

Effective Smart Phone Applications in College English Test Preparations

Yao Mao¹, Samah Ali Mohsen Mofreh¹ & Sultan Salem²

¹ School of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia

² Department of Economics, Birmingham Business School, University of Birmingham, UK

Correspondence: Samah Ali Mohsen Mofreh, School of Educational Studies, Universiti Sains Malaysia, Penang, Malaysia. E-mail: samahmofreh@usm.my

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Abstract

This study aimed to investigate the effect of mobile applications on Chinese college students learning English as a Foreign Language within the context of preparing for the College English Test. A quantitative method, combining pretests and posttests with questionnaires, was employed to evaluate the effectiveness of mobile application learning. One experiment class adopted this new preparation method, while one control class followed the convention in instruction. Before the experiment, the two groups are at the same level of English proficiency. As a result of the 16-week experiment, the two groups of students significantly vary in grades on their College English Test. Findings revealed that integrating Apps improved Chinese college students' College English Test achievements and generally demonstrated positive attitudes toward Apps adoption in preparation for the College English Test and future English language learning. This study contributes to the growing body of literature on the use of Apps in English language learning, demonstrating the potential of Apps in English language learning.

Keywords: mobile applications, preparation, English achievements, students' attitudes

1. Introduction

The College English Test (CET), under the auspices of the Higher Education Department of the Ministry of Education of China, plays a pivotal role in Chinese university students' academic and professional trajectories (Jin & Yang, 2018; Cui & Lang, 2023). This standardized examination evaluates candidates across multiple dimensions of English proficiency, encompassing listening, reading, writing, and translation skills, following the specifications outlined in the 2016 revised test blueprint (National College English Test Committee of China, 2016). Structurally, the CET apportions its assessment into three principal components: Listening Comprehension (35%), Reading Comprehension (35%), and Writing and Translation (30%). The former two segments employ objective question formats, while the latter necessitates constructive responses (Jin, Jie & Wang, 2022). As an integral facet of the collegiate English pedagogical framework in China, the CET serves to galvanize adherence to the collegiate English instructional syllabi, thereby elevating the prominence of English instruction within higher education institutions and prompting greater engagement from both educators and learners (Jin et al., 2022).

Moreover, the CET's implications extend beyond academia, as its successful completion frequently correlates with degree attainment and confers competitive advantages in the job market (Yang, 2022; Wu, 2023). Consequently, meticulous preparation for the CET constitutes a focal point in the English acquisition journey for many students, yielding dividends in terms of linguistic competence, employment prospects, and opportunities for advanced studies. Nonetheless, there is a segment of students who consistently experience failure in the CET exams despite investing a great deal of effort in preparing for the exams, leaving them feeling disoriented and dissatisfied with the unsatisfactory pass rates (Wang, 2022). A prevailing sentiment amongst the student body is perplexed regarding optimal strategies and resources for CET readiness, underscoring a discernible gap in providing efficacious learning aids and methodologies (Li, Qiu & Chen, 2022).

With the proliferation of mobile technology and the ubiquity of smartphones and tablets, these portable devices have permeated various domains of professional and educational activities (Dudeny & Hockly, 2007).

Educational scholars have increasingly directed their attention toward the pedagogic potential of mobile technologies, with language learning emerging as a salient area of investigation. The burgeoning field of Mobile-Assisted Language Learning (MALL) encapsulates a suite of personalized, contextually embedded, authentic, spontaneous, and informal learning experiences (Kukulska-Hulme, 2016). MALL leverages advancements in augmented reality, virtual reality, and multimedia communication to enhance the efficacy of second language acquisition. The relentless evolution of mobile information technology and the progressive sophistication of smartphone capabilities have invigorated the landscape of mobile learning applications (Apps) within foreign language education. As smartphones are ubiquitous daily, mobile learning has become a vital conduit for disseminating knowledge (Chen & Jia, 2020).

This study aims to help Chinese college students prepare for CET by integrating apps, improving their test preparation efficiency and self-learning ability, supporting personalized learning, and enhancing their understanding and use of apps.

This study aims to answer the following questions.

RQ1: What is the current situation of preparation for CET and the usage of Apps in Chinese college students?

RQ2: What are the effects of using Apps on Chinese college students' CET achievements?

