# Chinese Students' Perceptions of Using Mobile Devices for English Learning

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## ABSTRACT

*The advance of mobile technology has turned portable, handheld devices into an integral part of students' daily life, and also paved the way for the rise of mobile assisted language learning. This study focused on how Chinese students perceive the use of using mobile devices for English practice in and out of class, in order to see whether they are interested in mobile-assisted language learning (MALL) and how they construct the technology with regard to English learning. One hundred and one students from eighteen universities in mainland China participated in this study. All of them completed an anonymous questionnaire and 20 randomly selected students were interviewed. The results illuminate a strong motivation among students for learning English via mobiles, and diverse types of m-learning activities were discovered. The results also revealed that students' attitudes toward mobile learning can be impacted by their regions or more specifically their surroundings.*

*Keywords:    China, English, Mobile-Assisted Language Learning, Students' Attitudes, Students' Perception*

## INTRODUCTION

Mobile learning, a medium of learning suggested for distance education, is mainly facilitated by handheld devices which can take the form of smartphones, tablet PCs, PDAs (Personal Digital Assistants) and audio players. Those devices usually can be connected wirelessly to each other and to networks, thus ensuring mobility and flexibility. The pervasive availability of mobile technology and $3^{rd}$ generation (3G) service have paved the way for this emerging learning form (Zawacki et al., 2009; Kim et al., 2013). In most of the world, the technology has been widely applied and the ownership of mobile devices among college students has also increased at an impressive rate. The mobile media consumption among youths is believed to be the most rapid widespread adoption of communication technology in recent history (Squire & Dikkers, 2011). For instance, in China, so far 85 percent of the younger urban residents (age from 18 to 30) own smart phones (Netease News, 2013). With regard to college students, around 80.8 percent have at least one smart phone with internet connected service,

which means virtually all higher education students carry some form of mobile devices (People's Daily Online, 2013).

The widespread ownership and increasing demand of mobile devices among Chinese students implicates their strong awareness of mobile technology. However, it is known that mobile devices are commonly used by students as tools for communication and entertainment, for instance accessing music, games, websites and for social networking. Although mobiles have been widely acknowledged in delivering learning by researchers, it is still unclear how students perceive them as learning tools and in what way they employ technology for learning. This study seeks to explore Chinese students' perceptions of using mobile devices for English practices. It aims to understand whether they are interested in mobile-assisted language learning (MALL) and how they use such devices for English practice both inside and outside class.

## LITERATURE REVIEW

The rapid development of mobile technologies and various mobile products have enabled people to access information anytime and anywhere without limitations. Just as pencil and paper changed the means of learning, researchers saw signs of how mobile devices could enhance the existing learning approaches, both within the classroom (Viswanathan, 2012; Wagner, 2005) and outside school (Squire & Dikker, 2011; Kukulska-Hulme, 2006; Wang, Zou & Xing, 2014). As an extension of e-learning (Conole, 2004), mobile learning can be regarded as "the intersection of mobile computing and e-learning" (Quinn, 2008, p.1), which shares the principal aim in bridging the long distance between students and teachers. Mobile devices offer users "accessible recourses wherever you are, strong search capabilities, rich interaction and powerful support of learning" (Robson, 2003, p.1). On the one hand, it renders learning to be more learner-centered rather than teacher-led, which could challenge some traditional modes of teaching. While, on the other hand it

is also reported that students will become more enthused and motivated in engaging classroom learning (Bibby, 2011).

