A Study on the Effectiveness of Speaking Apps in Improving Students' Speaking Skills

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Abstract. In the context of education informatization, educational apps are popular as one of the mobile learning methods. This study was guided by multimodal theory and investigated students' attitudes toward learning with speaking apps and the effects of speaking apps on students' speaking skills through questionnaires and experimental studies. The following conclusions were drawn: speaking apps can stimulate students' interest in learning speaking, enhance their awareness of independent learning, and improve their speaking skills; speaking apps embody multimodal discourse design and are interactive, interesting, and effective in learning; most students are more willing to promote speaking apps for teaching.

Keywords: Mobile Learning, Speaking App, Speaking Learning Effectiveness.

1. Introduction

With the continuous maturity and rapid development of information technology, the concept of mobile learning has been accepted by teachers, students and parents, and its emergence has improved students' ability to access and use information and gradually penetrated into all learning areas of students, and the way teachers teach and students learn has changed dramatically [1]. Mobile learning has broken through the barriers of space and time, and students can learn from anywhere, at any time, through mobile networks [2]. The world is trying to combine information technology with education, and the development of information technology to improve teaching efficiency and learning effectiveness has become an inevitable trend in the future development of education [3]. English is one of the most widely spoken languages in the world, and is also an internationally designated official language. In China, English has long been included in the development strategy of basic education. In this context, the hot issue of research nowadays is how to integrate information technology innovation into English teaching [4].

Based on this, this paper examines the issue of the effect of using speaking apps on improving students' speaking proficiency from the perspective of multimodal discourse analysis [5]. Finally, a comparative analysis of the before and after data is conducted so as to explore the effect of speaking apps on students' speaking proficiency.

2. A Spoken Language APP under Multimodal Discourse Design

2.1. Multimodal Discourse Design and Spoken Language App

The design of multimodal discourse should take into account the influence of situational context, cultural context, communicative purpose, genre and discourse meaning, and combine existing design resources and communicative needs to design multimodal discourse [6]. The principle of modal discourse behind the large number of discourses and corpus in English speaking apps is similar to that of multimodal discourse design, i.e., the use of multiple modalities such as visual, listening and speaking to give users a practice mode combining video animation, original audio and personal practice and pronunciation proofreading, so as to achieve the effect of practicing and improving spoken language.

With the expansion of Internet coverage and the widespread use of mobile devices, more and more speaking apps are springing up in the application market. In selecting the experimental platform, this

project combined the members' own experience, online media usage and market ratings to select two universal and representative apps, English Fluent Talk and English Fun Dubbing, for the experiment. These two apps were also able to meet the experimental needs of the project and were generally well received by the experimental subjects.

2.2. Multimodal Discourse Design in English Fluency APP

English Fluency has a blend of multiple modalities:

(1) Media material matching: English Fluency uses pictures and text when presenting course information on the main page, and on the course learning page, three media - video, text and sound - are used to present learning content. It stimulates learners' interest in learning [7].

(2) Layout color: Fluent English presents a relatively simple and clear page layout, which is easy to identify. English Fluent uses green as the main color, with a simple interface partition and a proper ratio of picture and text size, which is easy for learners to learn.

(3) Uniformity of style: English Fluency uses green, white, and black on the learning page as well as the main page. The page format, style, and language style are internally consistent; it does not interfere with learners' learning and cognitive burden because of the clutter of style.

2.3. Multimodal Discourse Design in English Fun Dubbing App

English Fun Dubbing introduces interesting and attractive different dubbing clips to guide participants to listen more, measure more and practice more, so as to better improve their speaking skills [8]. By using multimedia technology, the visual and auditory input and the output of spoken expression in multimodal discourse, we mobilize the participants' interactive power and transform these modalities into new discourse with discourse meaning to achieve the purpose of situational context interaction and discourse communication by purposely planning and designing according to the needs.

3. Research methodology

The experiment is divided into two major parts: questionnaire study and experimental study.

The questionnaire survey was conducted to understand the current situation and problems of students' current use of apps in English speaking learning, and to provide a reference for the experimental research plan of applying speaking apps to improve students' English speaking learning effect [9].

The experimental study includes pre-experimental speaking level test, formal punch card study in January, post-experimental speaking level test, record measurement of students' speaking performance before and after study, observation of learning behavior during the punch card period, and finally quantitative analysis of the data and discussion and analysis.

4. Analysis and discussion

4.1. Results of the questionnaire study

The data for this analysis were 210 samples of college students' oral learning and English apps usage. We used spss statistical software to conduct frequency analysis, descriptive statistics, t-test, and variance test to understand the overall situation of the use of speaking and English apps among college students and to conduct a preliminary analysis of the effectiveness of mobile-assisted language learning and multimodal learning content.

4.2. Data introduction

The data for this analysis are 56 people, and the experimental subjects are divided into 4 groups: group 1 uses the English Fluency App for paid courses; group 2 uses the English Fluency App for independent learning; group 3 uses the English Fun Dubbing App for independent learning; and group

4 is the reference group. In the data analysis, groups 1, 2, 3, and 4 in the "mode" category corresponded to each other. By using SPSS statistical software, descriptive statistics and analysis of variance (ANOVA) were conducted to analyze the distribution characteristics and relationships among variables to solve the questions raised by the project.

