SMARTPHONE APPLICATIONS IN LEARNING MANDARIN

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ABSTRACT

Smartphone, the newest mobile technology has enhanced Mobile-Assisted Language Learning (MALL) and how students perceive them as a language learning tool have not yet to be broadly explored. Therefore, the motivation of this study is to investigate students’ opinion towards the issue of smartphone applications in learning Mandarin. This preliminary study utilized a quantitative research method. A survey is conducted to gather data through an adapted questionnaire which comprised of 24 questions. There are 79 undergraduates who are undertaking Mandarin language course students were selected using comprehensive sampling technique. The reason for selecting this sample was of being a convenience because they were accessible to the researcher.

In this study, types and the usages of smartphone applications were carefully explored. It is discovered that the respondents enjoyed learning Mandarin using both types of smartphone applications, which are Dictionary Based (DBA) and Teaching and Learning Applications (TLA), and they found it is easy to use them. This investigation also shows that students have a generally favorable attitude towards the usability, effectiveness, and satisfaction of smartphone for MALL. It is important to understand the issue because first, it is for the teachers to adapt MALL activities, especially how smartphone applications enable teachers to reduce workload and generate innovate teaching practices. Besides, it can be an interesting tool for the ‘net’ students to perform ubiquitous learning.

Keywords: Mobile-Assisted Language Learning, Smartphone Applications, Mandarin
and attention of the educators since it is ubiquitous in the hands of instructors and students. The enthusiasm of mobile consumers will increase in next two years because that the apps will become more creative and convenient (Bothun, 2011). People use a smartphone for their educational and non-educational intentions such as managing their own information, doing research, reading, communicating with friends and instructors, messaging and surfing the internet (Jubien, 2013).

The inevitable advance of mobile technology has changed the way we learn, communicate and live. Learning through these mobile technologies is defined as mobile learning (m-learning) (Turkle, 2011) and as electronic learning (e-learning) (Guy, 2009). Brown (2008) concedes that m-learning combines strategies, practices, tools, applications, and resources which support learning anywhere and anytime. An important contribution to the mobile-technology is that teenagers can perform learning easily (Kee and Samsudin, 2014). ‘Digital natives’ (Prensky, 2007) or ‘net generation’ (Obilnger, 2003), students are technological friendly and digitally fluent since younger generations spend most of their time on these devices for socializing or entertainment. Reinders and Cho (2010) clearly pointed out that any tool that can increase students’ access to the language will contribute greatly to their learning progress. This enables learning opportunities in a meaningful way.

The special features of mobility and portability (Thornton & Houser, 2005; Wood, Jackson, Hart, Plester, & Wilde, 2011), social connectivity or interaction (Lan, Sung, & Chang, 2007; Zurita & Nussbaum, 2004), context sensitivity (Sandberg, Maris and De Geus, 2011) and individuality (Chang, Lan, Chang and Sung, 2010) have integrated traditional learning with the inevitable advance of technology and it makes the education function better in both formal and informal setting. Being net generations of the second or foreign language, learners and teachers now are having more chances to practice the target language nearly anywhere and anytime. Although there are numerous studies suggest benefits of using advanced technologies in language learning, the impact of smartphones as a learning tool has not been studied widely. Most of the time students use their mobile phones because of its portability, social interactivity, context sensitivity and connectivity; but they often do not know for what purpose they are using them.

This study intends to investigate how university students in Universiti Malaysia Terengganu (UMT) use a smartphone to learn Mandarin and explore ways to guide students to optimize learning Mandarin using their smartphones in their daily lives. The students’ attitudes towards the smartphones’ usability and effectiveness with this new language learning tool will also be examined.

2. Literature review

2.1 Mobile-Assisted Language Learning (MALL) in foreign language

Numerous studies have been reported on the use of mobile phones in developing language skills in the last few decades. Lu (2008) explored the use of short messaging service (SMS) and discovered that it has the capacity to contribute to enhancing language learners’ vocabulary. Meanwhile, Levy and Kennedy (2005) used SMS in learning Italian vocabulary and 94.4% of students responded positively to the project. Kiernan and Aizawa (2004) concluded that incorporating tasks which focus on meaning can enhance interest in learning a foreign language. Besides that, SMS is also can be used to motivate students to learn and enhance their vocabulary (Jolliet, 2007).

The advancement of technology enhance the efficiency of group learning and improve the quality of interaction during language learning since it offers features of shared tasks and real-time interaction (Lan, Sung, & Chang, 2007 and Zurita & Nussbaum, 2004). To sum up, plenty of programs of distant language learning were successful using different apps in mobile technology whereby it
has successfully created a meaningful environment for students from different countries to practice their language and getting feedback instantaneously.

