



Open Research Online

Citation

Kan, Qian and Tang, Jinlan (2018). Researching Mobile-Assisted English Language Learning Among Adult Distance Learners in China: Emerging Practices and Learner Perception of Teacher Role. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 8(3) pp. 1–28.

URL

<https://oro.open.ac.uk/56802/>

License

(CC-BY-NC-ND 4.0) Creative Commons: Attribution-Noncommercial-No Derivative Works 4.0

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Policy

This document has been downloaded from Open Research Online, The Open University's repository of research publications. This version is being made available in accordance with Open Research Online policies available from [Open Research Online \(ORO\) Policies](#)

Versions

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding

Researching Mobile-Assisted English Language Learning Among Adult Distance Learners in China: Emerging Practices and Learner Perception of Teacher Role

Kan Qian, The Open University, Milton Keynes, UK

Jinlan Tang, Beijing Foreign Studies University, Beijing, China

ABSTRACT

Guided by the conceptual framework for next generation designs for mobile-assisted language learning (MALL) in informal setting, our study investigates how mobile devices impact the learning practices and habits amongst adult distant learners of English at a higher education institution in China. Data sources include quantitative data of 148 completed responses to an online survey and qualitative data from follow-up email interviews. The study demonstrates that students' main motivation for engaging in mobile assisted English learning is to fill in the gaps in their daily schedule in order to maximize available time, and the majority use mobile devices to support formal course learning. The skills and knowledge areas practiced with mobile devices are listening, followed by speaking and pronunciation, vocabulary, reading, and translation. Our study also reveals that teachers play a very limited role as perceived by students, while students expect more support from teachers for their out-of-class hour mobile assisted language learning. The research findings bear significant pedagogical implications in terms of integrating MALL into language learning curriculum, learner support and the need for continuous teacher training.

KEYWORDS

Adult Distant Learners in China, English Learning, Informal Learning, MALL Design Pedagogy, Mobile Assisted Language Learning (MALL), Tutor Role

1. INTRODUCTION

The ever-increasing affordability, accessibility and sophistication of mobile communication technology has infiltrated the education market (Hao, Dennien, & Li, 2017). The ubiquitous nature of mobile technology enables learners to have access to resources 'appropriate to their immediate situation' (Read, Bárcena, & Kukulka-Hulme, 2016), which offers enormous opportunities to support learning and teaching both inside and outside the classroom (Martin & Ertzberger, 2013).

In the field of second language learning (L2), mobile devices have truly become language learners' personal digital assistants (PDAs) (Godwin-Jones, 2011). The wide range of language learning mobile applications encourages learners to be more learner-centred (Burston, 2014). As a result, the practices and behaviours of language learners are changing (Kukulka-Hulme, 2012a; Arvanitis, Krystalli, &

DOI: 10.4018/IJCALLT.2018070101

Panagiotidis, 2016). Mobile learning is especially important in a distance language learning context when students constantly struggle with the time as they work whilst studying (Glogowska, Young, & Lockyer, 2007); and when there is limited interaction between teachers and students and amongst peers (Kan, Owen, & Bax, 2018). Language learning outside class hours, assisted by mobile devices, is essential to the development of language competence (Levy & Kennedy, 2005; Kukulska-Hulme, 2012a). Previous studies have revealed that L2 adult distance learners are becoming more and more self-directed learners as the technology enables them to be better organized and spend more time learning the language than before (Demouy, Jones, Kan, Kukulska-Hulme, & Eardley, 2016; Kukulska-Hulme & De Los Arcos, 2011).

With the increasing ownership of mobile devices among the world's largest English language learning population and the Ministry of Education in China actively encouraging the use of technology in promoting instructional efficiency in college English language education (cf. China Ministry of Education, 2016), it is important to examine how learners in China use mobile devices to support their English language learning, and what and how mobile learning resources are used so that mobile language learning can be effectively embedded into the teaching. A better understanding of it is particularly important in distance education when the boundaries between formal classroom learning and informal outside class learning are blurred (Demouy et al., 2016). Our study intends to find out if the reported emerging practices among Western distance learners reported in Demouy et al.'s study (2016) apply to a different cultural context, i.e. adult distant learners at the university level in China. If there are differences, we will explore the reasons behind them. Our study also aims to extend Demouy et al.'s study in the sense that we look beyond emerging practices to include two new dimensions: i) to link the skills practiced or knowledge areas obtained with their favourite apps/resources; ii) and to explore learner perceptions of the tutor's role.

