Investigation of the Present Situation of Intelligent APP in College Students' Vocabulary Learning

Ling Wang

School of foreign languages, Nanchang Normal University, Nanchang, China

Abstract—This research adopts the method of literature survey method, investigation method and interview method, etc. Through literature research method, this thesis combs and summarizes the research of mobile vocabulary learning at home and abroad. Based on the multimodal discourse theory and the second language acquisition theory, the author investigates the learning attitude, habits and strategies on vocabulary of college students and collects their opinions on learning words by using Bai Ci Zhan App through questionnaire method. And the author investigates the current situation and existing problems of using mobile Apps to study vocabulary. Intelligent App application in college English vocabulary learning can effectively enlarge students' vocabulary breadth and depth and motivate their interest in English learning.

Index Terms—vocabulary learning, college students, intelligent APP, present situation research

I. INTRODUCTION

With the modern technology develops rapidly, our life has been transformed into a new era: everything can be linked to our tiny, intelligent and convenient mobile phones. In addition, according to today's standards, we can conclude that mobile phones are no longer luxury, and it has become a necessity instead. People cannot go anywhere without mobile phones. People use mobile phones to order meals, ride cars, find jobs and so on. People can get a lot of information, resources and entertainment through this kind of mobile device, which not only has a great impact on the way of life, but also on the way we communicate with each other in society. In addition, in this mobile era, the change of learning style cannot be ignored. (Liu, 2017)

In foreign language learning, we do not have to bring one thick dictionary to have English classes, all we need to do is a smart phone, which has an electronic dictionary, and it is convenient to use a mobile phone to look up words that we do not know. Mobile devices with Internet applications have brought much convenience and rich information resources to college students in language learning.

Vocabulary learning has always been the most basic but crucial part of language learning. Although vocabulary is indeed crucial, a large number of English learners believe that memorizing words is arduous, time-consuming and boring. In addition, English teachers often have the task of vocabulary learning as homework, that is, learners must deal with vocabulary problems outside the classroom by themselves without the supervision of teachers. In this way, learners may easily get tired of vocabulary learning due to the lack of effective methods and proper supervision. However, some specific mobile phone applications can provide English learners with more attractive ways to learn and remember vocabulary, including pictures, audio and video.

II. LITERATURE REVIEW

A. Foreign Research

Recent studies on mobile vocabulary learning could be divided into three kinds: pushing messages including Short Message Service (SMS) text messaging and e-mails, e-dictionary and smart phone Apps.

For the purpose to reexamine the effectiveness of mobile phones in learning vocabulary, Thornton& Houser (2005) made a research to compare students' performance in the gains of vocabulary among three conditions: learning vocabulary via SMS, via PC and through traditional vocabulary book. Assigned to the same words, the group who learned words through SMS did better than the other two groups. Although much research has proved the effectiveness of vocabulary learning via mobile phones, some limitations of researches happened in artificial environment should never be ignored. Therefore, in order to get the real effect of mobile learning, it was necessary to conduct the research in realistic settings. Stockwell (2008) tracked 75 pre-intermediate English students' mobile phone usage outside the classroom in his study. According to the survey and the data, it showed that a large number of students preferred to use PC rather than mobile phones when completing the vocabulary tasks. And students said that they did not want to use the mobile phone to learn vocabulary at the outset owing to the screen size, and the data charges. Therefore, mobile technology, mobile phones also had some negative influence on vocabulary learning owing to some limitations of mobile phones itself (Stockwell, 2007). Similarly, Cavus & Ibrahim (2009) investigated the use of wireless technologies

in education with reference to the potential of learning words using SMS text messaging. As is shown in the results, students were willing to learn new words with the help of their mobile phones. The "pushing message" to individual learners' mobile phones offers cumulative lessons which maximize the exposure to the contents (Nation 2011). By contrast, the traditional vocabulary book, which usually includes lengthy presentation of vocabulary lessons, has no such advantages. The traditional vocabulary book is unable to deliver pushing messages like mobile phones. The strength of portability and immediacy has been embodied by mobile phones.

