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The Role of Digital Technology in Enhancing Oral English Proficiency in Primary School Foreign Language Learning — Research Proposal

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Abstract: Traditional foreign language exams in China typically prioritize listening, reading, and writing, often overlooking the importance of oral communication. This study aims to address this imbalance by investigating whether digital tools can enhance oral English proficiency among Chinese primary school students. Specifically, we focus on the use of digital technology, such as language learning apps, in improving speaking skills. The research involves 50 students, aged 12-13, who are divided into experimental and control groups. Both groups undergo pre- and post-intervention assessments to measure changes in oral proficiency. The experimental group uses a designated digital learning tool for a set period, while the control group follows the traditional curriculum without digital assistance. The results will offer valuable insights into the effectiveness of integrating technology into language learning curricula, providing practical recommendations for educators and policymakers aiming to improve foreign language teaching methods. This study seeks to contribute to the growing body of literature on digital technology in education and its potential to address gaps in traditional language instruction.

Keywords: Oral communication, Digital technology, Language learning, Primary students, English proficiency.

1. Introduction

With the rapid advancement of digital technology, educational tools and resources have become more accessible, offering new opportunities to enhance foreign language learning in primary schools. In China, based on my own experience, foreign language exams at the primary school level, specifically in English, typically assess listening, reading, and writing skills, while oral communication abilities are often neglected. Although it has been 7-8 years since I was in primary school, I recently visited several primary schools across three different regions and found that the situation remains unchanged; oral skills are still not assessed in foreign language proficiency exams. This omission may lead many primary school students to overlook the importance of practicing and developing their oral English skills.

Consequently, my research will focus on evaluating how digital technology can be utilized to assess and enhance oral proficiency in foreign languages. Fortunately, there are now numerous apps and software programs that emphasize oral language development. Effective communication and

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interaction are essential components of foreign language learning, making the development of strong oral communication skills crucial, especially during the primary school years, which represent a critical period for initial exposure to foreign languages.

Despite the widespread availability of these digital resources, there is limited research on their effectiveness in enhancing oral language skills in young learners. Therefore, this study will specifically explore whether digital technology can play an effective role in improving oral English abilities among primary school students. The central research question guiding this study is: Can the use of digital technology in the foreign language learning process in primary schools effectively enhance oral English proficiency?

2. Literature review

The literature reveals numerous benefits associated with the use of technology in foreign language learning. One key reason for technology's integration into modern language learning environments is its capacity to offer personalized instruction and materials, allowing learners to select and adapt lessons according to their individual needs. Additionally, technological advancements facilitate greater access to information and provide expanded communication opportunities. Technological devices such as televisions, radios, movies, and the Internet support self-directed learning in several ways: they help shape positive learner identities, maintain motivation [1], provide supportive learning communities, offer avenues for self-expression, and enhance learners' self-perception [2].

Most studies indicate that technology positively impacts foreign language learning. Participants in these studies reported a high perceived usefulness of technological resources for language learning ($M = 2.04$, $SD = .60$) and confidence in their ability to use technology effectively in this process ($M = 2.25$, $SD = .67$). Moreover, Timothy et al. (2010) found that participants felt they had favorable conditions for using technology ($M = 2.21$, $SD = .70$) and demonstrated high levels of computer self-efficacy ($M = 2.25$, $SD = .72$) [2]. Their findings refuted the hypothesis that there would be a significant difference in teacher support for technology based on gender, as the effects were insignificant, and both male and female participants held similar views on teacher support. Additionally, research has highlighted a generally positive attitude among language teachers toward incorporating technology into their classes. Studies on Technology-Enhanced Language Education (TELE) suggest that technology can facilitate more communicative classroom activities but also note limitations such as technical issues, barriers, and time constraints [3,4].

To summarize the literature, my study will involve a gender-balanced participant group, as gender is not the primary focus of my research. The main objective is to investigate whether technology is as effective for foreign language learning as the literature suggests, particularly in addressing the skepticism of many parents. Although most research has demonstrated that technology improves foreign language performance and learner engagement, there is a notable lack of studies focused on its impact on oral and communicative skills. Thus, my research will specifically examine improvements in young students' speaking abilities. Primary school is a critical period for Chinese students beginning their English education, making it essential to find effective methods for enhancing foreign language learning at this stage. This focus is driven by the goal of providing practical recommendations for teachers and parents, aligned with the Chinese proverb, "A good start is half the success." My study aims to contribute to the existing literature by exploring improvements in primary students' oral communication skills in foreign languages and addressing gaps in current research.