Our study is guided by the conceptual framework with six aspects of analysis proposed by Kukulska-Hulme (2012a) for next generation designs for mobile-assisted language learning to explore the interaction between time, space and characteristics of learning activities. Underpinned by Kukulska-Hulme's conceptual framework (see 3.2 for further details), our study partially replicates Demouy al.'s study (2016) in terms of using some of the questions in their survey in order to compare distance learners in the UK with those in China.

In the section that follows, we will briefly review relevant literature that informs the critical analysis of our data so as to answer the research questions (see 3.1). It will be followed by the research questions and methodology section where we describe our instruments and methods of analysis. We will then present the results with analysis, and finally we discuss some key issues with potential implications for MALL use for tertiary English language teaching practices in China and suggestions for future research.

2. LITERATURE REVIEW

In this section, we will review relevant literature on mobile assisted language learning in general and mobile assisted English language learning in China in particular.

2.1. Mobile-Assisted Language Learning (MALL)

MALL has many definitions. In this study, we follow the definition proposed by Kukulska-Hulme and Shield (2008, p.273) to define MALL in terms of "its use of personal, portable devices that enable new ways of learning, emphasizing continuity or spontaneity of access and interaction across different context of use". We will also regard the concept of mobility to include both learner and device as proposed by Palalas (2011). Over the last twenty years, there has been a proliferation of research on mobile-assisted language learning (MALL) (Burston, 2013; Chwo, Marek, & Wu, 2018) ranging from investigating emerging learner practices and patterns (e.g. Demouy et al., 2016; Kukulska-Hulme & De Los Arcos, 2011); the efficacy and usability of various mobile devices and apps for the learning

of various language skills and the acquisition of vocabulary and grammar knowledge (e.g. Arvanitis et al., 2016; Chang & Hsu, 2011; Mason & Zhang, 2017; Stockwell, 2010); integration of MALL into formal learning and MALL design pedagogical challenges (e.g. Burston, 2014; Cross, Sharples, & Healing, 2015; Stockwell, 2015); learner perception of teachers' role and attitudes (e.g. Palalas, 2011; Steel, 2012; Hao, Dennien, & Li, 2017; Sharples et al., 2016); learner attitudes and motivations (e.g. Hao et al., 2017); to learner profile and perceptions of MALL (e.g. Conole, De Laat, Dillon, & Darb, 2008; Hsu, 2013; Rosell-Aguilar & Kan, 2016); and exploring the use of social networks or mobile platforms for language practice and communication (e.g. Lamy, 2013; Plutino, 2017). Below, we will focus on i) emerging practices and learner behaviors; ii) link between the apps/resources with the language skills; iii) integration into formal learning; iv) MALL design pedagogy; and v) learner perception and attitudes of the tutor's role.

2.1.1. Emerging Practices and Habits in Informal Settings

The European Commission (2001, p. 32) offered the following definition for informal learning: Informal learning “results from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification. Informal learning may be intentional but in most cases, it is unintentional (or ‘incidental’/ random)”. In our study, we use the term ‘informal learning’ in a broad sense to include all language learning activities outside the planned class hours (be it virtual or face-to-face classrooms), which may be unintentional or intentional with the aim of supporting the learning of obtaining a certificate or qualification.

Cross, Sharples, and Healing (2015)'s study compared the impact of mobile devices on distant learners' study habits across a range of disciplines. One of the interesting findings was that over 70% of students on language, education and social care courses reported that their study habits had changed whilst only 50% of students on science and art related courses reported a change. It suggests that the affordances of smart phones and tablets are better suited for language learning as they enable the learners to practice the four essential skills: listening, speaking, reading and writing. Lai and Gu (2011) pointed out that ‘successful language learners often attribute their achievements in language learning to active engagement with the target language beyond the classroom (2011, p. 318). It is apparent that MALL can assist distance learners more in engaging in language activities because these students have limited interactions with tutors and fellow learners (Kan, Owen, & Bax, 2018).