In a study conducted by Kennedy and Levy (2005), participants are given messages by SMS on mobile phones in the frequency of ten messages a week. Learners can choose new words in familiar context or already known words in a new context. It indicates that the effectiveness of vocabulary learning is influenced by the messages. Browne and Culligan(2008) study the effectiveness of mobile vocabulary learning by using mobile flash cards out of classroom . From the research, flash cards learning activities on mobile phones are beneficial for learners to grasp their targeted items. But details about how the mobile phone's system works with the items are not mentioned in the study (Browne & Culligan 2008).

B. Domestic Research

The research direction of related studies on mobile vocabulary learning is devise. From the perspective of theoretical study, Yang (2012) explored the mobile vocabulary learning mode which includes SMS-based vocabulary learning, portable devices-based vocabulary learning and mobile community-based vocabulary learning, in accordance with the features of contemporary college students, she indicated the mobile learning can break the constrains of time and space, and students can study, communicate with each other and learn vocabulary at anytime and anywhere. Therefore, it has fully embodied the dominant role of students during the process of teaching. With respect of the practical implementation of mobile learning in vocabulary, most researchers used SMS, QQ or WeChat to deliver learning materials (Cui, 2014). Yu (2014) explored the feasibility of mobile English vocabulary learning based on the characteristics of college students and the advantages of mobile English vocabulary teaching. She designed the specific process of mobile vocabulary learning in terms of previous preparation, formal teaching and the acceptance of the results. Some believes the new study resources are emerging in large numbers and get the favor from teachers, parents and students. They also offered some suggestions to the development of education APP (Ma et al., 2016). Several studies aim to investigate vocabulary learning by using mobile devices to send messages. A study has been conducted to demonstrate how learners can acquire knowledge of vocabulary through mobile phones (Chen &Chuang 2008: 93-113). Song and Fox (2008) investigated undergraduate students' dictionary use of mobile devices to boost their vocabulary learning in English. The study reveals that students hold positive attitudes towards the use of mobile devices in learning.

III. RELEVANT THEORIES

A. Brief Introduction of Multimodal Discourse Theory

The theory of multimodal discourse refers to the theory of communication through language, image, sound, action and symbolic resources by using the senses of hearing, vision, touch and so on. A researcher puts forward a comprehensive theoretical framework for multimodal discourse analysis from four aspects, including culture, context, content and expression. (D.L. Zhang, 2009) Multimodality consists of five modes of communication: auditory, visual, olfactory, tactile, and taste. The process of vocabulary learning itself is multi-modal rather than single-modal. At present, English vocabulary learning is mainly based on two-dimensional multimodality with visual image and text mode. With the combination of mobile phone and various network resources, Bai Ci Zhan makes vocabulary learning move from two-dimension to three-dimension and four-dimension and from static graphics to dynamic video. Take the word "encouragement" as an example, when learners first enter the interface of vocabulary learning software, their tactile system has been stimulated. When learning the word "encouragement", after the word is read aloud, learners need to choose the picture that fits the meaning of the example sentence from the four pictures provided by Bai Ci Zhan APP. Besides, in the process of reading the example sentence "The cheerful leaders did everything they could to give the team some encouragement!", learners will hear the tone of the system's voice and meaning according to the example sentences. When learners successfully choose a picture that matches the example of culture, they hear the effect of success. In addition, Vocabulary software has introduced "word TV" and "word radio" two ways to memorize words, watching video to memorize words and listening to audio to memorize words. The whole vocabulary learning process has achieved the organic combination of various modes, and learners can choose more beneficial vocabulary learning methods according to their own actual situation, helping themselves to carry out vocabulary learning more effectively and personally.