2.2 MALL in learning mandarin

According to the most recent data from the U.S. Census Bureau, the number of people who speak Chinese in the U.S. ranks second among those who speak a language other than English (Ryan, 2013) which answers why there are a large number of foreign students interested in learning Chinese language. Furthermore, the number of smartphones in use world-wide surpassed 1 billion in 2012 and is expected to double in the next three years (Yang, 2012). In order to cater this increments, Liu & Räihä (2008) postulated that an easy-to-use Chinese text entry is needed to support the high penetration of mobile phones and SMS among Chinese users and they have successfully designed two new solutions for Chinese pinyin text entry with a rotator as an input device. On the other hand, Al-Mekhlafi, Hu & Zheng (2009) initiated Context-Aware Mobile Chinese Language Learning (CAMCLL) for foreign students as a service guide when the students are out of school for their real world Mandarin practice. CAMCLL guides the students by informing them, through their mobile phones, suitable sentences based on the four contexts (time, location, activity, and learner’s level). It is discovered that this approach has enhanced the Chinese language learning efficiency and effects for foreign students.

Earlier, Chan (2003) has discussed the usefulness of four software programs that are often related particularly and specifically to English-speaking American learners of modern Chinese. Advancement of ICT and mobile technology has introduced a large number of programs or mobile applications in learning foreign languages. Mobile learning games help to enrich their vocabulary and improve their knowledge of Chinese characters. Tian et. al. (2010) adds that mobile learning games can play an important role in the Chinese literacy acquisition process since it provides learning (second language)L2 in context. Meanwhile, in m-learning, Wong et. al. (2010) focused on learner-created content. They discussed the potential of transforming language learning into a real learning process. In the study, a number of students who were assigned to take photos in real-life were then asked to construct sentences with the prepositions or idioms given using mobile devices. The result showed that the students were more active in the classroom or online discussion for their semantic constructions.

3. Method

In the perspective of language teaching, mobile technology offers a great opportunity for instructors and learners to practice the target language ‘anywhere and anytime’ (Geddes, 2004). Recognizing the effectiveness of smartphones, this study intends to explore the students’ perceptions regarding the use of smartphones in learning Mandarin. The smartphone applications will be carefully explored. This paper will be expanded upon students’ satisfaction towards the effectiveness of smartphones as a learning tool. The information derived from the study will be useful for the instructors to adjust their learning styles to make the process of learning a foreign language more attractive and effective. The study addresses the issue on how Mandarin students use smartphones in learning Mandarin. Special interest was placed on the activities and students’ experiences involving the smartphones, as well as the perceived effectiveness and satisfaction of using smartphones in learning Mandarin.

This study utilized a quantitative research method which the data was gathered through an
adapted questionnaire (Chen, 2013). The questionnaire comprised of 24 questions. The first part of the survey was designed to find out the smartphone usage for learning Mandarin among the participants, while the second part was concerned with the participants’ perceptions about the effectiveness and satisfaction of using smartphones for Mandarin language learning.

79 undergraduates who are undertaking Mandarin language course students from Universiti Malaysia Terengganu were selected using comprehensive sampling technique. The reason for selecting this sample was of being a convenience because they were accessible to the researcher (Friedman, 2012). Participants were 67 females and 12 males from two courses: Communicative Mandarin (3 credit hours – 20 students) and Mandarin 1 (2 credit hours – 59 students).

A pilot study was carried out on members of the relevant population which were 30 Mandarin students from a nearby university. The reliability (Cronbach’s Alpha) calculated by SPSS version 16 was 0.917 which has fulfilled the standard of reliability (Sidek, 1990). The questionnaires were then distributed to all the Mandarin students in UMT at the 10th week of learning. Earlier, all participants were asked to download some Mandarin learning applications using their smartphones so they can use them in and outside of the class. The questionnaire was distributed to the students in Week 10 of the semester after they have some knowledge about Mandarin and smartphone applications.

4. Results

In this study, there is no surprise that all the undergraduates in the classroom owned a smartphone and all of them claimed that they had used their smartphones to learn Mandarin.

![Figure 1 Participants’ view on the usefulness of smartphone applications](image)

Figure 1 explains why smartphone is useful in learning Mandarin. All the participants have asked to download at least two types of Mandarin applications in the first class. The survey questionnaire was distributed to them in the 10th week. Since the students were introduced to the different Mandarin applications of smartphone earlier of the semester, the students were more confident and familiar with them. Furthermore, all of the students consented that smartphone was useful for Mandarin language learning because they were easily accessible (27.8%) and the variety of interesting features made it easy for them to learn new Mandarin Words (62%). However, some of the students informed that the smartphones can be useful but it depends on the Mandarin smartphone applications (5.1%). The result shows that smartphones aid students in learning
Figure 2 shows the different usages of smartphone reported by the students. The majority of the undergraduates used a smartphone to look up for new Mandarin words (67.1%) since the convenience of m-learning helped them to personalize their learning activities. Meanwhile, surfing related information about Mandarin (16.5%) and communicating with others using Mandarin (15.2%) were among the common usage of smartphones. One of the students reported that he use his smartphone for saving notes. The result shows that all the students make use of their smartphone in learning Mandarin.