For today's university students who are widely known as "digital natives" (Prensky, 2007), technology can be easily mastered and then exploited into learning. Based on such features of the new generation, relevant shifts of education approaches are expressly needed by many educators for producing higher learning efficiency (Alexander, 2004; Prensky, 2007; Wagner, 2005). In order to promote the use of mobile devices in language learning, clear understanding about what learners' perceptions about MALL and how they use such technologies appear to be the most essential. A survey done by Kim et al (2013) investigated 53 students' perceptions of mobile learning who graduated in three TESOL classes at a U.S university. The findings from the study showed students' positive reactions to the use of mobile technologies in language. It also suggested the potential capability of mobile devices to "provide students new learning experiences" and "more learning opportunities" for them outside the class (Kim et al., 2013, p.64). However, a general description of students' attitudes appeared not enough to represent the whole group of students in the world. Hsu (2011) conducted similar study about how EFL international students perceive the MALL across different cultures. Although the responses were mainly positive as Kim et al (2013) also demonstrated, students' technological affordances of MALL were appeared to be different among some cultures. Both of the above researchers revealed that students generally perceived MALL in a good way and showed positive reactions to the emerging technology, whereas how students construct this technology in and out of class was still unclear. Squire and Dikkers (2011) investigated how adolescents use their mobile devices for learning out of school and how youth construct the technology by presenting 10 students (aged from 8-16) with the devices and observing their practices. They indicated that students' mobile media use has no friction with learning, rather it further promoted

and embraced their learning. Indeed, mobile devices were being simultaneously constructed as "information accessing resources, media device and communication tools just like Swiss army knives" (Squire & Dikkers, 2011, p.15).

Although mobile devices, especially the smartphone, have been an essential part in many youths' life, way to engage them in pedagogy seemed not so smooth. Educators' responses to mobile media technologies have been changing constantly. From initially banning them to a more recent exploration of their potential (Alexander, 2004), until today when mobile technologies have been gradually applied to enhance teaching and learning (e.g. Chang & Hsu, 2011; Stockwell, 2010; Shrestha, 2012; Aydin, 2013). However, whether mobile technologies will really lead to a new quality of teaching and learning in terms of interaction and independence, access, flexibility and costs is still a controversial. There are also many barriers to the success of mobile learning applications. An often mentioned critique is that the screen of mobile phones is too small to fully present learning materials (Zawacki-Richter, Brown, & Delport, 2009). Compared with E-learning, mobile learning is still in a critical period, lacking acceptance and status. Although there has been a great deal of excellent work and experimental mobile learning projects, incorporation into mainstream education and training has not yet been taken place. According to Keegan (2005), the main reason behind such failure is about the excessively wide range of wireless applications, which suggests "learning and training do not seem to be high on the list of applications that are receiving attention today" (p.9). The wireless applications are designed not only for learners; in fact, most of them are used in business contexts.

Regarding the research into exploring mobile devices' use in language learning, many referred to the performances of various applications (apps) in assisting students' language learning. Currently, mobile phones users are faced with hundreds of thousands of apps available in their app stores. Increasing amounts of mobile apps related to language learning are created to assist learners. According to Sweeney and Moore (2012), there were around 1,000 to 2,000 language learning apps in Apple's app stores and most of them are dual-dictionary and vocabulary apps. They then focused on investigating the design process and features of vocabulary learning apps. Their study found that the majority of existing language learning apps have not yet been very pedagogically useful, due to the possible knowledge gap between the apps developers and language teachers. Godwin-Jones (2011) summarized the greater benefits of iPhone and Android apps to language learning since Apple launched its iPhone in 2007. He also mentioned the technical problems which previously hampered many language learning projects which were largely solved due to the huge development of mobile devices' functionality. Research has shown that mobile language apps can effectively promote learner's creativity and widen their understanding of target language. Taken *LingoBee* as an example; one of a popular language learning apps among Europe, it could stimulate creativity of language learner by providing communication among users and imaginative descriptions (Adlard, Ottway & Procter-Legg; 2012; Petersen et al., 2012). Language education practitioners are also encouraged to spend time in understanding new students and new patterns of learning that emerge as the expansion of mobile learning (Kukulska-Hulme, 2006). As the analysis of areas around mobile language learning, a large number of suggestions and new language learning apps are spread in order to help students take full advantage of mobile technology. Generally, the analysis of mobile learning has focused on contextual learning and continuous learning. A study conducted by Petersen, Chabert and Divitini (2008) effectively reflects that mobile devices could engage in two aspects. They described a mobile community blog that could support groups of language learners who come from different locations. In this case, the community blog serves as a platform for learners' communication across borders. This approach would promote both contextual and continuous learning. Since mobile learning rises from

and flourishes in the West, particularly North America, few previous studies were found regarding Chinese students' perceptions of using mobile devices for English learning and only a small number have been published in major international CALL journals. Because of the sizeable population of EFL in China and the deep penetration of mobile devices among Chinese students, it is important to guide students harnessing the robust power of mobile devices for learning. Therefore, the aim of this study was to explore students' perceptions of using mobile devices for English practice in and out of the classroom.