Stockwell (2015) drew researchers' attention to the fact that although most mobile language learning takes place outside the classroom, the published research is largely based on the classroom settings, i.e. how the devices are used in the teacher-led classroom. It is because researching informal language involves more variables as it is less systematic and harder to identify (Van Marsenille, 2015). A study carried out by Kukulka-Hulme and De Los Arcos (2011, p. 77) explored informal mobile language learning by adults in the UK, and found that “mobile learners exhibit conventional language learning behaviours like memorizing vocabulary, while at the other end, they create their own agendas, networks, resources and tools”. Chwo et al. (2018) challenged the common wisdom that “with MALL, learning can take place at any time or any place” as many learners have preferred times and places for their study (Chwo et al., 2018, p. 70). One of the aims of our study was to find out learners' preferred times and places.

Demouy et al. (2016)'s study, one of a few set in distance language learning context, explored why and how distance language learners in The Open University (UK) used mobile devices for language learning. This study showed that these language learners were becoming more self-directed in exploring what worked for them; they spent more time learning the language as the mobile devices allowed them to have access to learning materials in places and at times where and when it was unimaginable in the past. It also revealed the top two reasons for using the mobile devices for language learning: 1) exploring more resources for language learning; and 2) taking advantage of the gaps in daily schedule for language learning. Although such learning activities by students took place

informally outside class hours, sometimes the aim was to prepare for assignments which are related to their formal learning for a certificate or degree. The findings from their study give a snapshot of some emerging new practices and preferred activities by students using mobile devices. What is missing from this study is to identify the preferred apps and resources, and then link the preferred apps/resources with the language skill(s) practiced. For example, which apps are used for practicing speaking or vocabulary-building and why? Our study was set out to find out about it.

2.1.2. Link Between the Apps/Resources with the Language Skills

Most studies on MALL supported the hypothesis that mobile technology could enhance learners' second language acquisition, improving knowledge of vocabulary (Levy & Kennedy, 2005; Stockwell, 2010), grammar (Wang & Smith, 2013), listening (e.g. Read & Kukulska-Hulme, 2015), and speaking (Rueckert, Kiser, & Cho, 2012), in both formal and informal settings (Demouy & Kukulska-Hulme, 2010). There have been many studies giving descriptive analysis of a specific language learning app, and how the app helps improving listening, speaking and reading skills. Chang and Hsu (2011) investigated the use of mobile devices to integrate an instant translation mode in an intermediate English as a foreign language (EFL) reading course. The study found that the use of mobile devices encouraged collaborative learning, and as a result improved the reading skills. The study carried out by Mason and Zhang (2017) attempted to match the app(s) used by learners of Chinese as a foreign language with the language skill(s) practiced, but failed to explain the reasons behind their choices, i.e. the key features of the apps. Our study aims to identify the key features.

Arvanitis, Krystalli, and Panagiotidis (2016) conducted a desktop research that analyzed 20 free apps for L2 language learning, which revealed that the content of most of the applications focuses on the development of lexical and grammatical competence, lexical competence in particular. However, they did not investigate learner experience of these apps, and they did not identify the key features of the most popular apps/ resources which were not matched with the language skills practiced, as reported by learners.

2.1.3. Integration into Formal Learning

It is well established in the literature that MALL can motivate students by increasing their language learning opportunities outside the class (Kukulska-Hulme, 2005; Thornton & Houser, 2005; Huang & Sun, 2010), and by embedding the learning process into their everyday life (Price & Rogers, 2004). Cross et al. (2015) surveyed 3003 adult distant learners on undergraduate courses of various disciplines including language learners. It reveals distance learners in the UK use and integrate mobile devices to support their formal learning. 77% of participants reported that they accessed university study materials at least once a week such as reading course materials, taking part in online course discussion forums, downloading assessment materials, etc. Although the study did not focus on language learners, the large sample provided enough evidence that adult distance learners use mobile devices to support their formal learning. In Demouy et al. (2016)'s study on distance language learners, although only 5% reported that they used mobile devices in routine sessions to work on course materials, there were a further 36% who reported that they engaged in mobile learning in both unplanned sessions and planned times to support their formal course work. It is worth pointing out that the majority of participants (59%) in their study reported using mobile devices informally for language learning. Does it apply to distance language learners in China? Knowing how learners use mobile devices outside class hours to support their formal learning is very important because tutors can then design language activities that are suitable to carry out on mobile devices