In this study, types of smartphone applications were carefully explored. The participants were asked to list down the smartphone applications that they have downloaded, which helped and facilitated them in learning Mandarin. The responses were overwhelming since every of the students used more than two applications to improve their proficiency. It is discovered that the respondents enjoyed learning Mandarin using both types of smartphone applications, which are Dictionary Based (DBA) and Teaching and Learning Applications (TLA), and they found they are easy and interesting. All the students have downloaded 60 type (see Appendix) of Mandarin smartphone applications.

From the survey, there is 18 type of DBA and 42 type of TLA have been using by the students. Some of them are Pleco, 中ENG Dictionary, Hello Chinese, Chinese, Talking Chinese, Chinese Lite, Pinyin, 中文English, CN Phrase, Survival Kit, 24 HOURS Speak Chinese, A文, CHINESE 字典, Chinese Skill, Learn Chinese Chinese, Learn Chinese, 英汉English Chinese, 1200 字, and G文. All the smartphone applications are free and they are completed with the audio function. DBA provides meaning and the pronunciation of words, phrases, and sentences. Compared to DBA, TLA is more attractive which enable students to learn Mandarin words, phrases or sentences through many attractive and enjoyable techniques included games, songs, and oral exercises. In DBA, most of the students preferred Pleco(42%), Bravolo(27%) and 中ENG Dictionary(9%) and for TLA most of the students like ChineseSkill(32%), Survival Kit(28%) and HelloChinese(20%).

In short, there are numerous Mandarin smartphone applications which are free and charged which are very helpful in learning Mandarin. Most, if not all the applications will help the students to get the meaning of the Mandarin words, phrases, and sentences, listen and practice in pronouncing them anytime and everywhere, whether they are in or outside of the classroom. The respondents of this research have successfully installed and used more than two smartphone applications which including DBA and TLA in their smartphones. From the study, the students express their preferences more in TLA compared to DBA since the smartphone applications are
having more interesting and learnable functions in improving their proficiency.

This paper also attempted to assess undergraduates’ attitudes towards smartphone and language learning. A useful way to approach the evaluation of MALL technology is to address its usability, effectiveness, and satisfaction (Sharpes, 2009).

| Agree on the usefulness of smartphones | 86.1 |
| Ease the studying processes | 83.5 |
| Improve performance in Mandarin | 79.8 |
| Support critical aspects | 73.5 |
| Achieve more learning tasks | 74.7 |
| Increase outcome in learning | 74.7 |
| Accomplish learning tasks more efficiently | 87.3 |
| Give greater control of learning | 73.5 |
| Assist in Mandarin language learning | 83.5 |

Figure 3 Undergraduates’ Perceptions on smartphone applications in learning Mandarin (in %)

The result in Figure 3 showed that 87.3% respondents agreed that smartphone helped them a lot and gave them greater control over their learning of Mandarin language since the smartphones’ portability and accessibility has facilitated them in searching and receiving plenty of Mandarin learning material anywhere and anytime and at their own convenient pace. This shows that with the help of smartphones, the respondents are taking charge on their own learning and this can be a tool to promote autonomy, especially with issues of large class sizes or exam-oriented teaching. Additionally, the technology of smartphones enable the Mandarin applications to have the audio function, pictures and games, which can increase learning engagement. All these features have eased them in their language learning since 74.7% of respondents agreed that smartphone applications increased their learning outcomes as well as improved their Mandarin language performance (73.5%).

Smartphone applications in Mandarin not only allow autonomy, but it also helps to scaffold their learning. When they were given tasks on different aspects of learning Mandarin, respondents concurred that smartphones supported in locating and practicing critical aspects of language learning (65.9%). Since they are more autonomous, they sought for materials and practice their Mandarin during their free time, which confirmed that the applications enhance their effectiveness in learning (83.5%). By using the applications, they discovered that they could complete more learning tasks in a short time (78.5%). All in all, most of the students (83.5%) agreed on the usefulness of smartphones for Mandarin language learning and they were willing to use smartphones to learn the language.