The research questions include:

- Are students interested in using mobile devices (a mobile phone or tablet PC) for English practice? Why or why not?
- In what ways do students use mobile devices for English learning and practice?
- Are there any differences in participants' perceptions of mobile-assisted English learning between different regions from which they are?

## METHODOLOGY

### Participants

This study employed 101 college students who were from 20 Chinese universities in 11 cities including Beijing, Shanghai, Suzhou, Wuhan, Zhengzhou, Xi'an, Kaifeng, Hefei, Nanjing, Chengdu and Changchun. All participants in the research were Chinese and were randomly chosen from Year 1 and Year 2 students. Since English is one of the required subjects of all majors in both the first year and second year at all of the 20 Chinese universities, ensured all participants had the motivation to learn English. Apart from the grade limitation, only students who possessed at least one mobile device were involved in this study, since it was believed that those who were unfamiliar with mobile technology might not yield useful responses toward the study.

## Data Collection

### Survey Questionnaires

In the first phase of the study, all the participants were asked to fill in a questionnaire of 11 questions to obtain a considerable number of responses. The questionnaire designed for this study was to gather students' opinions about using mobile devices for English learning, including items concerning their learning modes, motivation and experiences, and also covered their suggestions for improving mobile learning instruments such as English learning apps. Before the questionnaire was administed, students' personal information was collected, encompassing gender, age, university, grade and major. The analysis of that data aided in discerning the current state of MALL among different majors, schools, grades and regions. Some of the responses were then analyzed further to investigate causative factors on differing students' attitudes towards MALL.

### Interview

In the second phase, interviews were conducted with 20 students randomly selected from all the participants in order to further understand students' real mobile learning experiences, the need of them and the causality behind their opinions. Items such as which English learning website is popular among students and why, evaluations toward different English learning apps even the expectations of future mobile teaching were collected. The interview included 8 questions to gain more detailed and valuable information of how students use mobile devices for English learning in and out of classroom. The questions can be categorized into three main aspects: What are the advantages of mobile learning in your mind? Which devices do you prefer for English learning? How do you learn English on mobile devices? All the interview answers were recorded on a digital recorder, and then transcribed to written texts. The length of each interview varied, depending on the amount of information that the subjects were willing to

*Table 1. Student's preferred learning patterns and their adopters' types*

| Learning Modes &Adopter types | Percentage |
|---|---|
| E-learning (early majority) | 24% |
| *M-Learning (early adopters)* | 68% |
| *PCs* | 32% |
| Traditional (laggards) | 22% |
| The Mixed (late majority) | 54% |

share. The student interviewees were coded as S1, S2, S3 and so forth.

# RESULTS AND DISCUSSIONS

## Students' Learning Styles And Willingness To Adopt MALL

Students' learning styles and strategies were highly important in this study to answer the first research question. Chapelle and Jamieson (1986) stressed that the types of students learning styles should be taken into consideration when ask the question about whether they like mobile learning. The students' learning modes were generally divided into three types in advance for participants' selection according to their daily learning method: e-learning, traditional print learning and the mixed way. Participants were required to judge their learning modes in terms of the portion of learning time spent on computing devices, either it was more than 50 percent, 50 percent to 20 percent or under 20 percent. According to Rogers (2003), confronted with new technology there were five types of adopters: innovators, early adopters, early majority, late majority, and laggards. Based on the learning approaches students preferred, a broad classification of their types of adopter could be identified, which resultantly revealed the willingness of their adoption of mobile English learning at present and in the future.

