5	4	4	4	46
22	3	4	3	5	4	4	4	3	4	3	3	3	43
23	5	5	5	4	4	5	3	3	4	4	4	4	50
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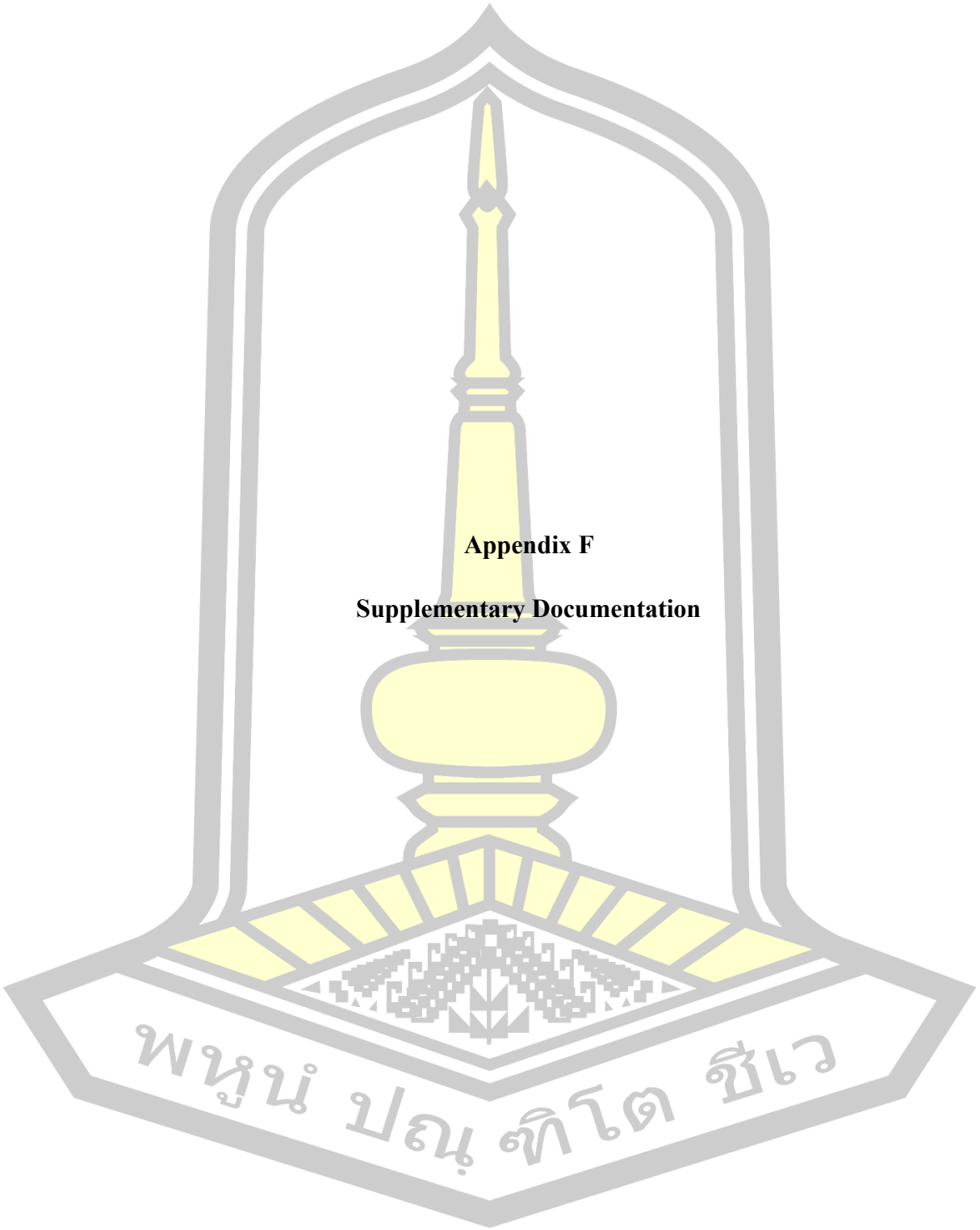


Appendix F

Supplementary Documentation

Teaching Materials of Smple lesson plan

Vocabulary

1. creativity

Explanation: Short videos inspire users to come up with creative ideas and content.

Example: "TikTok encourages creativity by allowing users to experiment with different styles and effects."

2. self-expression

Explanation: Short videos provide a platform for people to express their personality, opinions, and talents.

Example: "Short videos allow for self-expression, giving people a space to share their thoughts and talents."

3. community building

Explanation: They help create a sense of belonging by connecting users with similar interests or goals.

Example: "Short video platforms build communities by connecting people who share the same interests."

4. entertainment

Explanation: They offer fun, relaxing content that people enjoy in their free time.

Example: "Short videos provide quick entertainment, helping people relax after a long day."

