



Exploring the Effectiveness of English Learning APP in College Students' Oral Learning Taking Liulishuo APP as an Example

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Abstract. With the increasing global demand for English learning and the rapid development of mobile Internet technology, online English learning APPs are springing up. This study takes Liulishuo as an example to explore its effectiveness in college students' oral English learning. Collecting data through questionnaires, the study finds that the APP has significant effects in enhancing college students' speaking ability, and puts forward suggestions to further optimize the APP functions. The results of the study not only provide empirical support for the improvement of Liulishuo APP, but also provide a useful reference for other similar educational applications.

Keywords: component; Liulishuo; English Learning App; College Students; Speaking Learning; Effectiveness

1 BACKGROUND

The importance of English as an international common language is self-evident in today's deepening globalization. The rapidly developing mobile Internet technology is gradually expanding the domestic online education market, and English learning APPs account for a huge proportion of the domestic online education market. Flexible and personalized learning mode makes English learning APP become an important tool for college students' oral learning. In today's globalization, it is of great significance for college students to have fluent speaking skills: good speaking skills not only help communication and exchange, but also improve the competitiveness of employment and expand opportunities for international exchange. As an app focusing on oral learning, Liulishuo App, founded in 2012, has attracted a large number of users through its rich course content and efficient learning methods^[3]. However, there is still a lack of data research on its effectiveness in speaking practice and instruction for college students. This study aims to investigate the actual effectiveness of Liulishuo App in improving college students' speaking learning through questionnaire sampling.

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2 REVIEW OF RELEVANT LITERATURE

In recent years, scholars at home and abroad have conducted extensive research on the functionality of English learning APPs, their impact on speaking, online learning effectiveness, and online learning motivation and behavior. These studies have provided rich theoretical support and empirical references for this research. For example, Zhou Xiaoxia (2023) takes the dubbing module in the Liulishuo software as an example and argues that the dubbing function of the APP facilitates university English learning^[5], such as speaking practice, vocabulary, listening and translation; she also discovers and affirms the practicability of the practice of utilizing the means of new media network technology, artificial intelligence and big data technology, etc., to improve the level of students' English speaking, listening, and translating, etc.; Ren Juan (2021) explored the influence of English fluency on college students' English speaking self-efficacy from the perspective of self-efficacy^[1]; Wash Miao-Zhen (2021) conducted an empirical study on the teaching effect of English fluency based on the concept of mobile learning and related theories, and found that relying on the excellent teaching concepts and scientific and technological strengths, English fluency has received a large number of favorable comments on its mobile learning mode, and its learning effect has also been empirical affirmation^[4]; Qu Chunru et al. (2020) explored the correlation between users' motivation, satisfaction and behavior in using Liulishuo and found that users' motivation to use was significantly positively correlated with the frequency and duration of use. These studies provide theoretical support and empirical references for this study^[6].

3 FUNCTIONAL ANALYSIS OF LIULISHUO

Along with the emergence of AI and other emerging technologies, Liulishuo keeps pace with the times, using self-developed AI artificial intelligence technology to provide users with an efficient and personalized learning experience through artificially intelligent English teachers.

3.1 Pronunciation Review Function:

In terms of pronunciation assessment, Liulishuo uses the voice data of native American speakers as a blueprint, so when users are practicing, they can compare the blueprint data at the word level, sentence level, and phoneme level, and the system will ultimately combine fluency, intonation, completeness, legato, intonation, stress, and other indicators to score, so that the user can better understand where he or she is weaker, and then strengthen the practice in a more targeted way.

3.2 Speech Recognition Function:

After years of deep cultivation in the industry, Liulishuo has a huge "Chinese English Speech Database" - 53.7 billion cumulative number of recorded sentences and 3.9

billion cumulative minutes of recording time data, based on which the speech recognition function can recognize Chinese English pronunciation and help users correct their pronunciation in a timely manner. Based on this data, the speech recognition function is able to recognize Chinese English pronunciation and help users correct their pronunciation in a timely manner, and it is understood that the accuracy rate of this function is far ahead of the industry.