RQ3: What is the attitude of Chinese college students towards English learning Apps?

2. Apps in Mobile-assisted Language Learning

Smartphones, known for their multifunctionality in information exchange, communication, and entertainment, have transcended these domains to encompass educational Apps (Kaimal et al., 2020). A notable trend among college students is the preference for smartphones over laptops and tablets for internet usage, owing to their portability and ease of operation. Integrating multimedia and mobile learning capabilities within smartphones has created a compelling alternative to traditional English language learning methods outside the classroom (Abugohar et al., 2019).

MALL has emerged as a focal point of research, encompassing two primary areas of interest. Firstly, developing mobile language learning resources tailored to individual student needs complements formal classroom instruction. Secondly, the innovative incorporation of mobile devices into classroom curricula to enhance language learning outcomes (Stockwell & Hubbard, 2013). In China, for instance, the Zhejiang Provincial Department of Education initiated a pilot program utilizing mobile terminals, such as tablet PCs, in classrooms (2018), demonstrating the practical Apps of MALL in educational settings.

The COVID-19 pandemic has further accelerated the adoption of mobile learning, with universities implementing cloud classes that leverage smartphones for attendance tracking, lecture access, and assignment submissions, effectively integrating the "Internet +" concept into traditional pedagogy (Wang, 2021).

The emergence of educational apps marks a significant advancement in learning methods, offering promising opportunities to enrich fragmented learning experiences and complement traditional teaching approaches (Kearney et al., 2012). Proponents of Mobile-Assisted Language Learning (MALL), including educators who have utilized MALL programs, emphasize its potential as a valuable enhancement to the educational toolkit, especially for students with special needs (Traxler, 2019).

The advantages of App-based learning are manifold, including cost-effectiveness relative to personal computers and laptops, multimedia content delivery, continuous and contextual learning support, reduced training costs, enhanced learning experiences, and new avenues for traditional educational institutions (Mi, Wang, & Li, 2020). However, challenges persist, such as the assessment of out-of-classroom learning, support for multi-contextual learning, the absence of structured timetables, susceptibility to distractions, and the complexities of social-networked mobile learning (Zhou, 2023).

As smartphones evolve, learners exhibit increased enthusiasm for engaging with mobile learning, particularly when integrated with enjoyable and game-like elements (Mi et al., 2020). The popularity and efficiency of educational Apps have proliferated, with a particular emphasis on English language learning. For example, Yang (2023) developed a blended vocabulary learning model utilizing the "BaiSiZhan" App, demonstrating significant improvements in students' reading vocabulary and overall satisfaction with the learning experience.

The evolution of educational Apps is intrinsically linked to advancements in technology, with ongoing exploration and updates shaping their future development. This research endeavors to focus on harnessing the potential of these Apps for Chinese college students, specifically in the context of preparing for the CET (Mi et al., 2020).

3. Methods

3.1 Research Design

This study used a quantitative approach to examine the effect of Apps on the English language learning of Chinese college students in the context of CET preparation and to explore whether Apps improved students' CET scores and their attitudes toward using apps to learn English. EC utilized apps in test preparation, while CC followed a traditional preparation. This study utilized an experimental group- control group, the pre-post test quasi-experimental research design that lasted 16 weeks. The quantitative data were participants' CET scores on the pretest and posttest and questionnaires focusing on the experimental class's perceptions of English learning apps.

Once the experimental class was selected, the teacher ensured everyone had a smartphone. In addition, students and teachers in the experimental class were asked to join the school's VPMN, allowing members to receive free calls and use cellular Internet service. During the 16-week program, the experimental class adopted a new preparation method for English exams. Since preparation for university English exams takes place almost immediately after school and the new model takes some time to become familiar with, the teacher consciously guided the students to use selected smartphone apps during the English class, such as looking up new words or reading English articles through the YouDao Dictionary App.

3.2 Participants

This study used purposive sampling as an anonymous method to obtain the data. A total of 146 (N = 146) students from two sophomore classes at a university in southwestern China were selected for this study. All students completed a questionnaire before the experiment. One class was set up as an experimental class (EC), and the other was set up as a control group (CC). There were four college English classes per week, and one teacher taught the college English course of both classes. The two classes had the same number of students, gender ratio, and study hours, with an average age of 20, and all were willing to participate in the experiment. The two classes are comparable, and their English proficiency is almost identical, judging from the pretest results.