2.1.4. MALL Design Pedagogy

Chwo et al. (2018), after undertaking a meta-analysis of 213 recent papers in English on MALL, concluded that the first principle of MALL design is that designers must "consider carefully how the intended learners already use their personal mobile technology – where, how, and how long – and

ensure that MALL tasks align with those pre-existing habits of use” (p. 69). This is supported by many researchers such as Sharples (2016) who argued that designers should take into consideration the importance of learner contexts, peers, how to connect learning in the classroom with the learning outside the classroom. Wang and Smith (2013) also pointed out that the content of mobile learning needed to be related to the course work, otherwise students would be reluctant to engage in it outside the class, which was particularly the case for distance learners (Read & Kukulska-Hulme, 2015).

2.1.5. Tutor’s Role in Mobile Language Learning

There is uncertainty in the teaching and learning community about the tutor’s role in a mobile learning environment. It has been argued that teachers need to know the language apps students were using so that they could offer guidance and support on how to extend the learning benefits (Steel, 2012), otherwise teachers would be reluctant in getting involved (Chwo et al., 2018). The investigation of students’ perceptions of teacher role in a proposed mobile learning environment in a developing country showed that students needed a lot of teachers’ input throughout the learning process and expected the teacher to control the learning process (Imtinan, 2013). This view is supported by other researchers. The study by Palalas (2011, p.71) came to the conclusion that “this dynamic process of situated learning has to be supported by access to peers and facilitators.” When commenting on the informal learning through social media impacted by mobile devices, Sharples et al. (2016, p. 4) pointed out that anyone “can engage and leave at any time, but a skilled facilitator who takes on the tasks of filtering resources and engaging people can keep a social media project running for many years”. For teachers to meet the new learning environment, Kukulska-Hulme (2012b) argued that institutions must provide opportunities for professional training and life-long learning. They all seemed to agree on the importance of tutor involvement in mobile learning settings.

But, should tutors get involved in the learning spaces outside the class hours? Do we know how learners feel about it? There are a few studies investigating learners’ expectations and attitudes. Set in the context of social media and social network, Plutino (2017) ’s study reported that participants in her Twitter group expressed needs for tutors to provide opportunities to improve their communicative language skills outside timetabled lessons, which demonstrated students’ expectations of tutors’ active roles in guiding and supporting their outside mobile language learning and the success of tutors’ intervention. It suggests that teacher intervention would be only effective when required by students. In another study on distance language learners’ use of social network for learning, it was discovered that students were likely to participate and contribute more in the social network where the atmosphere was relaxed and easy than when they were invited by the teacher to reflect on a course point or by students to join in a structured activity (Lamy, 2013). Although both studies were set in a social media context, they can shed lights on how to manage teacher intervention and how to design effective outside classroom mobile learning activities as the studies reinforces the importance of getting to know students’ expectations and needs.

Another relevant and interesting study that is worth mentioning is the cross-cultural study on EFL learners’ perceptions of MALL conducted by Hsu in 2013. The participants in Hsu’s study were from Taiwan, who share similar cultural heritage as those of mainland China. Hsu’s study suggested that students from Asian heritage “greatly respect the status of teachers in the classroom, the participants believe that teachers cannot be replaced by technology” (Hsu, 2013, p. 208). This implies that learners of Asian heritage are more likely to welcome teacher intervention in their mobile assisted language learning. One of the aims of our study was to find out if this was the case with adult distance learners.

Most of the previous studies on MALL are situated outside China. Of 345 studies on MALL reviewed by Burston (2013), only five were set inside China. It might be due to the fact that only studies published in English were reviewed. Below, we will briefly review the literature on mobile assisted English language learning in China published in both Chinese and English.

