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Exploring Chatbot AI in improving vocational students' English pronunciation

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Abstract

Thanks to technological development, there has been a remarkable leap in the application of artificial intelligence, especially in education. This paper examines the effectiveness of Chatbot Mission Fluent, an AI chatbot, in improving English pronunciation among vocational students in a Hanoi college. Sixty vocational students participate in an A1 English course hosted in a quasi-experimental research design. After the course, participants were interviewed and asked to complete a survey questionnaire to collect their feedback on the AI Chatbot. The experimental group showed notably better English pronunciation than the control group. This research aims to address the knowledge gap regarding the use of AI chatbots as a tool in vocational education. Through this approach, the potential of AI chatbots in improving English pronunciation is carefully explored and emphasized among vocational students. However, this paper also noticed some difficulties in applying and monetarily supporting Missionfluent throughout the process. Overall, this study focuses on the significance of incorporating innovative technologies into language learning programs and highlights the beneficial potential of AI Chatbots' application in improving vocational students' English pronunciation while acknowledging AI Chatbots' drawbacks which were discovered in the procedure.

Keywords: Chatbot AI, vocational education, English pronunciation, quasi-experimental, A1 level.

Introduction

It is noticeable that technology has affected the way languages are taught, including English. Utilizing AI can be useful in improving English speaking skills, particularly pronunciation. Interactive language apps, video conferencing, and virtual classrooms are able to provide real-time practice and immediate feedback on learners' performance, which inevitably makes learning language easily accessible for everybody (Smith, 2018). Therefore, language learners can improve their speaking skills by studying physical materials and practicing online dialogues with native speakers (Jones et al., 2019). Now, with the assistance of AI in the form of virtual tutors and speech recognition software, personalized guidance can be delivered to users (Johnson & Smith, 2020). In addition, technology encourages learners to be active and independent throughout their learning process, while the traditional method is incapable of

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fostering an environment where one can receive regular practice and individualized feedback (Brown, 2017; Nguyen, 2021). According to Lee and Wong (2019), AI chatbots are able to imitate a real conversation for study purposes. Although its applications in education are not fully examined, educators and policymakers should notice AI's effectiveness in enhancing student pronunciation (Smith & Johnson, 2021). Unlike ELSA and Duolingo, which are familiar faces when mentioning language learning apps in Vietnam, Missionfluent is a new star in the market without any research having been done on its effectiveness. While ELSA costs between 405.000 VND and 2.595.000 VND and Duolingo costs $12.99 to get personalized feedback, Missionfluent is free for individual use. Thus, it is necessary to examine its ability as a tool to improve English pronunciation skills.

This study aims to examine the pros and cons of using AI Chatbots as a pronunciation training tool for vocational students by carefully considering their results and experiences in this specific context. Therefore, a thorough insight into the benefits of applying AI Chatbot to improve these students' English speaking skills is provided. This paper also targets the exploration of AI Chatbot's potential through semantic analysis and evaluation while uncovering its limitations when being integrated into language learning environments in vocational education settings in Vietnam. The ultimate goal of this study is to consider the efficacy of AI chatbot technology in bettering English pronunciation via AI technologies' integration into language learning environments and make corresponding recommendations for language pedagogy based on the outcomes of a group of vocational students at a college in Hanoi. Moreover, this paper recognizes the challenges facing this group of participants and tries to propose practical, evidence-based solutions for similar educational contexts. Besides, this research hopes to advance teaching approaches and empower learners with improved linguistic abilities for future careers.

Literature review

Pronunciation in English

According to Celce-Murcia, Brinton, and Goodwin (2010), pronunciation has a direct impact on learners' overall intelligibility and communication skills, so its role is extremely important in learning English. Roach (2009) also supposes the importance of pronunciation in English learning. Besides, Brown (2014) also supports the idea when pointing out that pronunciation significantly influences learners' ability to communicate in English effectively. This section attempts to provide an overview of pronunciation in English learning, including its definition, four main approaches, and its importance to learners.

The importance of pronunciation

Proper pronunciation is a crucial part of communicating and understanding spoken English (Goh & Burns, 2012). Hence, it helps students to grasp the language more quickly and speak correctly and fluently during the English learning process.

Accurate pronunciation also ensures others understand the intended message by improving their speech intelligibility. A study carried out by Rajadurai (2001) again emphasized the importance of pronunciation in teaching English and interpreting spoken English.

Besides, correct pronunciation enhances speech comprehensibility, allowing listeners to understand the words fully. Derwing and Munro's (2015) research indicated pronunciation directly affects learners' overall communication skills by highlighting the impact of pronunciation on second language learning. All things considered, it is imperative to prioritize

pronunciation in language learning programs, especially for vocational students who seek successful integration into the global workforce.