5. educational content

Explanation: Many short videos share useful tips, tutorials, or knowledge in an engaging way.

Example: "Short videos can be educational, teaching people new skills like cooking or languages."

6. viral marketing

Explanation: Businesses can promote their products or services in a creative, engaging way that reaches a large audience.

Example: "Companies use viral marketing through short videos to reach millions of potential customers."

7. inspiration

Explanation: They inspire people to try new things or pursue their passions.

Example: "Short videos can be a source of inspiration, encouraging users to try new hobbies or learn new skills."

8. quick learning

Explanation: People can learn new things quickly because short videos are concise and to the point.

Example: "Short videos help with quick learning by delivering bite-sized pieces of information."

9. social interaction

Explanation: They enable users to engage with each other through comments, likes, and shares.

Example: "Short videos foster social interaction as users can comment, like, and share content easily."

10. global reach

Explanation: Content creators can share their videos with a global audience, increasing visibility and engagement.

Example: "Short videos allow creators to reach a global audience, spreading their message worldwide."

11. distraction

Explanation: Constant notifications and endless content can divert attention from important tasks.

Example: "Short videos can be a huge distraction, making it difficult to focus on work or study."

12. addiction

Explanation: Excessive watching can lead to an unhealthy dependency on short video content.

Example: "The addictive nature of short videos can lead to hours of scrolling without realizing the time passing."

13. time-wasting

Explanation: People often spend more time than intended on short video platforms, leading to reduced productivity.

Example: "Binge-watching short videos can waste a lot of time that could be spent more productively."

14. misinformation

Explanation: Short videos sometimes spread false or misleading information quickly.

Example: "The rapid spread of misinformation through short videos can mislead many viewers."

15. shortened attention span

Explanation: Consuming short, fast-paced content regularly can reduce the skill to concentrate on longer tasks.

Example: "Constantly watching short videos may lead to a shorter attention span, making it hard to focus on longer tasks."

16. peer pressure

Explanation: The popularity of certain challenges or trends can pressure users to participate, even if they don't want to.

Example: "Peer pressure from viral short video challenges can make people feel obligated to take part."

17. anxiety

Explanation: Watching idealized versions of life or feeling the need to create popular content can cause stress and anxiety.

Example: "Seeing perfect lives on short videos can lead to anxiety about not living up to those standards."

18. Over-consumption

Explanation: Excessive consumption of content can lead to mental fatigue and lack of real-world engagement.

Example: "Over-consumption of short videos can lead to burnout and reduce face-to-face interactions."

19. privacy concerns

Explanation: Sharing too much personal information in short videos may result in privacy issues.

Example: "Uploading personal content on short video platforms can raise privacy concerns."

20. content overload

Explanation: The constant flood of new videos can overwhelm users, making it hard to find meaningful or quality content.

Example: "The sheer volume of content on short video platforms can lead to content overload, making it hard to find quality videos."

Sentence Structures for Describing the Positive Effects of Short Videos

1. One of the main benefits of short videos is that...

Example: "One of the main benefits of short videos is that they inspire creativity by allowing users to express themselves."

2. Short videos allow people to...

Example: "Short videos allow people to quickly learn new skills, such as cooking or languages."

3. A positive aspect of short videos is that...

Example: "A positive aspect of short videos is that they help people connect with others who share similar interests."

4. Many people find short videos useful for...

Example: "Many people find short videos useful for entertainment and relaxation during their free time."

5. Short videos provide an opportunity to...

Example: "Short videos provide an opportunity to engage with global communities and spread creative content."

6. One way short videos can be helpful is by...

Example: "One way short videos can be helpful is by offering educational content that’s easy to follow."

7. Short videos are great for...

Example: "Short videos are great for quick entertainment or learning something new in a short amount of time."

8. Short videos encourage...

Example: "Short videos encourage users to explore their creativity and try out new ideas."

9. One of the biggest drawbacks of short videos is that...

Example: "One of the biggest drawbacks of short videos is that they can be highly addictive, making it difficult to stop watching."

10. A common problem with short videos is that...

Example: "A common problem with short videos is that they can easily distract people from important tasks like studying or working."

11. Spending too much time on short videos can lead to...

Example: "Spending too much time on short videos can lead to poor time management and procrastination."

12. Short videos can be harmful because...

Example: "Short videos can be harmful because they often spread misinformation quickly."

13. The downside of short videos is that...

Example: "The downside of short videos is that they can reduce attention spans and make it harder to focus on longer tasks."

14. Short videos may cause issues like...

Example: "Short videos may cause issues like anxiety when people compare their lives to what they see online."

15. One negative effect of short videos is that...

Example: "One negative effect of short videos is that they can create peer pressure to follow trends."