2.2. Mobile Assisted English Language Learning in China

Arguably, China “constitutes the largest English learner group in the world” (You & Dörnyei, 2016). This statement is supported by the study carried out by Graddol (2006) and the British Council’s report (2013). English is taught in primary and secondary schools, and also at universities. It is a compulsory subject up till post-graduate level. Since China adopted the reform and opening-door policy in the early 1980s, “proficiency in English has been seen in China as a definite asset of considerable value” (You & Dörnyei, 2016, p. 496). As a result, there has been a substantial body of research on teaching and learning English as a foreign language (EFL), to name a few: challenges of learning English (Wu, 2001), distance language learning strategies (Xiao & Hurd, 2007); English learning motivations (You & Dörnyei, 2016); learner anxiety (Yan & Horwitz, 2008); and flipped classroom in EFL teaching (Zhang, 2017).

However, how Chinese EFL learners’ use of mobile technology in their English learning is under researched. A search using *Academic Search Complete* database returned a handful of studies. There are a few studies on user attitudes, perceptions and factors influencing learners’ acceptance of mobile devices for language learning (Hao et al., 2017; Wang, Zhong, & Lv, 2009). The majority of studies have focused on the feasibility of a specific application and its effectiveness of certain language skills such as speaking and vocabulary acquisition (e.g. Liu, Yu, & Ran, 2008; Chai, 2014).

In Hao et al.’s study (2017) on the factors that influenced mobile learning adoption amongst Chinese universities students, it revealed that the factors that affected mobile learning acceptance the most were “perceived educational need and ability to use” (Hao et al., 2017, p. 119), followed by social factors such as the projection of their social status. Another interesting finding from this study was that facilitation by instructors “should be given critical consideration when delivering mobile learning activities” (Hao et al., 2017, p. 117). It was a large-scale study that involved 292 university students. The study did not specify detailed information about participants in terms of their discipline area, but we can assume that some of them were English language students.

Amongst studies investigating the usefulness of a specific communication tool or app, one examined students’ views on using WeChat with teacher presence to improve listening and speaking skills, and an overwhelming majority (94%) of the participants responded positively (Chai, 2014). Another study explored flipped classroom in a medical English reading class via WeChat platform and WeChat community, and demonstrated improvement in students’ independent and collaborative learning, research and critical thinking (Jia, Zhang, & Shi, 2016).

There are very few studies set in the context of distance learning, one of which explored using Skype to assess distance language learners’ English-speaking skills (Zhao & Liu, 2012). The result showed that it could improve interaction and authenticity in speaking communication. However, it did not investigate the use of Skype on the mobile devices.

It is established in the literature that Chinese students have a positive attitude toward mobile language learning. However, in most studies, the interventions were initiated by teachers or researchers and were implemented from the top-down perspective. Very few studies have examined how EFL students use mobile devices for their informal learning out of interest and how such informal learning supports their formal university study. To our knowledge, there is limited study of this kind set in the context of distance EFL learners in China.

The above literature review suggests to us that there is a gap in the field on how and why adult distance language learners of English in China use mobile devices; what apps and resources they use and why; and their attitudes towards the tutor’s role in MALL. With the development of mobile technology, the boundaries between formal and informal learning are becoming increasingly seamless as students have more control over their studies. It is essential that educators have a better understanding about why and how students are using mobile devices to enhance their language learning in and outside the language classes. It is particularly important in the distance learning context as teachers

have limited face to face contact with learners, and when technology plays a very important role in their learning.

In the section that follows, we will present our research questions and methodology. .

3. RESEARCH QUESTIONS AND METHODOLOGY

3.1. Research Context and Research Questions

The study is undertaken in the Institute of Online Education at Beijing Foreign Studies University. The courses offered at the institute are mostly English language courses, and the instructional mode is independent learning supported with the multimodal support services ranging from the provision of autonomous learning materials, weekly face-to-face (F2F) and online synchronous tutorials, to Q & A online forums. Students are required to study about 22 courses (each course extended 16 weeks) for at least 2.5 years for a diploma or a post-diploma BA degree, or 5 years for a BA degree. The course assessment consists of formative assessment in the form of unit-based e-assessment and tutor-marked assignments, and summative assessment usually in the form of a final exam.

The overall aim of our study is to investigate how mobile devices impact on the learning practices and habits amongst adult distant learners of English, with four specific research questions:

RQ1: What are the patterns (scheduled or spontaneous) and learning behaviors when learning English assisted by mobile devices?