Traditional Approaches to Pronunciation Instruction

There are three main approaches to pronunciation instruction that combine traditional theories with modern techniques: the intuitive-imitative approach, the analytic-linguistic approach, and the integrative approach (Celce-Murcia, 1996; Chen, 2007). The intuitive-imitative approach has the students listen and imitate the target language without detailed instruction. The analytic-linguistic approach uses explicit interventions like phonetics and phonology to teach pronunciation. The integrative approach means studying pronunciation within practical communication exercises and focusing on suprasegmentals such as stress, rhythm, and intonation. While these approaches have been widely used, Celce-Murcia et al.'s (2010) research suggests that they do not fully satisfy the individual needs of vocational students. This limitation cannot be denied because these approaches fail to consider the learners' personalized aspects, such as backgrounds, learning styles, and specific pronunciation challenges. As a result, innovative methods should be explored to provide personalized and interactive pronunciation practice for learners.

Innovative Approaches to Pronunciation Instruction

To tackle the traditional approaches' problems, innovative techniques can be used to provide personalized guidance for vocational students when learning pronunciation. One suggestion is to use technology-based tools and applications, like ELSA Speak and Pronunciation Power, to receive instant feedback for language learners after finishing their in-app interactive exercises (Hung, 2015). These tools can provide analysis of learners' speech patterns to identify areas requiring improvement and offer targeted practice activities accordingly. Technology in pronunciation instruction allows learners to study at their own pace and receive individualized feedback to improve their pronunciation effectively.

Another innovative approach is providing real-world materials and imitating real-life communication scenarios in vocational students' future work environments. This helps students become familiar with and practice pronunciation in their profession in the future, which makes the learning experience more relevant and engaging. For example, students can take part in role-playing activities replicating real-life situations to conduct conversations in the target language. In addition, incorporating audio-visual materials from professional settings into practice sessions can expose learners to various accents, speech patterns, and communication styles, therefore improving their overall pronunciation skills (Levis et al., 2016).

Peer collaboration and feedback are other approaches to pronunciation guidance that promote a supportive and interactive learning environment. Vocational students can be paired with native speakers or proficient language learners to create an effective practice session. By doing so, students can receive constructive feedback, exchange pronunciation tips, learn from each other's strengths, and address one's weaknesses. Thomson and Derwing (2015) advocate this method as it encourages learners to actively participate and develop a sense of community, which boosts their motivation and self-assurance in their ability to pronounce words correctly.

Fluency and Accuracy in Pronunciation

To pronounce fluently and accurately in a target language is a major factor in effective communication.

Fluency means speaking smoothly with a consistent rhythm and a controlled pace of speech, allowing the listener to comprehend more easily (Derwing & Munro, 2015). In other words,

pronunciation fluency indicates that one can express one's thoughts and ideas coherently with a seamless flow of words and phrases.

Accuracy in pronunciation focuses on the correct articulation of sounds, stress patterns, and intonation (Gimson, 1989). Proper pronunciation prevents the possibility of misunderstandings and misinterpretations by ensuring the intended message is conveyed accurately. To be accurate in pronunciation requires one to master the specific sounds of a language, including vowels, consonants, and diphthongs, as well as fully understand the stress and intonation patterns expressing the meaning of words and sentences.

For vocational students desiring to work in English-speaking environments, fluency and accuracy in pronunciation are extremely important as they ensure successful communication with other parties in such contexts. Fluency helps vocational students converse their ideas smoothly while maintaining a natural flow that promotes listeners' understanding and engagement. Meanwhile, accuracy enables their messages to be delivered properly and clearly, avoiding the misinterpretation of other participants in the dialogue.

Vocational students can use various strategies and techniques to achieve both fluency and accuracy in pronunciation. Regular practice and consistent exposure to spoken English via numerous forms of media, such as audio or video, can help promote fluency (Derwing & Munro, 2015). Additionally, accuracy can be improved by paying particular attention to specific pronunciation elements, such as individual sounds or intonation patterns (Gimson, 1989).

Overall, fluency and accuracy in pronunciation are determining factors in effective communication. While fluency promotes smooth and coherent delivery, accuracy prevents the misunderstanding of the intended message. Vocational students who aim for English-speaking jobs should master these two components to perform successfully in professional and non-professional contexts. They should practice regularly and take part in proper training to improve their fluency and accuracy in pronunciation.