The generated data showed (See Table 1) the percentage of different learning styles. About 24 percent participants were fonder of e-learning and among them 68 percent preferred learning through mobile devices, which are substantially

mobile learners. Those students were classified as the 'early majority' and the participants who embrace mobile learning were recognized as the 'early adopters'. Mobile devices were more favored among students who prefer learning electronically, yet still were beaten by PCs when considered the entire participants' choices. Approximately 22 percent of students stated that they were used to learning English in more traditional way, with print books and face-to-face communication assistance. Mobile learning or even E-learning has not yet been penetrated in those students' lifes and they were labeled as laggards of mobile learning. More than 50 percent of students were regarded as 'late majority' adopters in this study. They usually used computing devices as auxiliary tools for English study. The importance and influence of computing devices on their learning are lower if compared with e-learning students who have high degree of dependence on technology. They would experience less difficulties if learning without computers or other digital devices, hence their learning process in some degree would not be affected by the technological revolution. In contrast, loss of computers might be disastrous for many e-learning and mobile learning students, as the following two quotes from the students of Xi'an Jiaotong-Liverpool University illustrated:

**S1:** "I can't live without computers and my mobile phones. Every assessment of my university should be submitted online and the important notifications are also sent by email".

**S2:** "My working efficiency can be zero if I forgot to carry my iPad or laptop. All of my lectures notes and PDF reading materials are saved in my iPad".

The general learning context seemed to have great impact on students' adoption of MALL. Along with the development of the Internet, many colleges in China now have installed campus email systems and online assignment websites for better student and teacher communication. Some of the schools are ahead in employing such technology; therefore, their students seem to have higher average involvement in e-learning and mobile learning. The different levels of technology dependency among the different types of adopters substantiated Rogers' (2003) definition of early adopters and early majority, who tend to have more positive perceptions of science and better capacity to tackle uncertainty and hazard. Understanding and analyzing the various adopters' characteristics and attitudes toward MALL can be essential to help promote and modify mobile technologies, which will be analyzed in detail in the following section.

## Students' Perceptions Of The Benefits And Challenges Of MALL

Six common advantages were selected to test students' attitudes towards MALL. Based on the information reported in Table 2, items 1, 5 and 6 were the three benefits receiving most students' consents. In other words those items were verified to be positive with learners' MALL experiences. About 49 participants strongly agreed that the assistance of mobile devices made self-study more enjoyable and interactive. In addition, compared with class teaching, MALL was stress-free; using mobile devices in class to search learning related information can be a convenient way to check understandings and help to enhance learning efficiency. Teaching contents can always be limited due to class time restrictions. Inadequate explanations of new content could slow down or even impede students' further learning processes. Under such

conditions, students' carry-on mobile devices can be employed to solve their questions by searching for answers online. However, 26 participants argued that information online was less detailed than that given by teachers, much even inaccurate. They prefer to directly ask teachers for help after class rather than relying on doubtful opinions from net friends. The opposing ideas of item 4 effectively revealed Chinese students differing perceptions towards MALL. Though more and more people notice the advantages of mobile technology and start to widen its uses in class learning, some still query its professional accuracy and so resist changing their learning patterns.

More than half of participants strongly agreed that their filler time had been better fulfilled by mobile learning activities. Moreover, this advantage received the least number of objections, with only 2 participants disagreeing. Due to the portability and connectivity of mobile devices, students can view learning contents anytime and anywhere they like, for instance, when waiting for the subway or a bus. S15 said: "Devices like smart phones can be easily put in pocket whenever you want to start or end the learning." Also, many participants use such independent learning method to review what have learned either in class or in self-study. As S3 said: "I often review the new words I learnt before through my dictionary apps when taking buses because I don't like spend much time on reviewing during self-study." MALL in this way again saved time for students memorizing old information in the future study. Others who expressed similar learning habits confirmed the high quality learning outcomes from the strong assistances of mobile devices, such as attaining words' pronunciation and sample sentences. It appeared that mobile devices could freely fit into learners' filler time and because of the portability and wireless internet access both quantity and quality of English learning can be guaranteed. Most participants strongly agreed that MALL can improve learning efficiency by shortening the time spent on 'pre-learning'. For example, compared with print dictionaries, dictionary