Table 1. The Information of Two Groups

Group	EC	CC
Number	73	73
Gender	Male 14	Male 19
Number	Female 59	Female 54

3.3 Instruments

Questionnaires and Tests are employed in this study, which is used to collect data to analyze the influence of Apps in preparing for CET in Chinese college students and their attitudes towards using apps to learn English.

3.3.1 Questionnaire

The questionnaire adapted from a Questionnaire survey and analysis of College English Test reform (Yu, 2005), mainly focuses on the following problems: first, is to understand the current situation of Chinese college students in the preparation for CET (preparation time, tools, and materials, preparation method, degree of satisfaction with the current preparation), the usage of their mobile phone, and their English learning (the method of memorizing words, whether often watch some English TV programs or movies, whether to set the timetable and learning goals, the exchange frequency with the English teacher and student). The questionnaire used a single selection of topics and a few multiple choices to survey the objects to express their opinions fully. After recycling the questionnaire, quantitative processing and analysis were done. In this study, a total of 146 questionnaire copies were distributed to the selected students. In addition, the respondents were required to complete the questionnaires in class. One hundred forty-six questionnaires were returned, and all the reclaimed questionnaires were valid.

After 16 weeks of using Apps to prepare for the CET, a questionnaire survey was conducted again to investigate the effect of using Apps in preparation for CET, mainly focusing on the following problems: the knowledge and understanding of using Apps to learn English (usage about Smartphone, resources, what kind of support and help want to get in the future). The satisfaction of using the new way of preparation (whether to raise the interest of students, improve students' English skills, or develop a habit of learning English) and their changes in English learning (memorizing words combine sound, form, and meaning, enjoying experience English reading, summarizing the English sentence patterns, scheduling and planning, communicating with teachers and

classmates, seeking help from teachers and classmates). A total of 73 questionnaires were distributed to the EC, and 73 questionnaires were returned, all of which were valid.

3.3.2 Test

The pretest data were taken from the second half of the 2023 CET-Band 4, and the posttest data were taken from the first half of the 2024 CET-Band 4. The exam consists of four parts: listening, reading, translation, and writing, with a total score of 710 points. The total score is 710 points, and the test time is 125 minutes.

Table 2. Content and Question Type

	Content	Proportion	Material	Types
Listening Test	Listening Comprehension	35%	Long dialogues, news reports, lectures and other listening chapters	Multiple-choice tasks
Reading Test	Vocabulary understanding	35%	Reading comprehension short story	Choose words to fill in the blanks
	Read and understand carefully.			Multiple choice question
	Long-form reading comprehension		Reading comprehension long form	Paragraph matching
Paragraph Translation	Language expression and preliminary translation skills	15%	Chinese paragraph	Translation from Chinese to English
Writing Test	Writing Ability	15%	Scene descriptions, pictures, tables, quotes, etc	Essay writing

3.4 The Utilization of Apps in Preparation

3.4.1 The Utilization of Apps in Class

In this phase, the teacher introduced the specific preparation for the CET model to EC, except the traditional learning forms of Smartphones, such as learning through WAP web, learning based on downloading and storing learning resources, learning through short messages from WeChat (the most popular chat tools in China), this model mainly introduced the English learning Applications. According to the 2023 mobile education application report and the App download ranking and scoring, this study selected the following apps corresponding to each CET preparation module. Table 3 contains information on the apps for CET preparation.

Table 3. Information on the Apps for CET preparation

Module	Listening	Vocabulary	Grammar	Writing	Reading
Corresponding App	Listening to English News	BaiCiZhan	English Grammar	Scallop LianJu	YouDao Dict
Brief Introduction	containing three different English programs: easy, ordinary and advanced. The software can choose whether to display Chinese translation in audio or synchronous playback with text and audio.	Exciting pictures and examples for every word. Using graphics directly to establish the natural environment. Providing word TV and word radio; referencing the SAT vocabulary assessment model, accurate test of vocabulary, and recording every step in the growth of students.	detailed content, simple operation, easy to use	including thousands of useful phrases and examples and the primary usage of words and phrases. Training all the basic sentence patterns	bilingual reading, easy-to-point word translation, and a wide range of content will push the relevant content according to the habit of reading articles
Steps for the use of the App	Sign up, set time, select content, push alerts, etc.				
Common Characteristics	The anti-forgotten system helps users to review and consolidate, with multiple training modes and continuous training to help users progress step by step, from easy to complex, and master different segments of English learning.				
WeChat Group	Twice a week, online guidance, daily check-in, checking each other's learning dynamics, weekly sprint rankings, timely communication, etc.				