16. Short videos can lead to...

Example: "Short videos can lead to over consumption, resulting in reduced face-to-face interaction and mental fatigue."

17. In my experience, short videos...

Example: "In my experience, short videos are fun, but they can become distracting if not managed properly."

18. I use short videos mainly for...

Example: "I use short videos mainly for entertainment, but I try to limit my time on them."

19. Personally, I think short videos...

Example: "Personally, I think short videos are useful for quick learning, but they can also be addictive."

20. From my perspective, short videos...

Example: "From my perspective, short videos can help with creativity, but they can also cause time-wasting."

21. For me, the biggest advantage/disadvantage of short videos is...

Example: "For me, the biggest advantage of short videos is their skill to entertain quickly, but the biggest disadvantage is their potential to be a distraction."

22. To avoid getting distracted by short videos, I...

Example: "To avoid getting distracted by short videos, I set time limits for watching them."

23. I try to balance my time by...

Example: "I try to balance my time by only watching short videos after I finish my work or studies."

24. One way to manage short video usage is by...

Example: "One way to manage short video usage is by setting specific times for watching them and sticking to those limits."

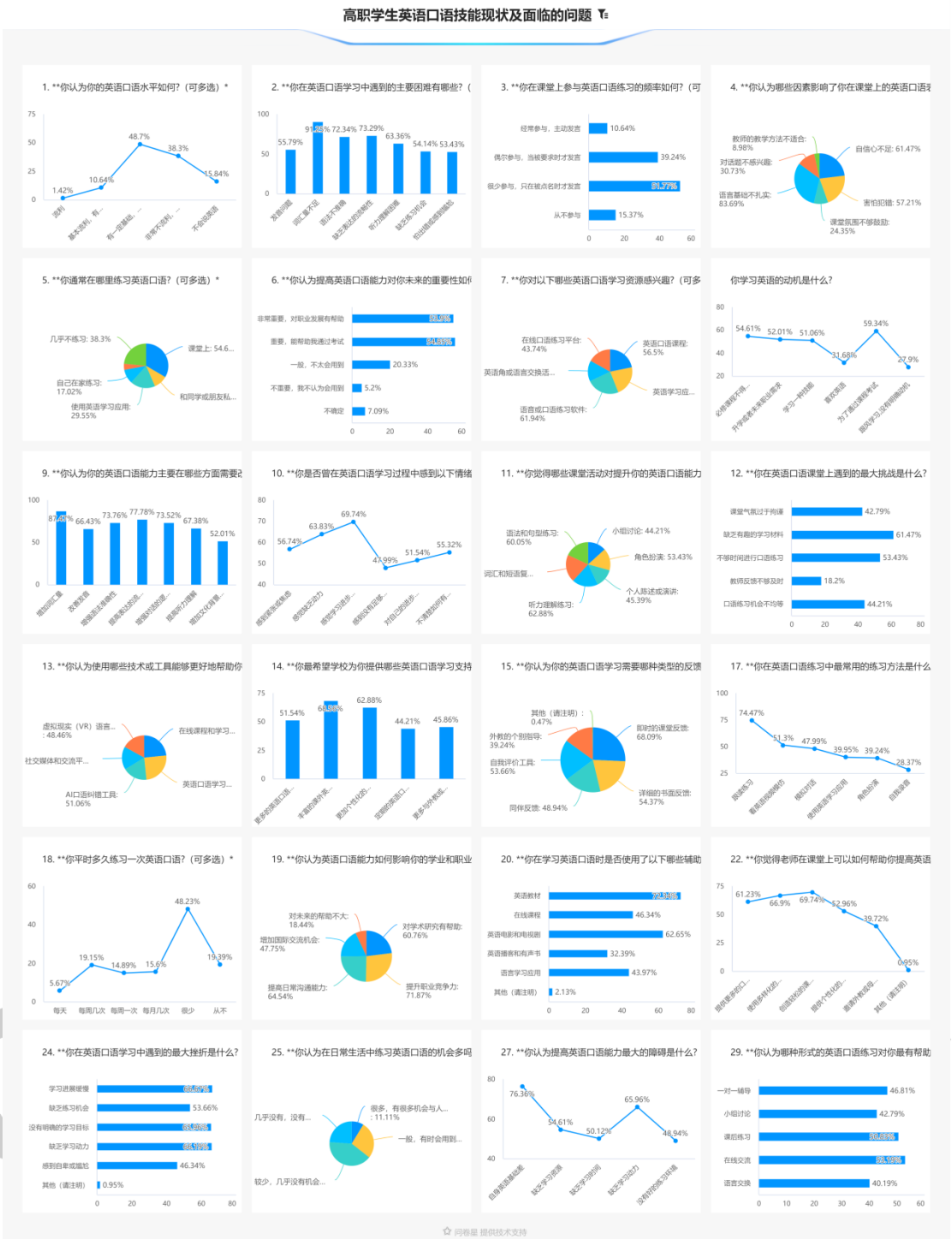
25. It’s important to limit short video consumption because...