*Table 2. Student's perceptions on the benefits of MALL*

| Leaners' Benefits from MALL | (Strongly) Agree | Neutral, Frequency | (Strongly) Disagree, Frequency |
|---|---|---|---|
| **Item 1:** MALL is stress-free, more enjoyable and interactive, because it allows me to study English in my own way. | 49 (48.5%) | 52(51.5%) | 0 (0%) |
| **Item 2:** I do not need to print out plenty of handout before class, because it is more convenient to view them on my mobile devices. | 38 (37.6%) | 39 (38.6%) | 24 (23.7%) |
| **Item 3:** I can easily share or receive learning resources timely. | 18 (17.8%) | 45 (44.5%) | 38 (37.6%) |
| **Item 4:** I can better understand the teaching content by searching information online timely in class. | 40 (39.6%) | 35 (34.6%) | 26 (25.7%) |
| **Item 5:** MALL improves my learning efficiency and save time for 'unnecessary waiting', such like looking for words on print dictionary or finding one of the lecture notes from plenty of files. | 56 (55.4%) | 38 (37.6%) | 7(19.8%) |
| **Item 6:** I can use my filler time more sufficiently on learning English, because MALL allows me to learn anywhere and anytime. | 65 (64.4%) | 34 (33.6%) | 2 (2%) |

apps can significantly save time of checking words, therefore, offering longer remaining time for learning words. In addition, mobile devices can well organize student's downloaded learning materials or lecture handouts by sorting them by date or other criteria, which can be more easily available anytime when needed by the user.

Although the laptop in some degree now also can provide those three functions, the convenience of using 'filler' time for learning was the difference that outstand mobile media devices from other forms of digitally mediated instruments (Squire & Dikkers, 2011). Upon reflection, young people have a great deal of filler time for example when waiting for a bus, waiting in line, waiting for friends or just sitting around bored. Students can use their filler time more extensively to learn what they interested in on their mobile devices and see the time as more useful to their life.

## Opinions From Students Who Prefer Traditional Learning

Students who learn mostly in traditional ways seemed to have less experience of mobile English learning, largely because they are used to learning with papers and pencils from the very beginning of their studies and did not want to change.

*Figure 1. Students' preference of technology devices*
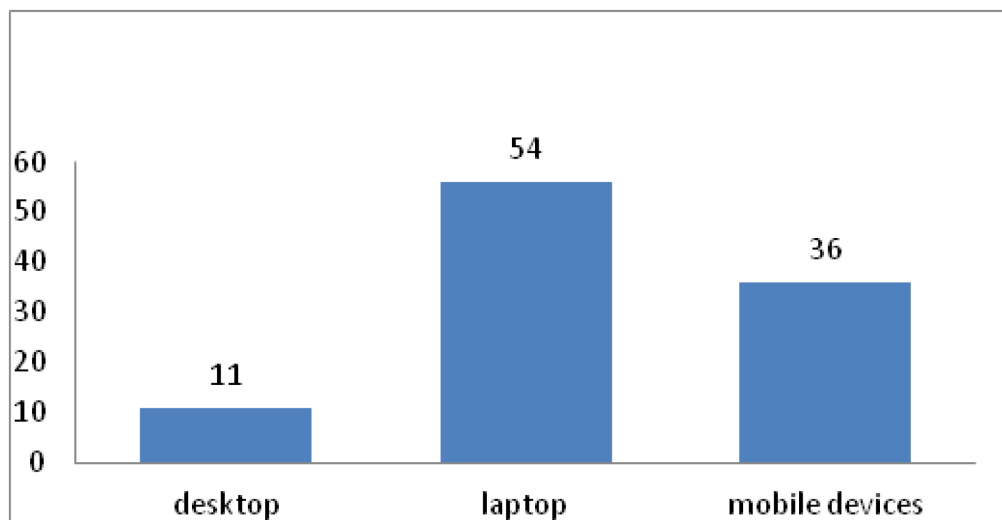


S1 noted:

*The atmosphere when we start learning did not have much advanced wireless technological devices like today. We grow up with variety books, from fairy story, textbooks to novels. I think my learning method has been developed already. And I do not like fitting myself in devices, if someday those devices have been changed to suit my learning method, which will be fine.*

Interviewees also said that highlighting keywords with pens and viewing contents on paper books can better help them understand and memorize the information. In addition, those students pointed that the accuracy and credibility of contents on English learning websites and software are questionable.