RQ2: How does informal mobile-assisted language learning support formal learning?

RQ3: What are the top apps/resources used for learning English and why?

RQ4: What is learners' perception of the tutor's role in supporting their use of mobile devices for English language learning?

3.2. Theoretical Framework for Research Design and Analysis

Kukulka-Hulme (2012a) proposed a conceptual framework for the design of language learning mobile apps in terms of the temporal and spatial characteristics of mobile learning scenarios, highlighting a series of questions in relation to language learning as presented in Figure 1 below. Although these questions were designed to be asked by app designers before developing an app, we argue that they can also be asked by a learner when using an app as well as asked by researchers when investigating learner behaviour and practices in mobile assisted language learning and exploring the relationship between the types of learning activities and the focus of language learning defined by time and place (see Figure 1).

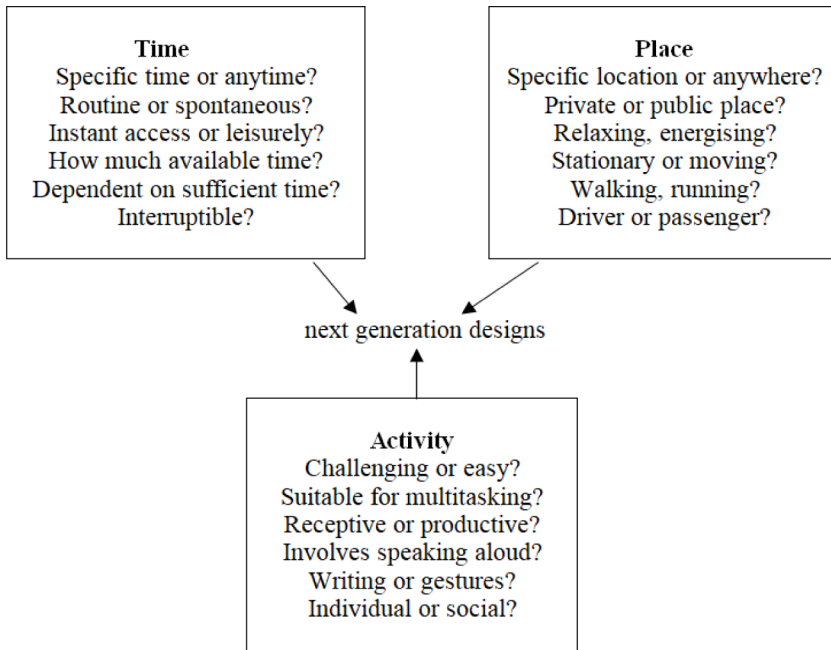
In the same paper, Kukulka-Hulme also put forward six aspects, consisting of six Wh-questions plus one How-question, for the analysis of MALL data or for interviewing participants for MALL research projects (see Figure 2).

The formulation of some of our questions in the questionnaire, the email interview questions and the analysis of data are guided by the framework and six aspects of analysis as they will help establish the connection between time, space and activities so as to answer the research questions of this study.

3.3. Research Participants

The participants of the study were 148 English major students from the diploma, post-diploma BA and BA programs of this online education institute. They were adult learners studying English at distance via the institute's own virtual learning platform and by attending weekly F2F tutorials. They were also supported by online synchronous tutorials and asynchronous forums. They usually study four or five courses per term on average and for each course they need to complete eight e-assessments and two tutor-marked assignments, and a final exam. The demographic information of the participants is shown in Table 1.

Figure 1. Conceptual framework for next generation designs for mobile-supported language learning in informal settings. Source: Kukulska-Hulme, 2012a, p. 9



Among the participants who submitted their responses, female students accounted for 75% of the whole population. Nearly three quarters (75%) were below the age of 35, with students of 26-35 years old occupying more than half the population. None of the participants in our study was above the age of 56. In comparison with student profile at The Open University (UK) where Demouy et al.'s study was carried out, the Chinese distance learners seem to be much younger. Between 50 – 60% of students at UK's Open University are above the age of 40, and over 10-15% above the age of 56 (Coleman & Furnborough, 2010). Although Demouy et al.'s study (2016) did not specify the