B. Brief Introduction of Second Language Acquisition Theory

The theory of second language acquisition was put forward by Krashen in the 1970s, he expressed that it is necessary to distinguish between "learning" and "acquisition" of second language, and their role in the formation of second language competence is also different. "Learning" is a conscious process, that is, through the teaching in the classroom, conscious practice, memory and other activities to achieve the understanding of the language we learned and the mastery of the grammatical concepts. "Acquisition" is an unconscious. It focuses on the natural communication to

improve language proficiency, and children master mother tongue through acquisition. Because of the language environment in China, it is a little difficult to acquire English. And most of them use the "learning" mode in class, so it is difficult for students to have the opportunity to acquire English. When using Bai Ci Zhan APP, learners can learn vocabulary through pictures, videos and associated examples, and help learners improve their knowledge and master English vocabulary through the way of non-native language, which can make up for the lack of language environment and the disadvantages of classroom teaching.

C. Brief Introduction of Ubiquitous Learning Theory

Ubiquitous Learning which is short for U-Learning is defined as a type of "4A" learning and an expansion of E-Learning. Exactly, anyone can use any device to acquire knowledge, information and communicate with each other at anytime and anywhere. Through technology learners can achieve "4A" learning can acquire no matter what knowledge or information they want. The circumstances that U-Learning creates are far different from those in formal learning. In this study, mobile phones, the most pervasive mobile device, is used to achieve ubiquitous learning. Students can wait in line in the school canteen, take the bus to their destination, and even lie in bed before falling asleep to complete the daily vocabulary learning, which is completely at the disposal of the students themselves. For one thing, U-Leaning transfers the teaching mode from the traditional teacher-centered to the student-centered, which cultivates students' autonomy in learning. Teacher is no longer the only source of information, instead any student can get access to learning materials without constraint of time or space. Also, the role of teacher turns to be the facilitator and supervisor. For another, it will help students to develop the habit of being a lifelong learner. In a ubiquitous learning environment, students could freely use all kinds of mobile devices they own to search for information they need, gradually it will become a learning habit. Rome was not built in a day, especially in vocabulary learning, it needs to accumulate every day rather than massive learning at a time.

IV. RESEARCH METHODS

This study aims at examining the effects of mobile phone Apps on college English vocabulary learning and the students' attitudes towards English vocabulary leaning Apps. Participants are randomly chosen from Nan Chang Normal University, since they are faced with the CET-4 and CET-6 which is closely related to their diploma. The questionnaire concerns the basic information of subjects, the students' attitudes of mobile vocabulary learning and the students' evaluation towards Bai Ci Zhan. All the survey questions are presented in Chinese in order to make the content understood better and avoid misunderstanding. This survey altogether provides 100 questionnaires and 100 questionnaires were retrieved. Besides the quantitative part of this study, qualitative data is also collected by open-ended interview questions. 4 subjects are randomly selected to take the online interview via QQ or WeChat. The relevant questions are as follows: What do you think of using mobile phone APP, like Bai Ci Zhan, to learn vocabulary?; When and where do you usually use your mobile phones to learn vocabulary?; What is your favorite function of Bai Ci Zhan?; What do you think of the difference between mobile vocabulary learning and traditional vocabulary learning?; Which way do you prefer to memorize words?