S3 raised this point:

*It depends on whether the websites are authoritatively enough, such these websites like BBC and VOA, their information are very idiomatic. But some other websites could have some grammar mistakes. So we should care what the situation is when we use the information.*

This could be another primary reason for avoiding online learning, unless there are recommendations from teachers.

## Preference Of Digital Devices For English Learning

Focusing on the technological devices themselves, desktop, laptop and mobile media device each has their own strengths and weaknesses. As hypothesized, the majority of participants chose the PC to conduct English learning, encompassing 11 students favored the desktop, and 54 picked the laptop (see Figure 1). Although mobile media devices are proposed to be the best solution to achieve personal learning in U.S (Squire, 2009), Chinese students seems to be more interested in using the laptop for learning.

As S10 explained:

*Laptop can be portable and has varieties kind of functions, and low price. Compared to iPad and mobile phones, it has better input interface. Desktop is too big to handle, and only can use in one place. However, laptop can let me learn both in classroom and dormitory.*

Laptops in some degree could also be mobile. Many participants revealed that they often carried their laptops during school days for lecture note-taking and self-study. The various functions laptops provided could satisfy almost all their needs. The mobile devices, especially smart phones, by contrast, still created quite a few problems for the students' learning processes. Many participants reported that the tiny screen and cumbersome input mechanisms are the two major obstacles hindering the process of mobile learning and consequently slowing down their learning speed. In addition, given that most of the mobile devices lack of some essential plug-ins, such as flash player, learners sometimes find it difficult to play media materials. For example S4 stated "It is quite distressing to find that the audio on BBC website cannot be played on my iPad due to the limitations of the browser, when you have rolled up sleeves to study today's clip." Moreover, mobile devices for learning can be limited by other hardware insufficiencies, small screen size, computational power and battery capacity (Jeng, et al., 2010). Laptops, in any of these aspects, could better fit into MALL. Another reason that contributed to the result concerned the price. Some advanced smart phones sold in the Chinese market cost even more than laptops. Hence parents always chose to buy laptops for their children, instead of smart phones which were commonly regarded as not suitable for learning in their mind. As a result, students usually got low-end mobile phones whose prices were under 2000RMB and mainly operated on the Android system. It was noted that poor functionality and fewer English apps could render their mobile devices unusable for English learning.

However, nearly all participants who embraced Apple products strongly valued the benefits brought by powerful functions and various leaning applications. S2 noted, "Products from Apple Company are becoming a fashion trend nowadays; the faster responding speed save more time waiting the buffer." S6 also said, "Diverse English self-learning apps can be downloaded from the store and even can help me learn English while dressing up." It was found that although participants tend to spend most of their time learning on a laptop or a desktop, mobile learning still remains predominant in their filler time. Using mobile devices to build and pursue interests could not alter students' schedules; in fact, those devices made better use of their schedules. Therefore, although mobile media devices currently cannot fully take the place of computers in students' learning practice, activities with the phone could effectively fit into the gaps of student's life.

## Mobile Learning Applications and Mobile Learning Activities

Respondents were requested to report whether they had English learning experiences on mobile devices. 85 percent of participants expressed that they had learnt on mobile devices and 60 percent of them spent more than 3 hours per week on mobile English learning. The most common way student conduct English learning on mobile devices was through wireless applications.

The analysis of answers from interviews demonstrated that word consultation, listening to English teaching podcasts and word memorizing were the most frequent items students performed on their mobile devices. For example, nearly all the respondents claimed that they now checked English words either online or on dictionary apps. Some traditional learning students tended to be enthusiastic at the beginning of the paper dictionary and that enthusiasm was later lost, which was mainly caused by time-consuming word checking and inconvenience of carrying it. Organized structure and rich content are the most important criteria for good print dictionaries; however, high efficiency is now what students pursue. Dictionary apps provide a quicker searching system to save time for learners finding words. The search bar can even be added to the home screen for greater user convenience. Despite such weaknesses of the printed dictionary, online word consultation service also won students' favor by its voiced functions. Many dictionary websites and apps provided vocabulary