The teacher introduced the usage of each App in detail to the students in the EC, accompanied and guided the students in downloading and using the apps in English class, and invited the students to join the WeChat group. During the weekly English class, the teacher consciously guided the students to use each selected App for ten minutes to become proficient in using each App and improve their effectiveness outside the classroom. During the rest of the regular classroom instruction, students usually do as the teacher commonly requires.

The teacher monitored the whole process effectively by checking or inspecting the students' downloading of the Apps and helping them familiarize themselves.

3.4.2 The Utilization of Apps after Class

After-school online tutorials are held twice weekly from 8:00 pm to 9:00 pm. The teacher also asked students to "clock in" to the WeChat group daily during this time. At this stage, "clocking in" was the key to motivating students to learn, helping them build confidence to experience progress and success, and helping them adjust their learning habits.

At this stage, the teacher's role is to guide students to use their Apps to study and practice independently within the specified time and to allow students to give feedback through the chatting software WeChat learning group, which provides students with more two-way communication opportunities to respond to and monitor the learning process and provide timely guidance.

3.5 Data Collection and Analysis Methods

In terms of data collection, this study used quantitative methods, including CET and questionnaires. First, this study surveyed 146 students using questionnaires to find out their current preparation status for CET and the use of Apps. After 16 weeks of experiment, both groups of students took English tests. Afterwards, a questionnaire survey was conducted on the students in the EC. All pre-and posttest scores and data from the two questionnaires were entered into the computer and then analyzed, described, and compared using SPSS 29. By integrating test

scores and questionnaire data, this study aims to understand the role of providing apps in preparing for college English exams and their impact on students' attitudes toward learning English.

4. Results

4.1 Analysis of the First Questionnaire

All the students from EC and CC were asked to complete the first questionnaire. One hundred forty-six students, covering 94.3% of the sample, claimed they had already experienced mobile learning. However, most of them, covering 85.7% of the students, admitted that they just had some lookup behaviors with E-dictionary built into the Smartphone or some simple searching behaviors through the mobile internet. When asked which English learning App they already know and frequently use, 95.2% chose E-dictionary, 14.5% chose Apps related to textbooks, and 26.8% chose Apps to improve English skills. Intentions of using Apps learning: 86.9% want to use Apps to study.

According to the status of Preparation for CET, more than 53.8% of the students were not satisfied with the current test preparation model or believed "it needs some change". In comparison, only 38.9% were satisfied with the current model and the rest, 7.2% chose "I do not care". The fourth question is about preparation time: "How long do you prepare for the CET?" 13.5% of them chose "one month", 73% chose "three months", 12.5% chose "more than three months", and the rest chose 0.9% "none". When asked, "Have you ever participated in the CET training class?" 44.2% admitted they have, and the rest have not. When it came to communication with the teacher after class, 44.2% of them admitted that they never found a chance to communicate with their teacher, only 2% always communicated with their teacher, 25% chose "communicate occasionally", and the rest 22.1% choose "few exchanges". When asked, "Are you willing to learn with the new model?" 13.5% of them chose "be extremely willing to", 73% chose "It is OK", 0.9% "not interested", and the rest 12.5% "do not care". Regarding "time appropriate spent every day learning with your phone", 16.3% of the students thought 10 to 20 minutes spent on mobile learning with a smartphone every day would work well; the central part is that 68.3% believed half an hour is enough. 23.4% would like to spend one hour or even more than that every day. When asked, "Which module do you want to learn with your smartphone?" 65% of them chose "listening", 93% chose "vocabulary", 55% "reading", and 12.5% "writing".