V. RESULTS AND DISCUSSION

A. Research Findings

In this study, Respondents are mainly juniors and seniors. And a large number of students have passed cet-4 and cet-6. As an English major, I get to know that most English majors can pass cet-6 easily. However, for those colleges who major in non-foreign language, it is difficult to pass the exams. Bai Ci Zhan have advantages and also have disadvantages (Q4, Q5), and the advantage colleges like best is that they can memorize words by pictures, providing human-sounding voice and remember words easily. While the disadvantages most colleges think is that Bai Ci Zhan relies on pictures too much and ignores word spelling. As for the purpose to download Bai Ci Zhan App (Q6), The purpose of most college students is to pass the English exams (such as cet-4, cet-6, TEM4, TEM8, IELTS and TOEFL). In addition, some colleges download Bai Ci Zhan in order to enrich English vocabulary and learn English well. About the question how many words students usually learn at a time. (Q7), the survey indicates 56% of students memorize 50-100 words every day through Bai Ci Zhan APP, 39% of people memorize 30-50 words through Bai Ci Zhan APP and only 5% of people can memorize 100-200 words through Bai Ci Zhan APP. Obviously, most students may choose a reasonable quantity of words to memorize every day. For the question how much time do they spend on learning and reviewing words. (Q8), a large number of students spend less than 45minutes on reviewing English vocabulary, accounting for 63%. And 32% of students spend 45-60 minutes on reviewing English vocabulary. It indicates a large number of students do not like reviewing and spending a little bit of time on it, but Bai Ci Zhan is equipped with the function of review and it is beneficial to students' vocabulary study. As for the question "Are you currently efficient at memorizing words"(Q9). It shows 67% of students think it is middlingly good, 22% of students believe it is bad and 11% of students think it is good about their current efficiency. For the question whether they are memorizing words actively (Q10), it reveals 56% of students occasionally recite words by themselves, 32% of students usually recite words by themselves and 2% of students never recite words by themselves. So we can know that colleges usually

cannot recite words by themselves and they need supervising and some reminders. For the reason why they choose some apps (Q11), the study reveals that students usually choose some vocabulary APPs mainly for powerful, comprehensive function and being convenient to review. In addition, simple and nice interface can be the reason. As for the question, if they will spend a lot of time on reading the explanation and the example sentence (Q12), it also shows 7% of students read every word, 71% of students read those that have not seen it at all and 22% of people never spend much time on the explanation of the word and the example sentence in the process of memorizing words.

For the question if they need set notification or other ways to supervise their clock (Q13), it shows 54% of students think they need to set notice or other ways to supervise their clock for they often forget and some students do not need to set notice or other ways to supervise for clock in is a habit. Clock in could motivate students to learn and memorize words, and it can be a method of supervision. On the question when and where do they usually clock in (Q14), it indicates 68% of students usually take advantage of the time when queuing up or waiting a bus to clock in and some people arrange special time and specific locations to clock in, accounting for 32%. On the question of what are the main reasons that motivate them to keep clocking (Q15), it shows 73% of students believe that to improve vocabulary and comprehensive English ability can motivate them to insist on clocking in. Also, the urge by teachers, parents or friends and relatives can motivate them to insist. For the question what is the frequency of using Bai Ci Zhan, it reveals 62% of students use Bai Ci Zhan App occasionally and some students use Bai Ci Zhan APP almost every day, accounting for 18%. As a result, we can see most people display a lack of self-discipline and use Bai Ci Zhan APP in their spare time to enrich their vocabulary. Although Bai Ci Zhan owns abundant merits, it cannot be suitable for all the study. As for the question how often do they use Bai Ci Zhan (Q17), it shows 98% of students hold the view that English vocabulary APP is just responsible for clocking in and they will do other offline study. Also, eight percent of students think Bai Ci Zhan is all their daily English study. Bai Ci Zhan is the most popular English vocabulary software among all kinds of English vocabulary software.

On the question what is the evaluation on the learning effect of Bai Ci Zhan (Q18), it also reveals that colleges are able to use learned words accurately after having used Bai Ci Zhan APP, 78% of students think they have improved English vocabulary after having used Bai Ci Zhan APP, 22% of students think that they have improved pronunciation and 2% of students think that they have improved listening skill. As for the question of what is the evaluation on improving enthusiasm of Bai Ci Zhan（Q19）, it also shows most people have improved learning enthusiasm and most of them hold the view that locking screen by words will increase learning enthusiasm. Also some students think interactions between users and giving comments and likes between friends will increase learning enthusiasm.