Regarding the item of willingness in using a smartphone to learn Mandarin, the result showed that majority of the students (72.1%) were willing to continue using a smartphone for Mandarin language learning. This is agreeable with the findings in Figure 4 whereby the respondents concurred that using a smartphone can improve their language learning because it enhanced their effectiveness and interest in Mandarin. Additionally, 73.4% claimed that they were willing to learn more about how to better utilize a smartphone to learn a Mandarin language more effectively, and 83.5% students stated that they were happy to have learned more about how to use a smartphone
for Mandarin language learning. This provides definitive evidence from the earlier findings whereby the students found it was enjoyable and meaningful by using the smartphones in learning Mandarin and they are willing to explore the applications so that they can be more engaged in learning. Participants of the study thought that smartphones were easy, convenient and they can use them anywhere and anytime, which is agreeable with Geddes (2004). The respondents agreed that smartphone applications helped them in completing their Mandarin tasks and enhanced their performance not only in Mandarin subjects but also other studies. Most of them found it was interesting and willing to use smartphone continuously in learning Mandarin. They wanted to know more about the usage of the applications and they were satisfied with the smartphone applications in enhancing their Mandarin language performance. These results suggest that smartphones are a potentially promising tool for MALL.

5. Discussion

This survey explored how Mandarin students used smartphone applications for Mandarin language learning and their attitudes towards the latest advanced mobile technology. It comes as no surprise that the respondents did not need any introduction on how to use the smartphone applications. This echoes Prensky (2007) and Oblinger (2003) characterizations of the students which are ‘digital natives’ and ‘net generation’; students are technological friendly and digitally fluent. Based on the result of this study, the undergraduates agreed that smartphone applications were easy and convenient to use anytime and anywhere and the findings relate closely to Turkle (2011) whereby the students found learning more interesting using smartphones. The paradigmatic development of the MALL framework in enhancing language learning (Wong et.al., 2010) has resulted plenty of smartphone applications appeared online for language learning. All the smartphone applications are complete with audios, pictures, songs, and games. This is evident of the focus of MALL which is gradually shifting from content-based (delivery of relatively static learning content through mobile devices) to design-oriented (design of authentic and/or social mobile learning activities) studies (Kukulska-Hulme, A., & Shield, L.,2008).

MALL in Mandarin should be developed and practiced by the instructors in their language classes, especially Mandarin subject in UMT. This was because students enjoyed themselves exploring and they expressed their willingness to use these smartphone applications in future. This finding indicated that mobile devices have changed foreign language instructional methods and learning strategies with today’s students (Abdous et. al., 2009). In order to create an effective and supportive teaching and learning environment by using the smartphone applications, the concept of didactic (Kukulska-Hulme and Traxler, 2005) in MALL can be applied, and there were set of pedagogical approaches(Mayes and de Freitas, 2004 ; Fowler and Mayes, 2004) can be referred by the instructors.

Even though the students’ attitude towards smartphone applications is positive, it is important for the instructor to manifest the learners a new technological affordances system (Yu, Sun and Chang, 2010). In regards to this, instructors need to guide the students to optimize the utilization of the smartphone applications in learning Mandarin which include variety activity design, autonomous and collaborative learning in order to be combined with their cognitive underpinnings of language learning to enhance their competence. In short, smartphone applications, as well as other mobile technologies should be further studied to better serve both Mandarin teachers and students.
6. Conclusion

In the study, students use smartphone applications in learning Mandarin. It can be concluded that smartphone applications are ideal learning tools to enhance learner autonomy and ubiquitous learning in and outside of the classroom. The smartphone applications they have been using were carefully explored. It was cleared that most of the students used them in finding new words, sentences in terms of their meaning and pronunciations. They enjoyed using the smartphone applications and they were fluent using them and this method of learning has improved their language performance. The overall, majority of the students satisfied of using the smartphone as their Mandarin learning tools. All in all, smartphone applications and the guidance from instructors will be another way of teaching Mandarin to the students who have grown up using these advanced technologies.

Despite the contributions of this study to MALL, it is not free from limitations. One of the limitations of the study is the lacking of generalizability. The investigation was carried out with a limited number of participants. Although the results were revealing and of practical value to the authors and their institute, caution must be taken when the results are to be generalized to other settings. This can be done by more action research on MALL which focuses on smartphone applications in learning Mandarin and the relationship between MALL in Mandarin and performance in terms of listening, speaking, reading and writing skills.

Finally, it is important to understand the issue of smartphone applications in learning Mandarin and the students’ attitude towards effectiveness and satisfactions of smartphone applications. First, it is for the teachers to adapt MALL activities, especially how smartphone applications enable teachers to reduce workload and generate innovate teaching practices. Besides, it can be an interesting tool for the ‘net’ students to perform ubiquitous learning and practice their Mandarin language anywhere, anytime and at their own pace and convenience. Last but not least, it does not add a financial drain on school budgets because the students are using their own smartphones.
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