4.2 Analysis of the Data of the Pretest between EC and CC

This study measured the EC students' pretest and posttest scores under two different conditions. Therefore, the paired sample t-test was used to determine whether there was a significant difference between the two data sets after 16 weeks using an experiment with the Apps to prepare the CET.

An independent samples t-test is used to compare means from independent groups. The EC and the CC are independent groups; therefore, the data of the EC and the CC were compared through independent samples t-test to see if there was a significant difference in CET score between EC a conducting new preparing method under the teacher's guidance and the CC with traditional preparing method without the teacher's interference.

Before using apps to prepare for the CET, their pretest scores were collected to testify to the discrepancy between the two groups' English competence.

Table 4. Group Statistics

	Group	N	Mean	St. Deviation	St. Error Mean
Pretest	CC	73	387.74	34.419	4.028
	EC	73	387.03	34.300	4.015

As displayed in Table 4, the average pretest scores for CET are 387.74 and 387.03 (total score of 710) for CC and EC, respectively. It was easy to find that the proficiency level of EC is more concentrated with the Std—deviation 34.300 than the CC 34.419.

Table 5. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
	F	Sig.	t	df	Sig. (2-tailed)			Lower	Upper	
	The total score-pretest	Equal variances assumed	.001	.970	.125			144	.901	.712
	Equal variances are not assumed.			.125	143.998	.901	.712	5.687	-10.529	11.954

From Table 5, the independent sample test of CC and EC, because of the variance test, the significance was 0.970, which was more significant than 0.05, indicating that the two classes had the same variance. It shows that the scores of the two classes are close, with their mean difference being only -.901 without significance (P>0.05). Also, it can be judged from a 95% confidence interval of the difference, which is a "0" between the lower and upper numbers. A tentative conclusion can be drawn here that the English proficiency of the two classes is very similar to that of the other, and further research can be carried out.

4.3 Analysis of the Data of the Posttest between EC and CC

After 16 weeks of applying Apps to the preparation, another CET was implemented among the two classes to explore the effects of the app preparation.

Table 6. Group Statistics

	Group	N	Mean	St. Deviation	St. Error Mean
Posttest	CC	73	399.67	47.64	5.576
	EC	73	417.86	27.994	3.276

Table 7. Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
	F	Sig.	t	df	Sig. (2-tailed)			Lower	Upper	
	The total score-posttest	Equal variances assumed	14.945	.000	-2.813			144	.006	-18.192
	Equal variances are not assumed.			-2.813	116.424	.006	-18.192	6.467	-31.000	-5.383

Table 6 shows the descriptive statistics results from the posttest scores between the EC and CC. As can be seen from the table, the means for the posttest of the EC and CC are 399.67 and 417.86, respectively. Table 7 shows the results of the Independent Sample test between EC and CC. The p-value was 0.000, indicating that the two groups had significant differences. The independent samples test further demonstrates that the mean difference (-18.192) is significant (P<0.05), as well as the 95% confidence interval of the difference. Thus, one point can be that the EC performs better in this test than the CC.

Here, one point needs to be clarified. Because the two classes are under the instruction of the same teacher, both of their CET scores will be improved simultaneously. Undoubtedly, the original preparation used by CC still works to some degree. However, using Apps in preparation for CET facilitates the EC much more effectively.

4.4 Analysis of the Data of the EC in Pretest and Posttest

The paired sample t-test was used to determine whether there was a significant difference in the total score and three-section scores of the experimental students after a 16-week experiment using Apps in preparation for the CET model.

Before and after the experiment, the total score, the writing section score, the listening section score, and the reading section score of the CET by SPSS statistical analysis as follows:

Table 8. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	The total score - posttest	417.86	73	27.994	3.276
	The total score - pretest	387.03	73	34.3	4.015
Pair 2	The listening section score -posttest	125.67	73	16.753	1.961
	The listening section score -pretest	117.07	73	15.548	1.82
Pair 3	The reading section score -posttest	159.08	73	18.322	2.144
	The reading section score -pretest	142.85	73	22.352	2.616
Pair 4	The writing section score -posttest	133.11	73	12.459	1.458
	The writing section score -pretest	127.11	73	12.762	1.494

Table 8 shows the described to varying degrees.