Chatbot AI

Chatbots are artificial intelligence-driven virtual assistants designed to mimic human dialogue with language learners (Liu et al., 2019). These chatbots use advanced natural language processing algorithms to understand and respond to user input in a way that resembles human-like interaction. Therefore, chatbots are able to provide learners with immediate feedback, practice opportunities, and personalized learning materials to improve their language competency.

MissionFluent is a recent tool that focuses on improving English pronunciation skills by offering exercises and real-time assessments tailored to enhance pronunciation. Via regular interactive sessions with MissionFluent, learners can practice articulating sounds accurately, thereby developing a better grasp of phonetic patterns and intonation in the English language. This practical approach to MissionFluent allows learners to enhance their speaking skills, especially pronunciation ability.

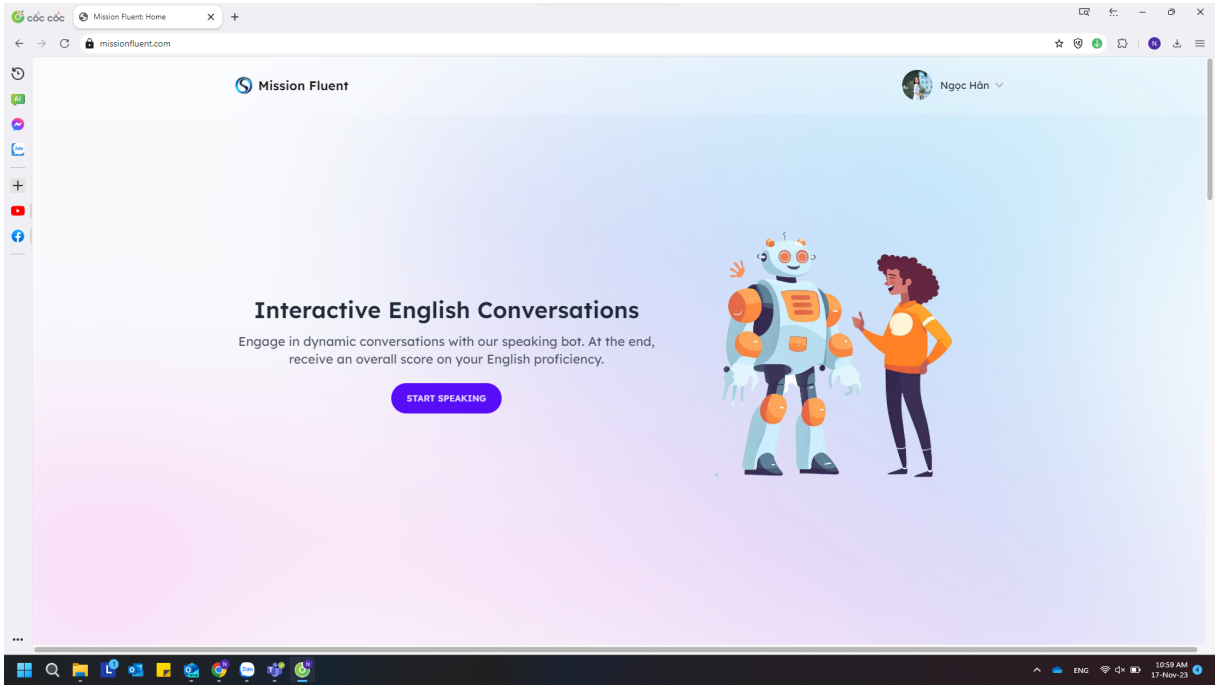

Figure 1. AI MissionFluent chatbot interface

In recent years, AI Chatbot technology being integrated into language learning, like MissionFluent, has attracted significant interest due to its potential to offer individualized and engaging language learning experiences (Li, Zhang, & Zhao, 2019). There have been studies about the effectiveness of AI Chatbot technology in various circumstances. For example, using AI Chatbot technology has significantly improved vocabulary acquisition and retention in college students (Li et al., 2019). Moreover, it has been discovered that chatbot-based language learning programs improve speaking ability and study motivation (Wu, Chen, & Huang, 2020).

Despite numerous existing researches indicating its effectiveness in language education, including its potential to improve language skills via online platforms and virtual reality (Levy, 2016; Le et al., 2022), and the positive impact of digital storytelling tools in ESL classrooms (Wang, 2019), there is a lack of evidence for the application of this technology to improve vocational students' English pronunciation in a Hanoi college context. Further research in this area would be highly recommended to yield insightful information on how well chatbot AI technology works for specific language learning needs.

Conceptual Framework: L2 motivational self-system (L2MSS)

Motivation is crucial in language learning, influencing learners' engagement and dedication. Scholars in the field of second language acquisition have developed a conceptual framework called L2 dynamics to understand better the complex nature of learner motivation and its impact on language learning outcomes.