Figure 2. Six aspects for MALL analysis. Source: Kukulska-Hulme, 2012a, p. 5

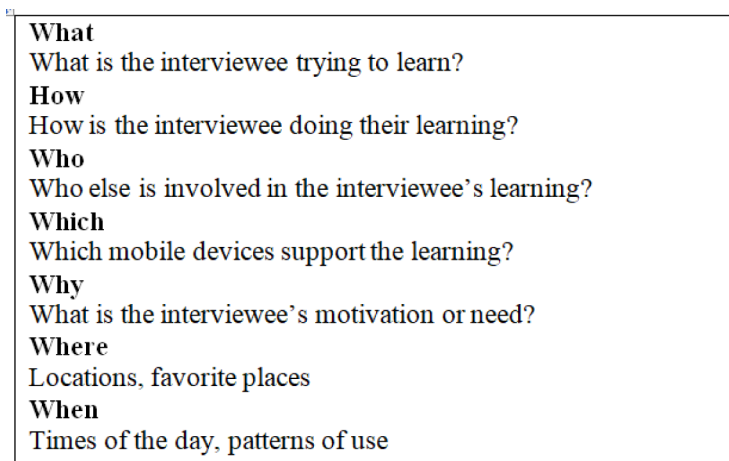


Table 1. Demographics of the participants

| | | |
|-----------------------|------------------------|--------|
| Gender | Male | 25% |
| | Female | 75% |
| Age | Under 25 | 21.62% |
| | 26 – 35 | 53.38% |
| | 36 – 45 | 22.3% |
| | 46 – 55 | 2.7% |
| | Over 56 | 0% |
| Qualifications | High school diploma | 19.59% |
| | Diploma | 50% |
| | BA degree | 27.03% |
| | MA degree or above | 3.38% |
| Occupations | Corporate staff | 61.49% |
| | Teachers | 10.81% |
| | Non-corporate workers | 8.11% |
| | Others, please specify | 19.59% |

percentage of participants in each age band, it did indicate that they ranged from 20 to 65+. The younger profile of our participants can mean that they were more open to adapting new technology and less afraid of trying new things.

It is also worth noting that 27.03% students have already had BA degrees before they joined this program. More than half of the students (61.49%) worked full-time in companies, hence they were time-poor as noted in the literature (Glogowska, Young, & Lockyer 2007).

3.4. Data Collection

Two different data collection instruments were used: online survey questionnaire and follow-up asynchronous email interviews. The online survey questionnaire was prepared in Chinese and sent to approximately 900 students with 148 complete responses (16.4% response rate).

It contained three parts (22 questions) with both closed and open ended questions: i) how and why they used their mobile device (activities, contexts, frequency, places and times, top three most frequently used apps/resources) to answer RQ 1 and 2; ii) how mobile learning supported their formal university course to answer RQ 3; and iii) what were tutors' roles and what they thought tutors' roles should be to answer RQ 4. Some of our questions in Part 1 were similar to questions in Demouy et al.'s study (2016) and some were formulated based on Kukulska-Hulme's (2012a) conceptual framework for mobile design (see Figure 1) as well as framework for MALL analysis (see Figure 2) to explore the relationship between time, place and activity, with the focus on what and how learners carry out their language learning activities. Questions for Part 2 and Part 3 were guided by the gaps in the research regarding integrating informal learning with formal learning and the tutor's role, as presented in the literature review above (see Appendix for the questionnaire).

Six students who completed the online questionnaire volunteered to be interviewed. We checked that the volunteers had all fully engaged with the survey questions, so it meant that their responses to certain questions could be further explored. Asynchronous email interview format was adopted for logistical reasons (e.g. the feasibility of implementation). The email interviews comprised six open-ended questions in Chinese intended to gain a deeper understanding of students' experiences in terms of the perceived benefits and drawbacks of mobile devices in their learning, why they preferred

some apps/resources to others, why they did / did not want tutor support, and how they would like to be supported by their tutors and why. All six respondents replied to the questions by email with some degree of detail.