Table 9. Paired Samples

Testiptive statistics results from the pretest and posttest scores for the experimental group for the total score and three sections scores, respectively. As can be seen from the table, the means of total scores and all three sections' scores impro

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Post total	30.836	8.061	0.943	28.955	32.716	32.685	72	0.001
Pair 2	Pre- Post Listening	8.603	17.88	2.093	4.431	12.774	4.111	72	0.001
Pair 3	Pre-Post Reading	16.233	18.958	2.219	11.81	20.656	7.316	72	0.001
Pair 4	Pre-Post Writing	6.000	14.246	1.667	2.676	9.324	3.599	72	0.001

As seen from Table 9, the students in EC scored an average of 30.836 points higher than the total score on the last test. With a p-value less than 0.05 (P<0.05), it can be concluded that there was a difference in students' CET scores after 16 weeks of experimenting with using Apps in preparation for CET.

Therefore, the students in EC have made significant progress in listening, reading, and writing sections after 16 weeks of the experiment and scored an average of 8.603, 16.233, and 6.000 points higher than the pretest. With

the p-value less than 0.05 ($P < 0.01$). After 16 weeks of experimentation, using Apps in preparation for the CET improved the overall score of the CET and the scores of the listening, reading, translation, and writing sections.

4.5 Analysis of the Second Questionnaire

The results of the second questionnaire show that applying Apps to the preparation for CET is widely accepted by students. All those students showed great interest in applying Apps to prepare for CET and are willing to use apps in their daily English learning. Seventy-three students of EC, covering 94.7%, showed great interest in this new preparation for CET, which is consistent with the expectations before the experiment. All the students had no difficulty using Apps following the teacher's introduction, taking them as a better preparation for CET tools. 97% of the students found more time to learn English since using new methods of learning English. 89.5% think this method can lead to a better learning effect. 86.6% of the students believed that they became more active and involved in English learning due to the push notifications and the registration requirements with the WeChat group, which enhanced their habit of learning English and helped users review and consolidate. 92.7% of the students considered apps to help them receive timely instruction, solve problems, and increase learning efficiency. 95% of the students memorized words that combine sound, form, and meaning. 94% of the students enjoyed experiencing the English reading App, 86% of the students summarized the English sentence patterns, 97% of the students scheduled and planned in preparation for CET, 98% of the students communicated with teachers and classmates, 95% of the students more like use Apps after class. 9% of students found that when using apps to study, their attention was occasionally distracted by other phone information. They would refresh various software occasionally, going in and out of fragmented information, making it difficult to concentrate on English practice.

Combining the results of the second questionnaire, it concludes that using apps to prepare for CET positively affects students' English learning.

5. Discussion

5.1 Discussion of the Current Situations of Preparation for CET and the Usage of Apps

From the first questionnaire, although most students agree on the importance of English learning, their intrinsic motivation to learn English could be more robust. College students have many problems, need clarification in exam preparation, and urgently need a new and creative learning mode.

Through the survey of students' smartphones, we can conclude that the popularity of smartphones among students, with their advanced hardware and multifunctional software, has made mobile learning possible as a complementary preparation for university English exams. It has become a habit for most participating students to use their cell phones to communicate with others, entertain themselves, browse the news, look up vocabulary words, solve problems, and learn new things when admitted. Based on some students' habits and the process of using their smartphones to learn the language, the data showed that they preferred learning materials that were new, creative, short, and in line with their interests.

In conclusion, the students did employ communication tools and social media in their mobile learning, and they used apps to learn English less frequently; they relied more on search engines to meet their information needs and more on electronic dictionary Apps to meet their needs to look up new words but could not stick to Apps to memorize words or as an English reading resource. Most students thought that the mobile learning mode helped them significantly in their English learning, and they would like to try such a learning method if it is available.

5.2 Discuss the Effect of Apps on CET Scores

After 16 weeks of the experiment, 146 students from both EC and CC took the posttest, and the collected scores were analyzed using SPSS 29 to test the differences between the two data groups by making a paired samples t-test and testing the differences between the pre-and posttest data of the EC using an independent samples t-test. Data analysis showed that both classes improved their test scores and that there was a significant difference between the CC and EC, suggesting that using Apps to prepare for the test is more effective in improving students' CET scores.