Example: "It’s important to limit short video consumption because too much screen time can affect productivity and mental health."

26. I find that setting time limits for short videos helps me...

Example: "I find that setting time limits for short videos helps me stay focused on my important tasks."

A Survey of Sichuan Vocational College of Health and Rehabilitation



Teaching Reflection

教学反思反馈

第 1 次课：短视频对日常生活的影响

问题 1：学生使用新词汇的频率较低
在复述和小组讨论时，部分学生（如 3 号和 12 号）没有充分使用课堂上学到的词汇（如“addiction”、“distraction”）。
反思：学生可能还不熟悉这些新词汇的应用，需要更多的练习机会。
改进措施：通过 FIF 设置复述任务，要求学生在使用新词汇时获得更高的练习分数，同时在课堂上增加词汇使用的奖励机制，鼓励更多学生尝试。

问题 2：讨论环节时间把控有待改进
情况：小组讨论“短视频对学习的影响”时，有些小组因为时间较短无法深入探讨话题。
反思：需要更灵活地分配讨论时间，以便学生能够进行充分的互动。
改进措施：根据小组的讨论深度调整时间分配，确保所有学生有机会表达观点。

问题 3：个别学生的发音问题较为明显
情况：16 号学生在复述时发音不够清晰，尤其是在长词或多音节词上。
反思：需要为这些学生提供更多的个性化发音练习。
改进措施：针对个别学生的专项发音任务，鼓励他们在课后进行多次跟读练习，由同桌督促。

第 2 次课：科技在教育中的作用
问题 1：个别学生的语调较为单一，影响表达效果
情况：8 号学生在课堂展示时语调较为平淡，难以引起听众的兴趣。
反思：需要引导学生在表达时运用更丰富的语调，以提升表达的感染力。
改进措施：FIF 练习中推荐增加语调练习，引导学生在课后多练习.

问题 2：课堂总结时内容较为分散
情况：教师在总结环节时，对词汇和句型的讲解较为零散，学生难以系统掌握。
反思：总结时应该有条理地组织教学内容，以便学生更好地巩固所学知识。
改进措施：使用 PPT 或板书将总结内容系统化，按主题归纳词汇和句型，并提供相关例句，帮助学生全面掌握所学内容。

问题 3：教学环节时间安排紧凑
情况：因为某些环节的时间显得紧凑，部分学生未能充分完成任务。
反思：应合理规划活动时间，以确保活动质量。
改进措施：重新调整时间安排，将一些环节合并或简化或提前分发学材，给学生更多时间进行任务的练习。

第 3 次课：环保与可持续生活
问题 1：学生复述时观点不够清晰
情况：部分学生（如 14 号和 19 号）在复述环保主题时，表达的观点较为模糊，没有明确支持或反对的立场。
反思：需要引导学生形成更清晰的观点表达，提升论述的逻辑性。
改进措施：推荐学生多跟读 FIF 上的 Ted 演讲内容，帮助学生思考如何表达明确的立场。

问题 2：课堂活动之间的过渡不够流畅
情况：在复述、讨论和展示之间，活动过渡较为突兀，学生需要时间适应。
反思：活动安排应更连贯，让学生在不同活动中有更好的衔接体验。
改进措施：在每个活动之间设置简短的过渡环节，如提问或引导性小讨论，以帮助学生从一个活动顺利过渡到另一个活动。

问题 3：个别学生在复述时语法错误较多
情况：学生（如 23 号和 30 号）在复述时，时态使用不当或句子结构错误。
反思：学生可能需要更多的语法练习来巩固课堂上学到的知识。
改进措施：增加语法专项练习任务和 FIF 短文的朗读，特别是涉及时态和复杂句型结构的内容，帮助学生在课后自主巩固。

第 4 次课：体育锻炼的益处
问题 1：学生使用新句型的频率较低
情况：部分学生（如 5 号和 18 号）在讨论时主要依赖简单句型，较少尝试使用课堂上学到的新句型（如“Another benefit of exercise is...”）。
反思：学生可能还不够自信使用新句型，需要更多的练习机会。
改进措施：在 FIF 练习中增加句型替换任务，要求学生在跟读时应用新句型，并在课堂讨论中通过鼓励和奖励提升他们使用新句型的积极性。

问题 2：教学环节的时间安排影响了讨论效果
情况：由于复述和小组讨论的时间较短，部分小组未能充分表达观点或完成讨论任务。
反思：应合理分配每个活动的时间，确保学生能够完成任务并深入表达。
改进措施：适当延长讨论时间，并减少复述的次数，让每个小组有充分时间完成讨论和展示。