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3. Methodology

3.1. Participants/Sample

In this study, we aim to recruit 50 students aged 12-13. To minimize gender bias, the participants will be evenly divided into 25 males and 25 females. We selected this age group because, within the Chinese education system, most children are first exposed to a foreign language—specifically English—in the third grade. By choosing students aged 12-13, who are in the fifth grade, we ensure that they have already developed a foundational level of English, reducing the risk of the experiment being compromised by participants who are too young to fully engage.

Initially, we will select 70 students (35 males and 35 females) aged 12-13. All of them will undergo a professional oral test conducted by native English-speaking teachers from the UK, who will serve as examiners. Based on their oral test scores, we will select 50 students (25 males and 25 females) with comparable performance as the final participants. Opportunity sampling will be employed, as we intend to recruit participants from three different schools located in distinct geographical regions of China, selecting them at the time and place where they are most needed.

3.2. Ethics

Ethical approval for the study was obtained from University College London and the Department of Education. Informed written consent was given by participants prior to participating in the study.

3.3. Materials

The experimental group, consisting of participants who are taught to use technology, will utilize software called '91 Talk,' which is designed to enhance oral English skills. Teachers will instruct the students on how to use this software, including guidance on identity verification and the check-in feature. The check-in feature will be used to monitor the frequency and duration of the students' usage to ensure the effectiveness of the experiment. Consequently, students in the experimental group will need access to at least one electronic device, which could be a smartphone, iPad, or computer. The control group, on the other hand, will not be taught how to use technology to improve their oral foreign language skills. They will continue their language learning through traditional human-led instruction, without any technological intervention.

The criteria for evaluating oral skills will align with the official IELTS scoring standards. However, the scoring system will be modified to a 0-100 scale, while the criteria and specific scoring details will remain consistent with the IELTS speaking assessment standards.

At the end of one semester, when all students have completed the oral proficiency test, which will take place during their sixth grade, students in the experimental group will be asked to complete a questionnaire. The questions on this questionnaire have been specifically designed by us. Given the young age of the participants, the questionnaire primarily consists of rating scales and multiple-choice questions, with a few open-ended questions included. The entire questionnaire contains 10 questions and is expected to take approximately 5-10 minutes to complete. This questionnaire aims to measure the frequency with which students use digital software, the manner in which they use it, and their subjective experiences and feedback regarding this approach, allowing us to gather more detailed and nuanced data. Students in the control group will not be required to complete the questionnaire.

3.4. Procedure

During the first semester of the students' fifth-grade year, professional oral examiners from the UK, who are also certified IELTS examiners, will administer oral proficiency tests to 70 students. From

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these, 50 students with similar scores will be selected as the final participants. These 50 students, consisting of 25 boys and 25 girls, will be randomly assigned to either the experimental group or the control group. The experiment will commence at the beginning of the second semester of fifth grade. The experimental group will be taught how to use '91 Talk' as a technological intervention, while the control group will continue with traditional in-person instruction. Students in the experimental group will be required to log in daily, with a minimum of 1 hour and a maximum of 2 hours of platform usage each day.

At the end of the semester, just before the students' holiday break, the examiner will administer a second oral proficiency test using different questions, and the experimental data will be recorded. To ensure ethical standards, personal information such as names, race, and religion will not be recorded. Instead, all participants will be assigned anonymous identifiers, such as "boy1" or "girl1." After completing the two oral tests, students in the experimental group will also be asked to complete an anonymous questionnaire. The entire experiment will span one full semester, approximately four months in duration.

3.5. Data Analysis

Data collection will involve pre- and post-intervention assessments of oral English skills. Quantitative data, including measures like the mean, mode, and median, will be statistically analyzed to evaluate the effectiveness of the digital tools. Additionally, qualitative data will undergo thematic analysis to uncover key factors influencing the outcomes.

4. Results prediction

The mean is the most crucial statistical measure in our dataset. Based on the data we have collected, we will calculate the mean scores of two oral tests for 25 students in both the control and experimental groups. These mean scores will be compared using a bar chart, where the x-axis represents the group and the y-axis represents the mean score. We predict that the students in the technology intervention group will show a significant increase in their mean scores on the second oral test compared to the first. By comparing the bar charts of the two groups, we will observe differences in bar heights to determine which group demonstrates a more pronounced and effective improvement in oral proficiency. Subsequent analysis and recommendations will be made based on the experimental results.

5. Limitation

Our experiment has several limitations that warrant further improvement and refinement. One of the limitations is that, although our sample size is reasonably large and we have avoided gender bias, all participants are Chinese, and their ages are strictly limited. As a result, the findings may not be generalizable to non-Chinese individuals or students from other age groups. However, because our primary focus is on elementary school students, we recruited participants from various geographical locations within China to enhance regional generalizability. Nevertheless, the overall generalizability of the results and findings could still be improved.