5.3 Discussion of the Attitudes of Apps

According to the second questionnaire's data analysis, EC students were more willing to participate in English learning activities and interested in English learning. This learning using Apps promotes online interaction between teachers and students and between students and students. When students encounter vocabulary or sentence structure difficulties, they can turn to Apps to solve the problem promptly, making the whole learning process smoother and more effective. They like to use Apps to read English materials and listen to English news

because of the exciting and rich pushes. They like to memorize words and phrases in apps because of the memorization process, which is fun, gives them a sense of competition, and gives them a sense of achievement. Even the most boring learning of grammar and writing is made easy and enjoyable using Apps. In addition, students noted challenges they faced in using the App, such as needing more time to organize their time wisely and more concentration.

In summary, using Apps makes learning activities more effective, and students are willing to use Apps to learn English. Therefore, the research question of Chinese college students' attitudes toward English learning Apps can be positively established.

6. Conclusion

The study focused on the App's effectiveness as a tool for students to prepare for CET. The quantitative analysis results indicate that using apps in preparing for the exam can effectively impact learners' CET scores and learning attitudes. The following conclusions were drawn based on the research process and the data collected.

Firstly, although most Chinese students recognize the importance of learning English and strongly desire to pass the CET, they perform poorly in the exams. Many things could be improved in the process of preparing for CET. Therefore, there is an urgent need for a new, creative, targeted, and systematic mode of study and preparation.

By investigating the use of Apps among Chinese students, we can conclude that the popularity of smartphones among students and their advanced hardware and software features make it possible to serve as the most suitable mobile learning tool and platform for college students. Almost all students surveyed admitted that it is almost a habit for them to use their smartphones to communicate with others, entertain, solve problems, read news, and learn new things. Many students have learned to use language tools, such as electronic dictionaries and word memorization software. Looking at the intentions and purposes of using smartphones, we can conclude that they like new, creative learning materials they can choose from, and English learning apps meet their individual needs.

Secondly, integrating Apps into the preparation for CET could improve learners' scores to a certain extent. From the perspective of the four sections of the test (Listening Comprehension, Reading Comprehension, Writing, and Translation), there are varying degrees of increase. According to the statistics analyzed from the examination scores, the Reading Comprehension part scores have been improved, closely followed by the scores of the Listening Comprehension part. Besides, the Writing part scores have slightly increased.

Thirdly, integrating Apps into the preparation for CET improves the students' positive attitude toward English learning. After the experiment, students became more willing to participate in English learning activities, which stimulated learners' interest in English learning and cultivated a sense of autonomous English learning. They prefer to read the English materials from the "YouDao Dic" owing to its funny and abundant push messages; they prefer to listen to the English news by the learners' level of speed and rich content from "Listening to English News" they prefer to recite the words and phrases because of the interest of memorizing process, a form of competition and achievement on the ranking list from "BaiCiZhan". For Apps' steps and plate settings, the most tedious part of grammar and writing becomes more manageable. This means smartphones make English learning activities more effective and optimize learners' interest.

In conclusion, this study found that the satisfaction level of the surveyed students with their current preparation for CET is relatively low. Therefore, this situation provides certain advantages for conducting mobile learning of university English. In addition, it also provides particular possibilities for increasing the popularity of smartphones in students' learning and using smartphones as test preparation aids. Combined with the findings of the second questionnaire, students preferred to use smartphone apps for learning. They could consistently use smartphone apps for learning outside the classroom compared to traditional preparation for CET. The test scores of students who consistently used the Apps for studying were significantly higher. Therefore, preparing for CET using smartphone Apps is conducive to increasing learners' interest in studying, improving their test achievements, and increasing students' attitudes towards mobile learning using Apps compared to the traditional exam preparation mode. Meanwhile, students indicated that challenges may affect the App's effect. Therefore, the role of teachers in guiding and monitoring the use of the apps should be noticed, and most importantly, in enabling students to develop English learning habits and guiding them to develop learner autonomy.

7. Recommendations for Future Research

As this study was conducted for only one semester among students in two classes and two majors, future research could expand the sample size to enrich the findings and their applicability, as well as a longitudinal study to understand the long-term effects of apps on English language learning and student achievement.

Additionally, investigate how app learning can be customized to meet the needs of the following diverse students to optimize use at different proficiency levels.

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