问题 3：课堂总结内容较多，学生难以全部消化
情况：教师在总结时涉及大量词汇和句型，学生难以短时间内全部掌握。
反思：总结环节应简化内容，重点突出最重要的词汇和句型。
改进措施：将总结内容分成几个部分进行逐步讲解，每次重点讲解 2-3 个关键点，并在课后通过 FIF 自主复习任务帮助学生巩固。

第 5 次课：跨文化交际
问题 1：小组讨论时学生使用具体例子的能力较弱
情况：有些小组在讨论文化差异对沟通的影响时，只能说出最基础的观点，缺乏文化背景知识。
反思：学生需要更多的背景知识和引导，才能举出具体的例子。
改进措施：再涉及一些文化类知识时,提前准备学材，让学生对讨论主题有更好的了解，并在讨论时引导他们引用这些资料。

问题 2：个别学生在小组讨论中参与度低
情况：部分学生（如 21 号和 29 号）在小组讨论时不太积极，更多时候是倾听，而非主动发言。
反思：需要激发这些学生的课堂参与度，提升他们的互动意愿。
改进措施：在小组活动前安排角色任务，要求每个学生承担特定的讨论角色（如发言者、总结者），鼓励更多学生参与表达。

问题 3：课堂气氛有待提升
情况：部分小组在讨论时互动不够，课堂气氛显得较为安静。
反思：可能是讨论问题不够吸引学生兴趣，或者学生对文化话题的了解有限。
改进措施：增加趣味性文化话题，或设置与学生生活相关的文化差异案例，激发讨论兴趣，并鼓励学生在讨论中分享个人经验。

第 6 次课：在线购物的利弊
问题 1：学生积极性过高导致讨论环节超时
情况：本堂课的话题贴近学生生活，学生展开了激烈的辩论，讨论时间超出了预定计划。
反思：讨论的高参与度是积极的，但也需要更好地控制时间，避免影响后续教学环节。可以考虑在讨论过程中设置提醒，以便适时结束讨论并进入下一个环节。
改进措施：在讨论环节设置时间提醒，如在讨论进行到 8 分钟时给予提示，要求学生在剩余的 2 分钟内总结讨论内容。还可以安排学生代表总结发言，简化讨论分享的过程。

问题 2：讨论环节的任务安排不够清晰
情况：部分小组在讨论“在线购物的利弊”时，对讨论任务的具体要求不够明确，导致讨论方向不清。
反思：需要在任务设置时明确讨论的重点和预期成果，以提高讨论的针对性和有效性。明确具体的任务要求可以帮助学生集中精力完成任务。
改进措施：在讨论开始前给出明确的任务指示，如每个小组需要提出至少两个优点和两个缺点，并举例说明。同时，可以分发讨论任务卡片，列出关键讨论点，帮助学生更好地把握任务方向。

问题 3：课堂总结时间不足
情况：由于讨论环节超时，教师在总结在线购物相关词汇和句型时时间不足，导致学生未能系统复习课堂内容。
反思：需要更好地控制课堂活动的时间分配，确保每个环节有足够的时间进行。同时，在总结环节可以采用更高效的总结方式，让学生在短时间内获得重要信息。
改进措施：采用“快速总结法”，每个关键词或句型配上一个例句进行简要讲解，并在 FIF 软件中布置课后复习任务，帮助学生在课后自主巩固课堂内容。也可以在课堂上安排学生小组总结，分享他们认为最重要的词汇和句型。

第 7 次课：工作与生活的平衡
问题 1：课堂设备偶尔出现卡顿
情况：在使用 FIF 软件进行发音练习时，部分学生的设备出现短暂的卡顿情况，但很快恢复正常。
反思：设备问题虽然不严重，但可能会打断学生的练习节奏。需要在课前确保设备运行流畅，避免类似情况影响课堂进程。
改进措施：在课前检查所有设备的连接状态，并建议学生关闭其他不必要的应用程序。同时，可以在课堂上准备备用设备或提供纸质版练习材料，以防设备出现问题时能迅速应对。

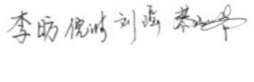
问题 2：展示时语速偶尔较快，影响表达清晰度
情况：9 号和 28 号学生在展示时偶尔语速过快，导致某些句子的发音不够清楚。
反思：学生在展示时的紧张情绪已经明显减轻，但仍需要注意语速控制。
改进措施：通过简单的深呼吸练习或提醒学生在关键词汇处稍作停顿，帮助他们在展示时放慢速度，提升表达的清晰度。

问题 3：小组讨论时个别学生参与度略有差异
情况：个别小组在讨论时，一名学生的发言稍多，而另一名学生发言较少。
反思：虽然大多数学生的参与度已经较高，但仍需要注意引导每个学生有平衡的表达机会。
改进措施：在讨论前给出轮流发言的规则，要求每位学生至少提出一个建议或观点，以确保每个人都能积极参与。