B. Discussion

As the intelligent English learning software is popular, it makes the learning convenient and breaks the limitation of time and space. English learners cannot be limited by time and space. Compared with the traditional learning tool, paper books, the carrier of learning has changed. Now the mobile phone is a tool that people carry with them, learners can line up to remember the words. In the Bai Ci Zhan, words can be downloaded offline, so people don't have to worry the consuming of flow. In the aspect of self-directed learning, it often occurs after class. In the past, it was difficult for teachers to supervise students' learning. However, with the rapid development of mobile devices and 4G networks, instant communication between teachers and students becomes possible. For students, when they encounter difficulties in learning English, they can turn to the teacher immediately for help, and vice versa, the teacher can immediately guide and give feedback to the students in need. In addition, appropriate monitoring should be considered in self-directed and self-paced learning, and social media can provide this possibility

Bai Ci Zhan uses pictures to help learners memorize words. The drawing is lively and interesting, which is simple and easy to remember. In addition, learners can create small classes and invite friends to join them. They can also join the existing classes through invitation code and they can supervise each other in the class to learn and make progress together. Study in a small class will present class ranking, which can stimulate them to study. In word PK of Bai Ci Zhan, learners can make a competition to remember words randomly, with nearby people and friends. And then make the learning effective according to the results of the competition. At the same time, word PK presents the game role of "Lord Bao ", which enhances the interest in the competition. It is easy for learners to develop a strong interest in learning by means of game.

Learning words does not mean knowing the meaning of words, and Bai Ci Zhan is also not a tool for presenting the meaning of words. By providing words TV, word radio, lecture halls and related reading section, Bai Ci Zhan helps learners learn words and extends knowledge beyond words. Bai Ci Zhan provides a variety of word expansion ways for learners, which not only meets the needs of different learners, such as visual and auditory, but also provides learning content including hot news, English classics, life common sense and so on. It can enrich learners' knowledge and expand learners' horizons. (Wu, 2019)

Bai Ci Zhan provides the pronunciation of words and the example sentences which are presented in the intonation full of emotion. Learners can understand the words' context in application more easily and grasp the emotion of words through the pronunciation of example sentences. In addition, the radio station on Bai Ci Zhan also brings audio feast to learners. It first presents the word and the meaning, then carries on the word explanation with the common sense or the related event as the background, and gives the corresponding example sentence. Each audio in the radio consists of

about 6 mins, including 12 words. Learners can switch their own audio lists and listen at anytime and anywhere.

VI. Conclusion

The problems of college English vocabulary are universal. This thesis chooses the mobile APP that people can't live and work without it as the starting point, and choose the popular Bai Ci Zhan APP among college students to investigate the present situation of intelligent APP in college students' vocabulary learning. Through the questionnaire, interview and careful analysis, the author has found that there are many problems existing in college English vocabulary, such as rote memorization, limited vocabulary size and depth and spelling mistakes. The widespread use of smart electronic products, such as mobile phones, makes mobile learning more convenient and autonomous, but there are also inevitable drawbacks, such as over-reliance on pictures, too much interference and so on, which can reduce the efficiency of memorizing words. Software also provides some "punch" monitoring mechanism, but it lacks some kind of supervision and reward and punishment measures. And this fragmented learning style does not form a system, which prevents users from forming a systematic knowledge structure. The lack of self-control, patience and willpower of some users can also influence the use of software. However, there is no doubt that the learning of mobile English vocabulary can be used as a supplement to classroom learning and has a great effect on vocabulary acquisition. In order to overcome the disadvantages of mobile learning, the authors suggest: 1. Combine mobile learning with group collaboration. Software users can set up online communication platforms, such as WeChat or QQ, helping to form collaborative learning that allows learners to help each other, as well as mutual monitoring mechanisms. 2. Mobile Learning of English Vocabulary should combine teaching and learning as an important part of flipping classroom teaching, bringing into the teaching program. Therefore, fragmented learning methods can be integrated into the English learning system, through the effective network platform communication model, effective inspection, which is more conducive to the students' learning effect.

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Ling Wang was born in1967 in Jian, China. She received her bachelor of Art degree in linguistics from Jiangxi Normal University, China in 1995.

She is currently an associate professor in the School of Foreign Languages, Nanchang Normal University, Nanchang, China. Her research interests include cross-cultural teaching and teaching methods.

Prof. Wang is a member of the Chinese Association of Foreign Language Teacher.