and example sentences reading functions for learners to practice pronunciation. In addition, some vocabulary learning apps, like Youdao, are highly appreciated for its contextual learning and revision functions. Learners can not only access the lexical and grammatical descriptions of the word, but also are given representative sentences under each situated context and common collocations. Imaginative descriptions encompassing pictures, detailed story and origins behind are also available when using some dictionary apps and websites. S7 said "it makes terms or abstract word easier to understand. Sometimes, I can easily get the right and intrinsic meaning when read the given picture." The most helpful dictionary app and website participants recommended were both produced by *Wangyi* website whose *Youdao* dictionary app remains the highest user downloads in Apple's and Android's app store. The latest version of *Youdao* mobile dictionary app added diverse English learning activities to its basic consultation service, such as everyday English, bilingual reading, expressions in English movies and English music appreciation, supporting more opportunities for users to learn through their interests. Moreover, students can even share their favored English learning contents through various social websites and post their comments or feelings. The most popular networking apps students used in their daily life are *Wechat*, *Microblog* and *Renren*. Through such communication platforms, interaction could then be easily created among learners and their friends or teachers. As S4 mentioned that, "I have posted a question about two phrases which occurred in my shared article, and it is my high school English teacher who solves my puzzles. Interestingly, we have not met for 3 years!" The delivery of distance education here has been achieved by online two-way communication.

Another common way to learn English on social apps presented by students was to subscribe to favorite English learning channels. On this point, S1 said "Since I've added IELTS China to my favorite *Microblog*, I receive lots of useful information about the coming texts, even the predicted questions. It's too great!"

Students can make anything they like their favorite and get benefits from its released news. Each time they refresh their homepage, they probably receive interesting learning contents which also can be shared with others. The role that communication and interaction play in the mobile learning process is critical. Around 60 percent of respondents claimed that they have discussed English learning questions with other friends. It was evident that students exchange knowledge and opinions on the simulating platform and gradually improve both English learning skills and sociability, therefore a vivid learning interaction with the environment was developed.

Apart from education through social network, some mobile applications also have their own teaching approaches. The provided English materials are not messily presented on the screen but rather grouped into different courses usually in terms of topics and difficulty levels. For instance, the English listening for *Lazy People* app, one of the most popular English listening apps recommend by participants, categorized various native English speeches in different levels of difficulty from junior school to Chinese College English Test Band Six. Such sorting schemes makes apps fit better into Chinese students' life and effectively provides them with the best suited learning courses. In addition, the duration of each audio clip is around 10 to 20 minutes and like many other English podcasts takes the form of dialogue. There are generally two persons talking to each other using targeted expressions or vocabularies. Detailed explanation of the words' usages and more examples are always given later for learners' references. At the end of the clip, each key word taught before is once repeated by presenters at slow speed just like teachers in class reading new words for students to imitate. However, such story-based teaching methods can be more effective and vivid than face-to-face traditional English classes. Five of interviewees reported that they gained better understandings of some words from English learning applications than from their teachers in school. Underlining this, S7 said that:

*My English teacher seldom explain the usages of 'easy' words, but sometimes it is what most of us confused about. Asking questions about easy words he thought might annoy him. So I always turn to vocabulary teaching apps to look for answers.*

Such a case was apparent in many Chinese schools and usually caused by insufficient communication between teachers and students. The average student to faculty ratio in Chinese university was more than 80 (Sina Education, 2011) and the situation was even more serious in high schools. Not every student can get enough attentions and suited education from their teacher in or out of class. Mobile learning appeared to be one ideal way for supplementing their lack of education with high flexibility and low costs. Besides, many English podcasts employ native speakers for broadcasting. Interpretations from them seem to be more convincing and authentic for Chinese learners.