Additionally, the technology intervention group was subject to a number of uncontrolled variables. For instance, how students used the software for learning, whether they remained focused while using the software, or whether they were distracted by other activities are factors that were beyond our control. These extraneous variables may have introduced unnecessary interference into the experiment. Given concerns about accurately measuring improvements over a short period, our experiment will span approximately four months, which presents a considerable challenge for students around the age of 12. We are also concerned that the dropout rate may be higher than

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anticipated, potentially leading to incomplete and missing data. These are some of the potential limitations associated with this experiment.

6. Discussion

Based on the analysis of this experiment, several different outcomes may emerge, each of which could offer new insights and implications for modern primary school foreign language education. If the technological intervention leads to a significant improvement in oral language skills, educators and relevant educational authorities may consider incorporating similar technological interventions into traditional teaching methods, while making appropriate adjustments [5]. Additionally, enhancements could be made based on students' feedback from the questionnaires, such as improving user satisfaction with the technology and finding ways to help students stay focused on the learning software without being distracted by irrelevant information. Given that primary school students often have limited self-control and independent learning abilities, even if technological interventions are highly effective, they should be implemented with caution.

On the other hand, if the technological intervention has minimal impact on improving oral language skills, it would be premature to dismiss technology as entirely ineffective. In such cases, further experiments should be conducted for comparison and validation, possibly replicating the same method with different samples [6]. This outcome suggests that the importance of traditional human-led instruction should not be underestimated. If technological interventions prove to be less effective, more caution is warranted in their application. If the negative effects outweigh the benefits, or if feedback from students and parents is predominantly negative, it may be advisable to reduce or even avoid the use of technological interventions, allowing students to focus more on traditional teacher-led instruction.

7. Conclusion

To conclude this research proposal, our study aims to evaluate the potential of digital technology to enhance oral English proficiency among primary school students in China, addressing a significant gap in traditional language assessments that often neglect speaking skills. Through a controlled experiment involving 50 students, this research will provide empirical evidence on the effectiveness of technological interventions compared to conventional teaching methods. The anticipated findings could have significant implications for curriculum design and pedagogical practices in foreign language education. Should the results demonstrate a substantial improvement in oral skills due to technology, it could prompt educators and policymakers to integrate such tools more broadly into the language learning process, with careful consideration of student feedback to optimize engagement and effectiveness.

Conversely, if the impact of technology is minimal, the study will reinforce the continued relevance of traditional teaching methods and highlight the need for a balanced approach in the use of digital resources. Ultimately, this research contributes to the ongoing discussion about the role of technology in education, offering practical recommendations for enhancing oral language instruction in primary schools. By addressing both the potential benefits and limitations of technological interventions, the study provides a nuanced understanding that can guide future educational strategies and policies aimed at improving foreign language proficiency in young learners.

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Appendix

Questionnaire on Investigating the Effectiveness of '91 Talk' in Enhancing English Speaking Ability

Participant Information:

- **Gender:** _____
- **Age:** _____

Instructions:

- Answer all questions. For open-ended questions, please write at least 30 words for each answer.
- If you cannot understand a question, raise your hand to seek the teacher's help.

Questionnaire

1. On a scale from 0 to 5, how would you rate your happiness level while using the '91 Talk' app for studying a foreign language?
(0 = Not happy at all, 5 = Extremely happy)

- Rating: _____

2. How long do you usually use the app during each study session?
(Choose one option)

- A. 1 hour
- B. 1.5 hours
- C. 2 hours

3. On a scale from 0 to 5, how helpful do you think this app is for improving your English speaking ability?
(0 = Not helpful at all, 5 = Extremely helpful)

- Rating: _____

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4. How many days in total did you use the app within the last month?

- Number of days: _____

5. How frequently do you get distracted by other things while using the app?
(Choose one option)

- A. Never
- B. Sometimes
- C. Always

6. If you got distracted while using the app, please explain what you were doing.
(If you were not distracted, you can skip this question.)

- Answer: _____

7. In your opinion, is using the app more helpful than practicing with a teacher?
(Choose one option)

- A. The app is more helpful
- B. Teacher practice is more helpful
- C. Both are equally helpful
- D. It's hard to say

8. How do you feel after participating in this study for 4 months?
(Choose one option)

- A. I feel okay
- B. I feel tired
- C. I feel extremely tired
- D. I enjoyed it
- E. No special feelings

9. Do you think using technology like this app will help students improve their English oral ability? Why or why not?

- Answer: _____

10. Please provide any suggestions you have for improving this study.

- Answer: _____