The L2 Motivational Self-System (L2MSS) is a significant aspect of language acquisition as it encompasses various motivational components. According to Dörnyei's process model of L2 motivation self-system (Figure 2), L2MSS consists of three components: the Ideal L2 Self, the Ought-to Self, and the L2 Learning Experiences (Dörnyei, 2009).

Figure 2. Dörnyei's process model of L2 motivation self-system

The idealized perception that speakers of a second language have of themselves is known as the "Ideal L2 Self." A strong incentive is to strive to become the person they see themselves as when speaking the target language with ease. To achieve integrative and internalized instrumental goals, it pushes students to close the gap between their real and ideal selves.

Concerning meeting expectations and avoiding unfavorable consequences, learners' beliefs about the qualities they ought to have are the subject of the ought-should L2 Self. This part corresponds with the ought-to self as defined by Higgins, reflecting obligations and demands from outside sources. It contains external rewards that affect learners' motivation to learn the L2, even if they are less internalized.

Including the immediate learning environment and its effect on motivation, the L2 Learning Experience constitutes the third component of the L2MSS. The instructor, the curriculum, the peer group, and previous achievements influence this component. It follows a bottom-up approach, which distinguishes it from the self-guides of the Ideal L2 Self and Ought-to L2 Self. The self-related aspects of this component and its impact on learner motivation require more investigation.

Studying how chatbot AI might enhance student pronunciation requires an understanding of the L2MSS and its constituent parts. The ought-to L2 self and the Chatbot's alignment with expectations both boost motivation, but the ideal L2 self encourages students to close the proficiency gap. Positive learning experiences depend heavily on the establishment of a supportive learning environment. Combining these components can create an efficient chatbot AI system that improves pronunciation and student motivation.

In summary, there is a lot of potential in the study of using chatbot AI, more precisely, the MissionFluent chatbot, to improve vocational students' English pronunciation in a college context in Hanoi. This research aims to provide useful insights and recommendations for educators, curriculum designers, and language learning practitioners seeking to improve the English pronunciation abilities of vocational students. Specifically, it addresses the special needs of vocational students and investigates the potential benefits of chatbot AI technology.

Research Questions

To achieve the objectives of this research, the following questions will be addressed:

1. To what extent does the application of Chatbot AI (MissionFluent) affect the L2 motivations of vocational students in enhancing pronunciation skills?
2. What are the perceived benefits and challenges of incorporating Chatbot AI (MissionFluent) into vocational students' English pronunciation practice?

Methods

Pedagogical Setting and Participants

The study will take place in two English classes at a college in Hanoi. The participants will consist of first-year students studying English in two classes named Level 1.1 (it means the proficiency of the class at level A1, according to the CEFR scale, which categorizes English into four levels, A1 through B1). However, not all students participate in the school's English entrance exam to classify classes; they are randomly assigned to classes. Therefore, the two classes in this study are both mixed-level classes. Typically, each class comprises around 33 to 38 students (Class 1 has 33 students, Class 2 has 38 students). The blended learning approach necessitates that students engage in online video lessons before attending in-person classes. As part of the evaluation process, students will undergo a final speaking test, where pronunciation will be a significant aspect considered.

Design of the Study

Using a quasi-experimental research approach, the effect of chatbot AI on improving vocational students' English pronunciation will be investigated. Subjects will be sorted into two groups according to their enrolled classes: the experimental group and the control group. You might not be able to allocate randomly due to practical constraints. To determine their starting proficiency in English pronunciation, both groups will take a pre-test. This test is an oral test; students will read the given passage (level A1) and use an AI chatbot to score. The results will be recorded by taking screenshots and stored on a storage tool. The control group will continue receiving standard English pronunciation teaching without any additional support, while the experimental group will receive the chatbot AI intervention. A post-test will be used to assess both groups' progress in pronouncing words correctly in English after a predetermined duration of instruction. This design with pre- and post-tests will allow results from the experimental and control groups.

Data Collection and Analysis

Google Forms questionnaires and interviews will be the main ways in which data for this study is gathered. The purpose of the Google Forms surveys is to collect quantitative information about participants' attitudes, perceptions, and levels of satisfaction with the chatbot AI intervention. To get a variety of answers, these surveys will contain multiple-choice, open-ended, and Likert-scale items. Semi–structured interviews with a smaller group of participants will also be held to collect qualitative data. Through these interviews, it will be possible to learn more about the attitudes, experiences, and difficulties that students have when utilizing chatbot AI to improve their pronunciation. To protect the privacy of the students who took part in the study, the researcher coded each student from A1 to A30, which corresponds to the pre-and post-test score percentages.