## The Possible Relationship between Region and the Level of Mobile Learning Activity

One interesting factor we found during the data analysis was the relationship between regions and the length of time spent on mobile learning per week. Based on information reported in Table 3, the mean hours of students study in different areas showed a group phenomenon of polarization. Cities were ranked in descending order of the mean mobile learning hours. It was noted that students who study in the east of China, Shanghai, Suzhou, Beijing and Nanjing, which are more developed than mid-western cities tend to spend more time on mobile language learning, with the average mean hours of 3.09, whereas the average in Midwestern regions such as Changchun, Kaifeng and Hefei is 1.9 hours. In other words, participants with different living or studying circumstances did have different levels of active use of MALL. Similar cases also occurred in the questions concerning favorite language learning apps. Participants from developed cities such as Shanghai and

Beijing shared more and various categories apps, yet the responses from developing cities were restricted, mainly dictionary apps. These findings suggest a significant difference in the familiarity to MALL among various areas. Participants who study or live in richer cities tend to have higher adoption of new technology, which in the meanwhile provides more opportunities for the development of mobile learning. The primary causes could be attributed by higher income of families and more advanced, technological education environment in richer cities. The current state of mobile learning is roughly the same in worldwide. This is perhaps due to the populations in many developing countries being unable to afford the high prices of Android or IOS devices. Mobile learning has not been taken in their education systems, while it has been already universally accepted by Western schools to improve education quality (Quipper, 2013).

## CONCLUSION

This study sought to examine Chinese undergraduates' perceptions of using mobile devices for English learning, in order to understand their levels of interests in MALL and how they constructed their devices. We anticipated that students would show great interests in mobile English learning, yet still lacking breadth and depth of participation compared to the students in the West. Consistent with the hypothesis, around 78 percent of the subjects expressed that they would like to involve mobile devices in their language learning. In addition, the mobile devices have been sufficiently used for learning English through diversified online activities and applications. Students who prefer e-learning modes had a demonstrable preference to mobiles (68%) over computers (32%) as instructional tools in English learning. In terms of the attitudes towards MALL, differences of the mobile learning activeness are noticed between students from rich eastern and mid-western developing cities. There were a variety of ways to learn English on mobile

*Table 3. Descriptive data analysis of mobile learning time*

| City | Mean hours | Standard Deviation | Average of mean hours |
|------|------------|--------------------|-----------------------|
| **Shanghai** | 3.4 | 0.69921 | 3.09 |
| **Suzhou** | 3.2 | 0.54883 | |
| **Beijing** | 2.8889 | 1.05409 | |
| **Nanjing** | 2.8889 | 1.05409 | |
| **Xi'an** | 2.6667 | 1.11803 | 2.48 |
| **Zhengzhou** | 2.5 | 0.57735 | |
| **Chengdu** | 2.5 | 0.57735 | |
| **Wuhan** | 2.25 | 0.88641 | |
| **Changchun** | 2.2 | 0.83666 | 1.9 |
| **Kaifeng** | 2 | 1.0547 | |
| **Hefei** | 1.5 | 0.54772 | |

devices reported by participants. As Squire and Dikkers (2011, p.463) mentioned, "students used them for amplifying their access to social networks, interests, and access to information, which taken together constituted a form of English". In this study we correspondingly found the similar example of it in several networking apps. Like the Swiss-army knife, mobile phones empowered students to learn English regardless of the constraints of their schools.

However, it appears that we may be still in the early days of the application of mobile technologies into English learning and teaching. It is evident that in general, all participants have used mobile devices for English learning, but the average depth of their participation in those mobile simulating practices seems low. In addition, the participation level also differed from distinct learning approaches and personal interests. There could be a wealth of language learning software and websites on a technological learning style student's mobile devices, even some other useful software like recorders and notepads are used for English learning. However, students who prefer conventional ways, learning normally with fixed curricular objectives determined by the state, do not have much motivation for mobile learning in their filler time. Furthermore, although the majority of students are oriented positively toward independent and interest-driven learning (Squire &Dikkers, 2011), many Chinese students currently are still unaware of how to use mobile technology for learning. It may also call for teachers' involvement in using mobile devices in English teaching in order to encourage students' motivation in mobile learning in China. Therefore, the key challenge for language educators is to help develop current thinking and skills about mobile learning and stimulate students to take full advantage of mobile technologies for learning.

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