The following are the averages of the written test scores, oral scores, and mini-program scores of the four groups of experimental subjects before and after the experiment, as shown in Table.1.

Table 1. Results of the pre-experimental oral proficiency test

Title	Models				Aggregation
	1.0	2.0	3.0	4.0	
Written Test Results	55.429	61.143	58.714	61.143	59.107
Verbal Results	84.857	90.071	84.214	82.214	85.339
Applet	82.064	76.611	75.496	74.407	77.145

In addition, all four groups of subjects improved their performance after the experiment. Compared with group 4, the The first 3 groups showed more significant improvement than the 4th group.

4.3. Confidence and validity analysis

The reliability coefficient value is 0.640, which is greater than 0.6, thus indicating that the quality of the reliability of the study data is acceptable. For the "CITC value", the CITC value corresponding to the number of days clocked is less than 0.4, which indicates that the data on the number of days clocked in the experiment are different, which is consistent with the reality that some subjects did not clock in enough days. The commonness values corresponding to all study items are higher than 0.4, indicating that the information of study items can be extracted effectively. In addition, the KMO value is 0.649, which is greater than 0.6, and the data can be extracted effectively. In addition, the explained variance values of 1 factor are 62.396% respectively, and the cumulative explained variance after rotation is 62.396% > 50%. It means that the information of the study term can be extracted effectively. The reliability and validity of the experimental data results were demonstrated by the reliability and validity analysis.

4.4. Analysis of covariance

Considering the different basic levels of English of the experimental subjects, which was an uncontrollable factor, the pre-experimental test scores were used as covariates to exclude the effect of the basic level of the experimental subjects on the experiment. Because the previous analysis concluded that learning with a speaking app had no significant effect on the written test scores, the covariates only considered the differential relationship between the use of the app or not on the speaking scores.

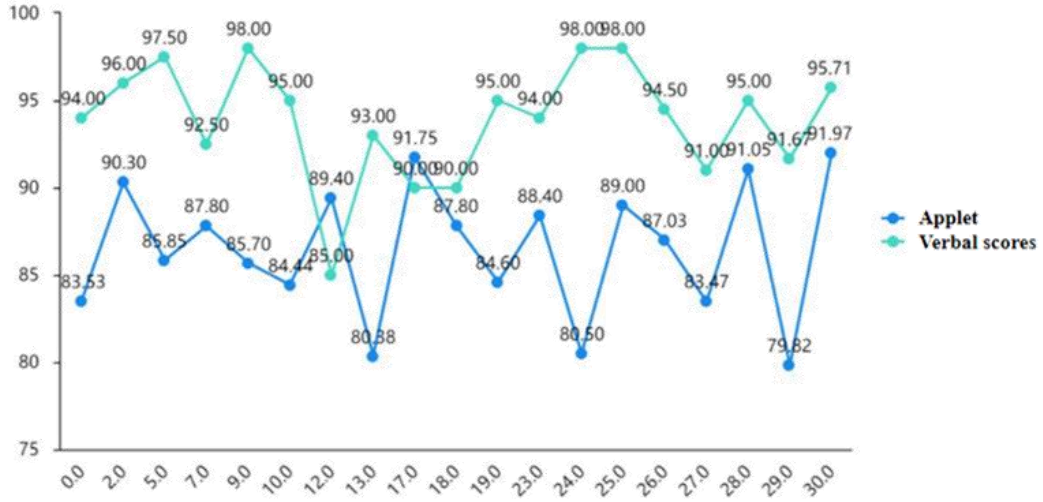


Figure 1. Comparison of days clocked and all items analyzed

When groups 1, 2, and 3 were compared with the four reference groups, they did not pass the parallelism test and could not be analyzed for covariance. This indicates that there is an interaction between the covariates and the study variables, i.e., the base level has a greater effect on the learning effect, which may be related to the small sample size and other factors.

Considering the effect of the number of days of punching on the experiment, the experimental subjects in groups 1, 2 and 3 who used the speaking app for learning were subjected to ANOVA to compare whether there was a difference relationship. The comparison results are shown in Figure 1.

The results of the data show that all of the samples with different number of clocking days do not show significance ($p=0.616$, $0.900>0.05$), which means that all of the samples with different number of clocking days show consistency and there is no difference in the performance of speaking for the applet. That is, there was no significant relationship between the number of clocking days and performance improvement. This may be related to the basic level of the experimental subjects, the short experimental period and other factors.

5. Conclusion

This study summarized the current situation of speaking App research through literature analysis and questionnaire survey, and analyzed and proved the experimental research in view of the problems of students' using speaking App to assist their speaking learning at the present stage. The study concluded that speaking apps can stimulate students' interest in oral learning, enhance their sense of independent learning, and improve their oral proficiency, but have no effect on the written test; different learning programs have certain effects on learning outcomes. By using speaking apps, learners deepen their understanding of language knowledge and improve their English listening and speaking skills. In the context of "Internet+" and the in-depth development of education informatization, this study firstly found through questionnaires that the college students surveyed had obvious "dumb English" in using APPs for speaking learning and had less exposure to speaking apps.

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