Besides, this study intends to gather extensive and varied data via surveys and interviews to provide a complete grasp of the influence and possibilities of chatbot AI in improving the English pronunciation abilities of vocational students. Additionally, statistical methods will be used to examine the quantitative data gathered from the surveys, including correlation analysis,

inferential statistics, and descriptive statistics. The images and other qualitative data will be analyzed to detect trends, patterns, and background knowledge that can enhance the quantitative results.

Findings and discussion

Findings

In this academic research, the participants were all studying at level 1.1, which corresponds to the A1 level (according to the CEFR scale). However, it was evident that the class consisted of students with mixed English proficiency levels. This suggests that there was a variation in the student's abilities.

According to the pre-survey data, it was found that 33.8% of students were at the beginner level (on a scale from 1 for beginner to 5 for advanced). This indicates that there was a range of English proficiency among the students. It is important to consider this diversity when evaluating the effectiveness of the intervention. Because students have different levels, their confidence when pronouncing English is also different. Chen et al. (2021) and colleagues believe that good students will deal better with problems when communicating, while low-level students will tend to repeat answers. It is important to consider this diversity when evaluating the effectiveness of the intervention. In terms of motivation, the majority of students (39.4%) expressed moderate motivation (scale number 3 on Likert) to learn English. While most students showed motivation, it was not at a high intensity. However, it is worth noting that 84% of students identified effective communication as the main reason and motivation for learning English (Figure 3).

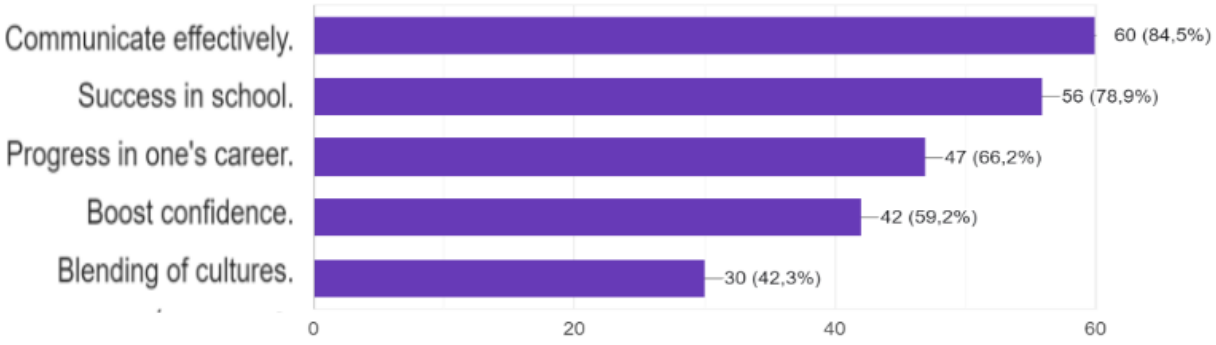

Figure 3: Reasons for motivation to improve English pronunciation

Besides, a significant portion of students (32.9%) expressed high expectations (level 4 on the Likert scale) regarding the usefulness of AI chatbots in improving their English pronunciation in Figure 4. This demonstrates a positive attitude towards the potential benefits of AI chatbots for pronunciation improvement.

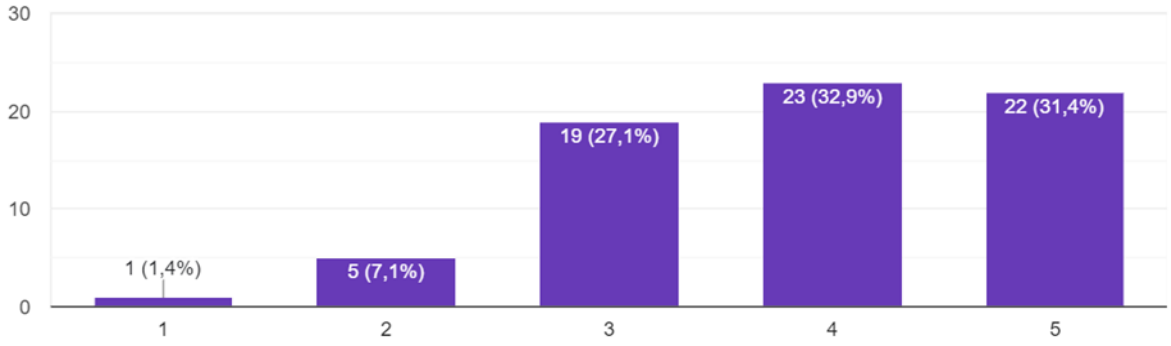

Figure 4: Students' expectations regarding chatbot AI that enhances English pronunciation

Furthermore, it is worth noting that 81.7% of students were not aware of MissionFluent , the specific AI Chatbot used in the study (Figure 5). This will show a desirable result on whether applying Chatbot AI can improve students' pronunciation in a certain time or not.