3.3 Speech Synthesis Function:

Liulishuo's speech synthesis function incorporates a number of deep learning technology, synthesized speech in addition to supporting the free switching of different languages, hybrid synthesis and personalized voice customization, in terms of naturalness, clarity, intelligibility and other aspects of closer to the level of real people's pronunciation, which is conducive to the exercise of the user's own oral fluency.

3.4 Syntax Error Checking Function:

English grammar is a big headache for many users, who often have various problems in the process of learning. In order to better help users identify grammatical errors, Liulishuo has independently developed the Grammar Error Detection function, which currently supports 50+ types of error detection, such as subject-verb agreement errors, verb morphology errors, spelling errors, and singular and plural noun errors, etc. It can comprehensively analyze the English text provided by the user, and give corrective suggestions in conjunction with the user's problems, helping the user to strengthen his or her English grammatical skills.

3.5 Personalized Learning Path Feature:

Liulishuo provides personalized learning paths and plans based on students' learning needs and levels. Students can follow the learning path recommended by the system, or they can choose the content and order of learning on their own. Personalized learning paths can help students learn speaking more efficiently and improve their learning results. In addition, the app allows students to select their English level when they first log in, and test where they are in their English proficiency by using the official word, speaking and listening modes, and then make a more directional personal assessment and plan.

Above is the functional analysis of Liulishuo, through the functions of speech recognition technology, speech synthesis function, grammar detection and choosing personalized learning path, the app provides effective support and help for college students' oral learning. Students can practice pronunciation through imitation and scoring system, and improve fluency and accuracy through real-time dialog practice. Meanwhile, the rich and diverse learning contents and personalized learning paths can also meet the learning needs of different students. The functional advantages of Liulishuo make it significantly effective in college students' oral learning^[2].

4 STUDY DESIGN

4.1 Scale Development

In this study, a self-administered questionnaire was used for data collection, which included students' motivation, engagement (e.g., frequency of using the APP, length of study, etc.), and assessment of learning effectiveness (e.g., oral proficiency scores, grade improvement, self-feedback, etc.). The questionnaires were scored in the form of Likert scales, and a total of 100 valid questionnaires were collected.

4.2 Subjects of the Study

The participants in this study were college students from different grades and different English levels. All of them have used Liulishuo for oral learning and are willing to participate in this study. To ensure the diversity and representativeness of the sample, participants in this study were grouped according to grade level and English proficiency.

Participants were distributed by grade level as follows:

Freshman year: 5%

Sophomore year: 15%

Junior year: 70%

Senior: 10%

The participants' self-assessment of their English proficiency was as follows:

Primary: 15%

Intermediate: 65%

Advanced: 20%

4.3 Research Hypotheses

This study hypothesizes that English fluency has a significant contribution to the oral learning of college students.

4.4 Analytical Tools

This study mainly uses data statistical tools such as questionnaire star to analyze quantitative data, including descriptive statistics, correlation analysis, and regression analysis. By counting and analyzing students' motivation, engagement, and learning effectiveness, the researcher can draw appropriate conclusions^[7].

5 DATA RESULTS

5.1 Descriptive Statistical Analysis

Based on the results of the questionnaire, the following statistics on the main issues are presented:

How often do you use the "Liulishuo" program?

Daily: 17.65%

Number of times per week: 23.53%

Weekly: 35.29%

Monthly: 23.53%

You use the software for roughly the same amount of time each time:

Less than 15 minutes: 23.53%

15-30 minutes: 52.94%

30-60 minutes: 11.76%

Greater than 60 minutes: 11.76%

What is your main motivation for using the Liulishuo App? (Multiple choice)

Improvement of spoken English skills: 64.71%

Increase in vocabulary: 52.94%

Improvement of listening skills: 41.18%

Preparation for relevant examinations: 47.06%

Need for study or internship abroad: 11.76%

Other: 5.88%

Do you think Liulishuo can help improve your speaking fluency?