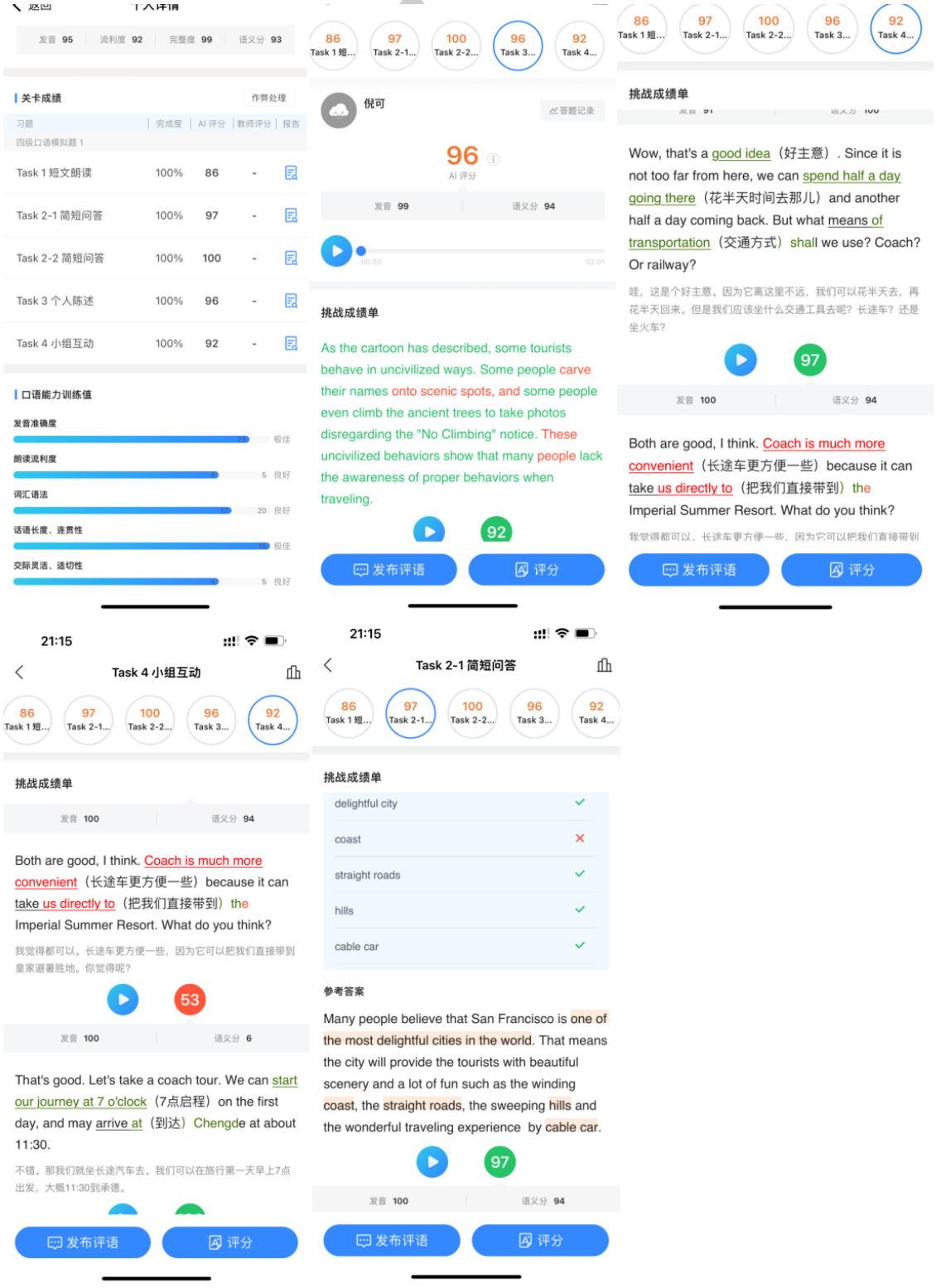
第 8 次课：职场沟通技巧
问题 1：课堂上的个别学生分心
情况：在讨论过程中，10 号学生有几次走神，没有完全参与到小组讨论中。
反思：尽管学生整体参与度较高，但偶尔的分心仍可能影响课堂效果，需要引导学生保持注意力集中。
改进措施：在讨论前设置明确的任务目标和分工，如每人负责提出一个观点或总结一个建议，帮助学生保持参与感。可以增加讨论中的随机提问，确保所有学生都在积极参与。