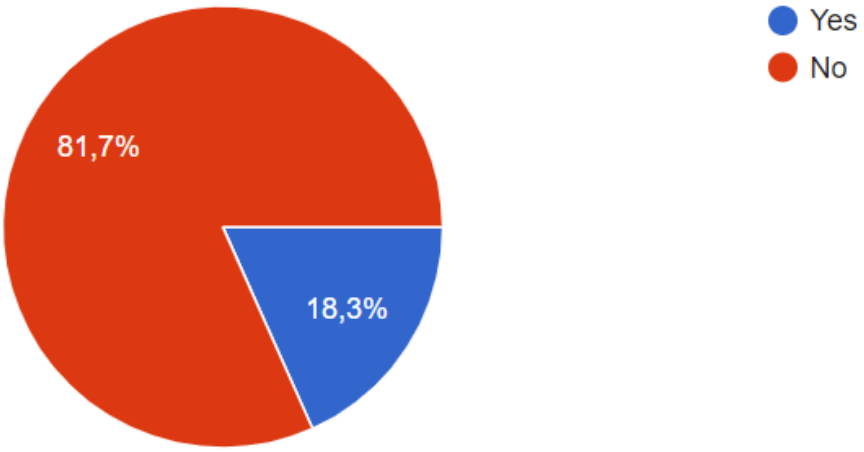

Figure 5: The Mission Fluent Chatbot's AI familiarity among students

On the other hand, the study utilized MissionFluent as a tool for practice over three weeks. The post-survey data revealed that a significant percentage of students in the experimental group, specifically 45.5%, reported feeling more motivated after engaging with this AI Chatbot. In addition, an equal percentage of students, 45.5%, rated their confidence in their English ability as a 4 on the Likert scale after utilizing the Chatbot AI. This indicates that the students experienced an improvement in their confidence levels when it comes to pronouncing and communicating in English.

Notably, a considerable portion of the students, 39.4%, expressed that they perceived a change or enhancement in their English pronunciation following their usage of Mission Fluent. Consequently, a substantial majority of students, 75.8% (Figure 6), recommended the utilization of Chatbot AI for English pronunciation practice among their peers.

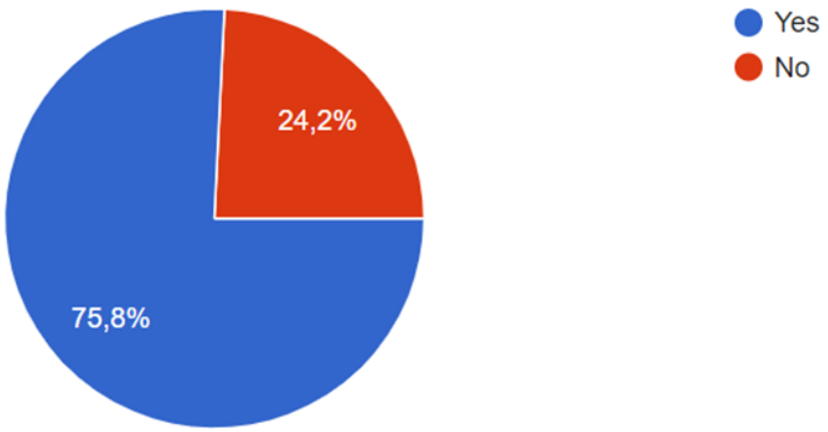

Figure 6: Recommendations from students for other vocational students use AI chatbots to study English pronunciation

Among the features offered by the Chatbot AI MissionFluent, 78.8% of students found the "Scoring your speaking" feature to be particularly useful. This feature allows students to receive scores for their spoken English. However, it is important to note that as a newly developed application, MissionFluent may encounter certain issues. Some students provided feedback suggesting that the software developers should enhance the scoring and word recognition systems, as there were instances where the system failed to display scores after completing a speech.