Very helpful: 35.29%

Somewhat helpful: 64.71%

When using the "Liulishuo" software, what are the main areas of practice that you focus on? (Multiple choice)

Pronunciation: 64.71%

Vocabulary: 70.59%

Grammar: 47.06%

Dialogue exercises: 52.94%

Which features of the "Liulishuo" software do you think are the most helpful for your oral learning? (Multiple choice)

Intelligent scoring system: 41.18%

Real-time feedback: 64.71%

Scenario dialog simulation: 76.47%

Personalized learning: 47.06%

Did you find the feedback and suggestions provided by the Liulishuo program helpful in your speaking studies?

Yes: 100%

Do you feel that your speaking ability has improved after using "Liulishuo" software?

Significant progress: 29.41%

Some progress: 64.71%

No change: 5.88%

How difficult do you think it is to use the Liulishuo?

Very easy: 23.53%

Easier: 41.18%

Medium: 35.29%

What content updates in the Liulishuo do you think would best meet your learning needs?

Pronunciation skills: 52.94%

New theme: 64.71%

Glossary update: 52.94%

Grammatical interpretation: 58.82%

Do you think Liulishuo can help you improve your confidence in speaking English?

Yes: 100%

What are your reasons for continuing to use Liulishuo?

Good results: 47.06%

Habitual use: 41.18%

Price is right: 11.76%

User-friendly interface: 20.41%

6 ANALYSIS AND DISCUSSION

6.1 Data Analysis

The following conclusions can be drawn from the analysis of the questionnaire data:

Most of the students used the app once a week (35.29%) and several times a week (23.53%), which shows that most of the students used the app regularly for speaking practice. Most students use the app for 15-30 minutes (52.94%), which shows that students generally choose to focus on speaking practice in a shorter period of time. Improving speaking skills (64.71%) and increasing vocabulary (52.94%) were the main motives, reflecting the importance students attached to oral expression and vocabulary accumulation. Students focused mainly on vocabulary (70.59%) and pronunciation (64.71%), indicating that these were the areas they considered most in need of improvement. Scenario-based dialog simulation (76.47%) and real-time feedback (64.71%) were considered the most helpful features, showing students' need for interactive and immediate feedback. All students agreed that the feedback and suggestions provided by the app were helpful in learning to speak English and could improve their confidence in speaking English, and the majority of students reported that they had made progress (94.12% in total), indicating that Liulishuo was effective in improving their speaking skills. The main reasons why students chose to continue using the app for learning were good effectiveness (47.06%) and habitual use (41.18%), indicating that the effectiveness of the app and the habit of using the app already formed by the students were the main driving forces for their continued use.

6.2 Discussion

This study explored the effectiveness of Liulishuo in college students' speaking learning through an empirical approach and drew positive conclusions. Liulishuo effectively improves college students' speaking ability by providing personalized learning plans and rich and diverse course contents. The results of the questionnaire showed that students generally gave positive evaluations of their experience of using the program and its learning effects, especially its features in terms of speaking fluency, pronunciation, vocabulary and interactivity. The survey results show that students' reliance on the software mainly comes from its practical effects and formed usage habits, indicating that Liulishuo has strong competitiveness and user stickiness in the English learning APP market.

However, there are also some problems that need to be solved. In order to further improve the effectiveness and user experience of Liulishuo, it is recommended to cultivate students' independent learning ability, optimize the APP functions and increase promotion efforts. It is believed that in the near future, Liulishuo will play a more important role in college students' oral learning.

7 USER FEEDBACK AND SUGGESTIONS FOR IMPROVEMENT

According to the data analysis of the questionnaire survey, most of the students are satisfied with the learning experience of Liulishuo and think that this APP provides rich course content and efficient learning methods, but at the same time, they also put forward their opinions on the improvement of the APP in terms of the interface design, learning functions and interactive experience. Based on their comments and feedback, Liulishuo can consider improving and optimizing in the following aspects:

7.1 Developing Students' Independent Learning Skills

Liulishuo can add some self-learning modules to the function items to achieve the purpose of cultivating students' self-learning ability, and at the same time, it can guide students to reflect after learning. For example, a series of speaking practice tasks can be provided so that students can do self-evaluation and reflection after completing the tasks, which will improve their speaking level. This will not only make students have a more comprehensive knowledge of their own speaking level, but also play a good role in the cultivation of independent learning and creativity.