问题 2：学生对场景展示的时间管理略显松散
情况：部分小组在角色扮演时展示时间稍有超时，导致课堂总结时间略显不足。
反思：学生对时间管理的意识需要进一步加强，特别是在展示任务中。
改进措施：提前在每个展示环节给出时间提醒，如设置倒计时或口头提示，帮助学生掌握时间。还可以引导学生在展示前先进行时间预估和任务分配，确保展示时更有条理。

问题 3：背景噪音影响部分学生的发言
情况：在角色扮演的展示环节，由于周围的讨论声较大，影响了 14 号学生的发言清晰度。
反思：虽然总体课堂氛围较好，但仍需关注环境因素对表达的影响。
改进措施：将小组展示的场地稍作分隔，或者使用安静区域进行展示。可以通过安排轮流展示的方式，避免同时进行多组讨论。



FIF Test Record

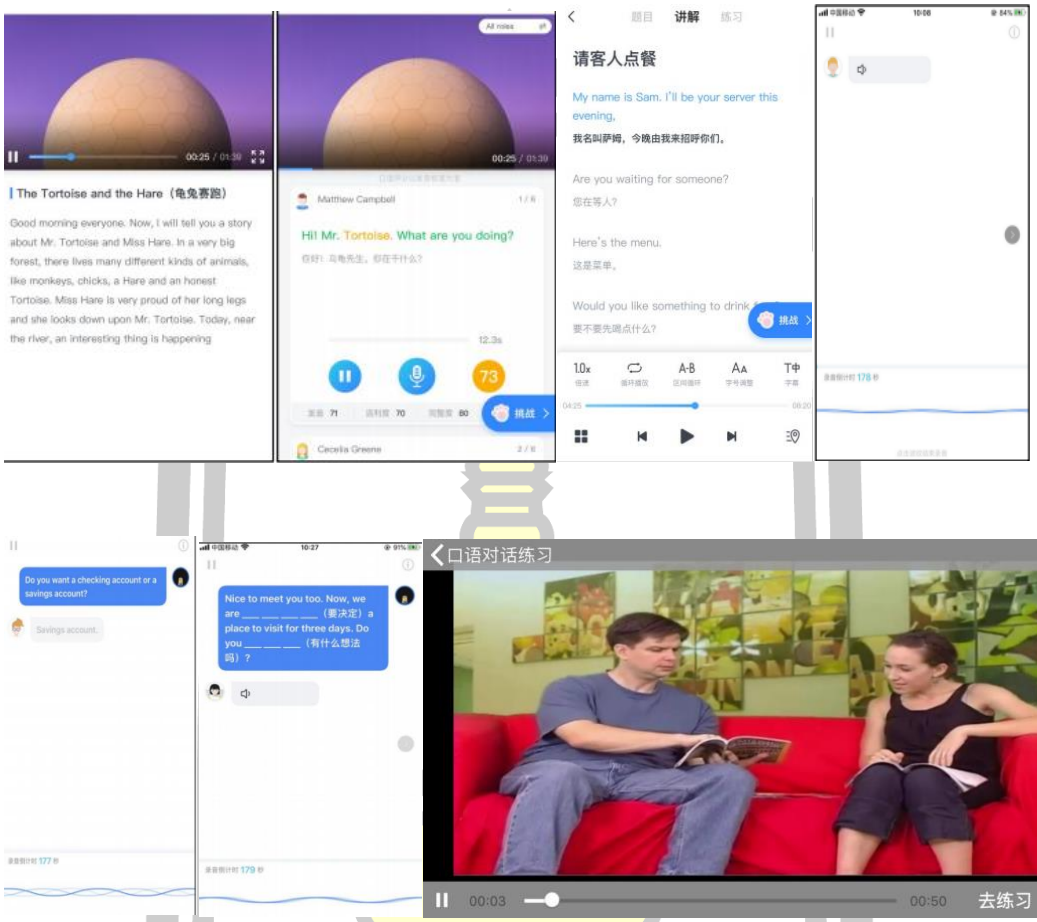