In addition to the test results, a small number of students in the experimental class agreed to take part in a private interview. Those students whose scores improved in the post-test mentioned that they spent more time interacting and practicing with the Chatbot, which helped them. On the other hand, students whose scores decreased mentioned the opposite. Students who achieved high scores in the post-test mentioned that they found the AI Chatbot's interface visually appealing and the speaking support features, such as topic-based conversations with the Chatbot, very interesting. This motivated them to improve their English pronunciation every day. However, students whose scores decreased were generally less motivated to study and had little interest in AI Chatbots. Nevertheless, the survey revealed some issues with the Chatbot. Three out of four students encountered a problem where the Chatbot did not provide immediate scores after completing their speech but took a long time to display the scores or didn't display them at all. Additionally, the content of the students' conversations was not recorded on the screen after completion. As a result, all the students expressed their desire for the program developers to fix these errors to make the Chatbot better.

In general, the findings from the Pre-survey and Post-survey indicated that the students involved in the research had varying degrees of English language skills, but almost all students experienced an improvement in their motivation to learn English pronunciation after utilizing the Chatbot AI. Additionally, their confidence in pronunciation and speaking English also notably increased. Despite a few drawbacks, most students still recommended the Chatbot to their peers.

Lastly, the scores of the experimental group students showed varying fluctuations after utilizing the Chatbot AI and monitoring their input and output. Notably, their scores exhibited a significant increase following the implementation of Mission Fluent for daily practice.

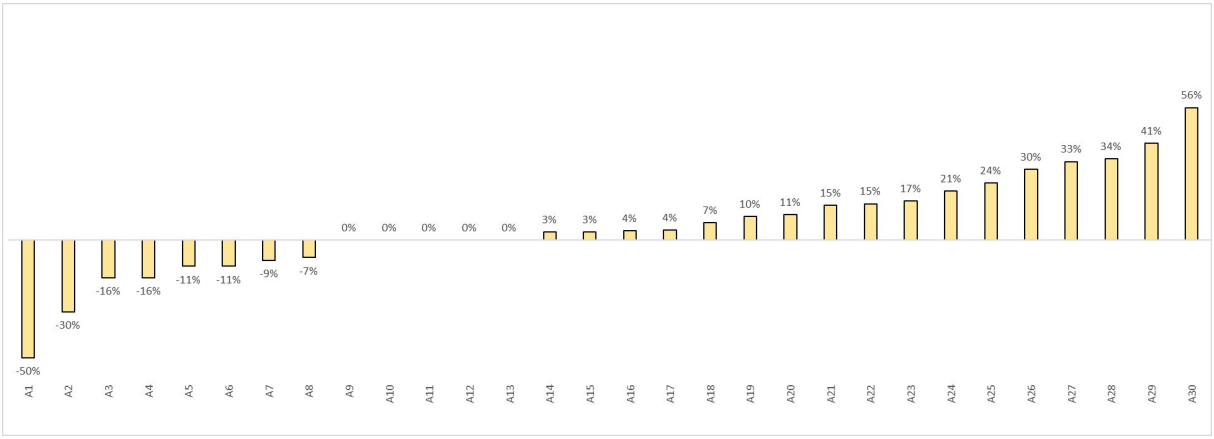

Figure 7: Student percentages of pre-and post-test scores.

A closer examination of the data in Figure 7 revealed that students who experienced score improvements as well as those who witnessed score declines were interviewed. The impact that helps students increase their score is: *"I feel excited when using Chabot, as it helps me practice pronunciation regularly every day and also because of that my score improves."* student A30 responded to the researcher, *"Chatbot AI points out each mistake, from there I can know what I need to practice and avoid those errors"* (Student A19). Besides, among the explanations offered by pupils for lower grades is "*I enjoy using Chatbot, but I don't use it frequently to work on my pronunciation."* (Student A8). Additionally, *"I am quite confident when pronouncing, but when using Chatbot, it's probably because my laptop has poor sound reception,"* (student A13) is another argument for the lack of change in ratings.

The findings indicated that a majority of students shared similar motivations for learning English, such as studying to pass subjects or acquiring English proficiency for professional purposes. Furthermore, students reported an increase in their confidence levels and a noticeable improvement in their pronunciation skills. They responded: *"Because of regular use of Chatbot, my confidence when speaking English has improved", "I felt more confident after practicing my pronunciation with Chatbot."* (Student A8, A13, A19, A30).

However, it is important to note that the disparity in scores can be attributed to several factors. Students who saw an increase in their scores were found to have dedicated more time to practice and maintained a regular practice routine compared to those whose scores dropped. Additionally, technical issues like faulty equipment (laptops, phones) and unstable internet connection were identified as contributing factors for students not achieving high scores. During the interview process, students expressed their concerns about the AI chatbot: *"There are times when it doesn't recognize my voice, or it takes too long to grade, or it doesn't grade at all, which wastes time and affects the turn." (Student A13, A19), "Mission Fluent developers need to put more effort into improving these issues"* pupils A19 suggested.