7.2 Increase Promotion to Improve Value for Money

Increase the promotion efforts, reduce the price of membership recharge appropriately, or carry out offline activities to attract more users for oral learning. We can publicize and promote the APP through various channels, such as social media, campus publicity, lectures, etc., so that more students are willing to understand the APP and

use the APP, and we can also cooperate with colleges and universities to further expand the influence and the scope of use, and use the Liulishuo APP as an auxiliary teaching tool for speaking courses.

From the above, it can be seen that Liulishuo APP still needs to optimize the user experience in speaking practice and other learning sections. Therefore, we suggest that Liulishuo can continue to make efforts to improve and make a better product.

8 CONCLUSION AND OUTLOOK

8.1 Main Findings of the Study

The study delves into the effectiveness of Liulishuo in college students' oral learning through the survey method of questionnaires. The results of the study show that the APP is effective in improving the speaking ability of college students. Through independent learning within the APP, students' speaking ability has been significantly improved and they generally have a high degree of satisfaction with the APP. Liulishuo has attracted the attention and use of a large number of college students through its unique personality development program and cutting-edge AI technology.

8.2 Implications for Other English Learning Apps

The results of this study are also inspiring for other English learning apps. Firstly, to meet the needs of different students, other APPs can learn from the personalized learning plan and corresponding course content adopted by Liulishuo, and secondly, they can introduce an intelligent assessment system to accurately assess and analyze the students' speaking ability and then provide targeted advice in speaking learning. In addition, other APPs can optimize the user experience and functional design to improve students' willingness to use the APP.

8.3 Directions for Future Research

Based on the discussion and summarization of the current study, some directions that can still be studied in the future can be proposed. Firstly, we can further explore in depth the differences in the effectiveness of English fluency in oral learning for college students of different majors and the specific enhancement effects in oral fluency, phonological accuracy, oral communication skills and other aspects. Secondly, we can study and compare the English learning app with traditional oral teaching, and discuss the advantages, disadvantages and complementarities of the two. In addition, the acceptance and motivation of students to use English learning apps can be studied, as well as the effect of apps on the cultivation of students' independent learning ability and other aspects.

Along with the rapid development of "Internet+", digital informationization and artificial intelligence, modernization of education is a major trend nowadays, and the innovation and reform of English speaking teaching in colleges and universities is

also imperative. Liulishuo APP has remarkable results in the oral learning of college students, but there are still some problems to be optimized and solved. It is hoped that it can improve the effectiveness of use and user experience through further research and improvement, and also provide useful references for other similar English learning APPs to further promote the development of English learning education in the era of mobile Internet.

REFERENCES

1. Ren Juan. The Effect of English Speaking Intelligence App "Liulishuo" on College Students' English Speaking Self-efficacy[J]. *Overseas English*, 2018(1):29-30.
2. Lv Shuang. A preliminary study of "Liulishuo" cell phone APP to assist college art and physical education students' oral language teaching[J]. *Journal of Mudanjiang College of Education*, 2015(10):75-76.
3. Zong Liyong, Wu Qiang. Research on the Influencing Factors of Liulishuo App User Satisfaction Based on Text Mining[J]. *New Media Research*, 2019, 5(23):1-6.
4. Xian Miaozhen. Utilizing Mobile Learning to Promote the Innovation of English Speaking Teaching in Colleges and Universities - Taking Liulishuo App as an Example[J]. *Modern English*, 2021(16):38-40.
5. Zhou Xiaoxia. The Application of Liulishuo App in College English Learning--Taking the English Dubbing of "Tongue-tied China" as an Example[J]. *English Square*, 2023(35):92-95.
6. Qu Chunru, Qi Kaiyi, Li Chen. A Survey on the Satisfaction and Motivation of Using Liulishuo App[J]. *Education Teaching Forum*, 2020(46):7-10.
7. Li X . Research on the Effectiveness of the Application of Teaching Aids in Multimodal Pedagogy—Taking the Mr.English App as an Example[C]//Eliwise Academy. *Proceedings of the 2020 International Conference on Educational Innovation and Philosophical Inquiries (ICEIPI 2020)*. CSP, 2020:6. DOI:10.26914/c.cnkihy.2020.074957.

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