Function of FIF APP

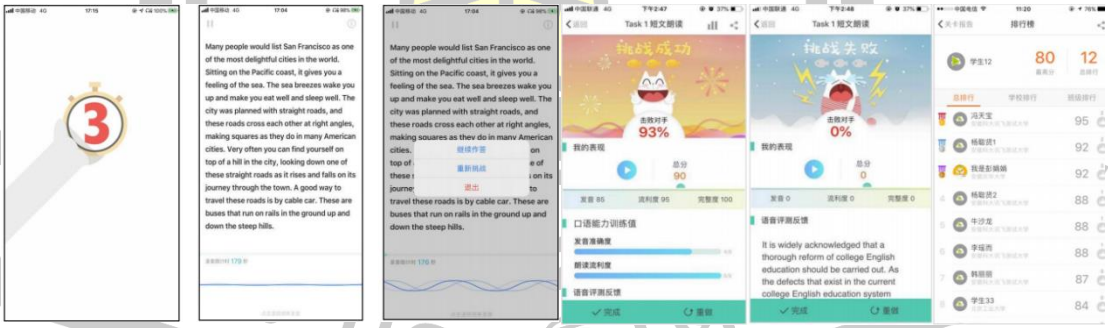
1. Personalized Design

2. AI Technology

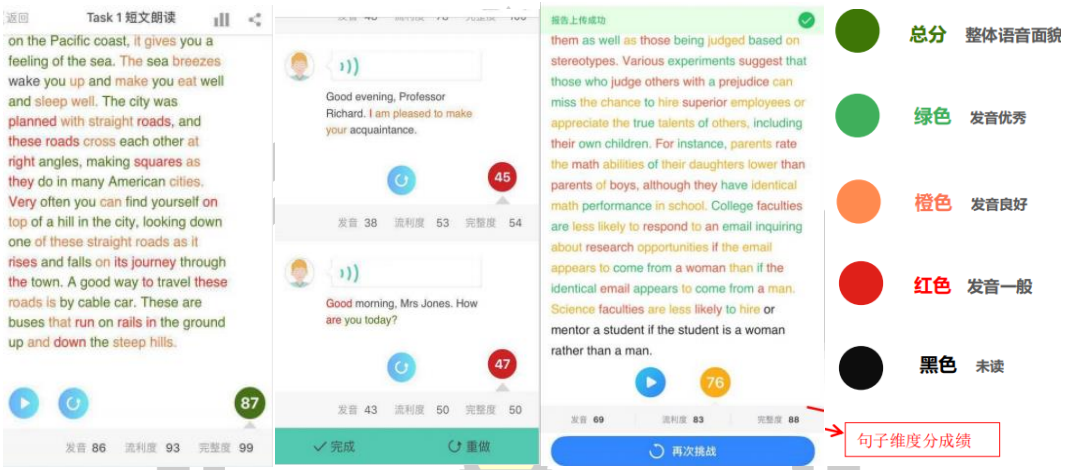
3. Tasks



4. Difficulty Mode



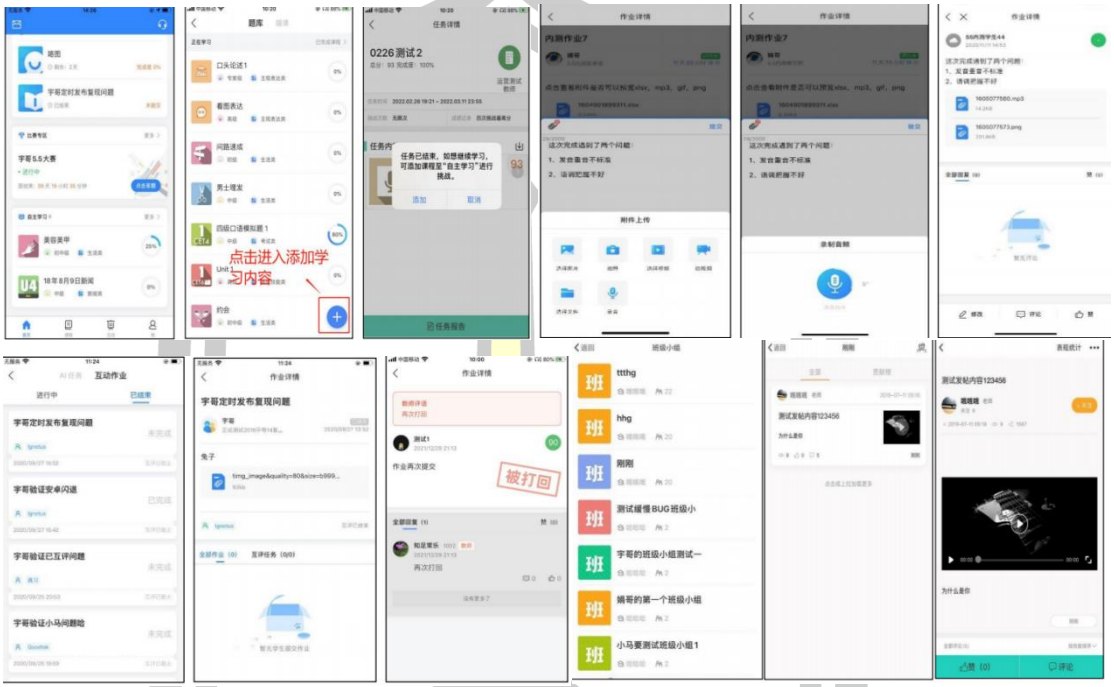
5. Pronunciation Correction



6. Instant Feedback

7. FIF Evaluation System

8. Autonomy Learning



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