Discussion

There were some clear parallels and contrasts between our research and some earlier studies that were displayed.

About the similarity, the data obtained from the post-survey indicated that a considerable percentage of students in the experimental group reported feeling a higher level of motivation and confidence in their English language skills after engaging with the AI Chatbot. The findings indicate that the use of the Chatbot resulted in significantly improved English pronunciation among students. This aligns with previous studies about Chatbot AI in learning English that

also reported similar outcomes (Kim et al., 2019; Yang et al., 2022) and the findings from a study conducted by Aswaty and Indari (2022). They indicate that the chatbot AI significantly impacted students' speaking abilities.

One possible explanation for this improvement could be attributed to the fact that conversational chatbot designs offer a limited but corrective range of responses, making it easier for students to manage the flow of conversation compared to human interlocutors. Users can improve their English-speaking skills in a secure and accepting learning environment with chatbot AI (Saragih et al., 2021). The primary motivation for their language learning was the desire to communicate in English effectively. This observation aligns with the concept of the Ideal L2 self within the L2 motivation framework, where students aspire to become proficient in English communication, driving their motivation to learn the language.

Conversely, a few aspects of my research stand out when contrasted with other studies. Numerous research studies have demonstrated the numerous advantages of AI chatbots for assisting and bolstering students' English language proficiency, particularly in pronunciation (Anggraini, 2022; Bajorek, 2017; Bin-Hady, 2023). However, they frequently overlook the shortcomings and areas where those AI chatbots may use some work. In particular, ChatGPT and ELSA Speak are helpful AI chatbots that facilitate efficient English learning. However, the use of these chatbots is limited (i.e., students must pay a price to access all of the chatbots' features). With MissionFluent, students may take advantage of all the advantages of chatbots without having to pay a fee. This encourages students to study and practice more to improve their English speaking and pronunciation abilities.

Additionally, this study is even more noteworthy because it was conducted in a Vietnamese vocational college. This establishment is commonly disregarded when it comes to providing foreign language instruction to pupils. There isn't any research on using AI with Vietnamese vocational school students at the moment. Universities frequently perform research on non-specialized issues. When the research is applied in a comparable situation, this distinction will enable the study to collect significant information supporting other future investigations.

In summary, the results of this study show that although the students' levels of English ability varied, they all showed increased enthusiasm and confidence when learning how to pronounce words correctly in English by using AI chatbots. The use of MissionFluent for consistent practice was a major factor in their improved scores. The study also found elements that affected student score differences, such as practice commitment and technical challenges. Overall, even with certain drawbacks, most students advised their classmates to employ AI chatbots to improve their English pronunciation.

Conclusion

To conclude, this study hopes to shed light on the effectiveness of AI Chatbots, specifically MissionFluent, in improving vocational students' English pronunciation.

The results of the study demonstrate that MissionFluent significantly improved the English pronunciation abilities of vocational students. The experimental group, which regularly practices with the Chatbot, showed statistically significant improvement in comparison to the control group. Their improvement was shown in various aspects of pronunciation, including stress, intonation, and vowel sounds. Based on the findings, AI chatbots can increase students' language competency by providing extra practice and immediate feedback when being integrated in traditional classrooms. Therefore, it is suggested that educational institutions

should implement AI chatbot technology, such as incorporating it into the existing curriculum, offering students guidance and support, monitoring progress and providing timely feedback, and continuously improving the chatbot AI based on user feedback to enhance its functionality and effectiveness.

Nevertheless, it is also necessary to acknowledge the limitations of this research. First of all, the scope of this study focuses on vocational schools, which prevents the generalizability of the findings to other educational levels. Thus, further and deeper study should be conducted to consider the applications of AI chatbots in high schools, universities, and other educational settings. Secondly, this research does not consider other language skills, namely writing, reading, and listening. Due to that drawback, future studies should explore AI Chatbot technology's impact on overall language proficiency. Because of the time limit and small sample size, it is advisable to conduct research on a larger scope for a longer period to obtain more reliable results.

In conclusion, this paper investigates the effectiveness of AI Chatbots, specifically Mission Fluent, in improving vocational students' English pronunciation. Based on the study, it can be seen that AI Chatbot is a useful tool in conventional classroom training, offering more opportunities for practice and timely feedback, eventually improving students' performances. However, it is important to acknowledge the limitations of this study and conduct follow-up research to explore the potential of AI chatbots in different educational contexts and linguistic skill levels. Educational institutions should foster more effective and engaging language learning environments by utilizing technological advances like AI chatbots to improve students' language ability.

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