3.5. Data Analysis

A mixed-methods approach was used in analyzing the survey and email interview data. Quantitative descriptive analysis was carried out for analyzing closed objective questions in the survey to provide us with an initial broad picture of the research questions we wanted answers for. Some descriptive statistics was generated by the online survey tool itself such as the percentage of respondents reporting where they were engaged with MALL, whilst other statistics such as the top five most popular apps/resources used were calculated manually by counting each occurrence in the answers to the open ended questions. These descriptive statistics were then contextualized and explored more fully by using qualitative analysis to capture students' attitudes and perceptions. Qualitative data from the interviews along with students' responses to the open-ended questions in the survey were analyzed manually by the researchers and coded into broad themes via the thematic analysis method (Braun & Clarke, 2006; Bryman, 2008) and guided by Kukulska-Hulme's conceptual framework of the interaction between time, place and language activities (2012a) (see Figure 1 and Figure 2). All this was also integrated with the demographic information of the participants.

4. RESULTS AND ANALYSIS

Research results were reported in the order of the four research questions.

4.1. Mobile Learning Habits: Frequencies, Favourite Times and Places

When inquired whether they used mobile devices for learning English such as looking up words or practicing word pronunciation, 89.86% reported using mobile apps or resources for English learning. This figure is much higher than that in Demouy et al. (2016) who reported 53% using mobile devices for language learning. A possible explanation might be that participants in this study were younger than those in Demouy et al.'s study (over 75% below the age of 35 and zero above the age of 56 vs ranging from 20 to 65+) and that our participants, like many Chinese students, may be more motivated in English learning as pointed out by You and Dörnyei (2016). Another reason might be that Demouy's data was collected in 2014 when mobile devices were not as affordable as nowadays.

An overwhelming majority of the students (92.48%) responded that the use of mobile devices enabled them to study at times and in places they would not normally have studied in the past, a similar response (86.5%) was also observed in Demouy et al. (2016)'s OU study, which reinforced the fact that mobile devices have offered immense opportunities for language learning and have enabled learners to learn whenever and wherever they want. As one student noted,

The biggest advantage of apps is that it could help you to study whenever and wherever you would like to. (Student 2, email interview)

Not surprisingly, a large number of students (77.24%) reported that consequently they were spending more time on language learning as a result, which is very important to language learning as more exposure and time spent, more progress will be made. This finding again replicates that in Demouy et al. (2016)'s OU study with 78.6% of the participants acknowledging more time spent on language learning.

The questionnaire also demonstrated that 43.61% of the participants engaged in mobile learning several times a day or daily, 21% reporting several times a week, only 15% participants using it "once a week" or "less often" (Table 2). The finding pinpointed that for a significant number of participants in this study, mobile learning has become a very important part of their learning process.

Table 2. Mobile English learning: how often?

| | Frequency | Percentage |
|-------------------------|-----------|------------|
| A. Several times a day | 58 | 43.61% |
| B. Several times a week | 28 | 21.05% |
| C. Once a day | 27 | 20.3% |
| D. Less often | 14 | 10.53% |
| E. Once a week | 6 | 4.51% |

Table 3. Impact on learning: favorite times

| | Frequency | Percentage |
|------------------------|-----------|------------|
| A. Last thing at night | 76 | 57.14% |
| B. Commuting to work | 60 | 45.11% |
| C. At lunch breaks | 36 | 27.07% |
| D. Weekends | 27 | 20.3% |
| E. Daily walks/jogging | 17 | 12.78% |
| F. At breakfast | 16 | 12.03% |

As the majority of respondents were working full time, it was not surprising that their favorite time to carry out learning was the last thing at night (57.14%), followed by 45% of the participants selecting on the way commuting to work (Table 3).

Similar to participants' responses to the favourite time for mobile learning as the last thing at night, the largest percentage of students (58.65%) preferred doing mobile learning in a quiet place on their own (e.g. home) (Table 4). This is an interesting finding, which might be due to the fact that they carry out mobile learning to support their formal study such as to complete the coursework or prepare for the exam, hence they need a quiet place in order to concentrate (see 4.2). As our participants could choose as many options that applied, the second most favourite places reported were determined by the need or whenever the opportunity arises (51%), which corresponds to their response to favourite times as 'commuting to work' ranked second (45%) in Table 3.

The third high responses (40.6%) was about engaging in mobile learning "On the move (e.g. travelling on the train/bus, jogging/driving)", which was also in agreement with students' response

Table 4. Impact on learning: favourite places

| | Frequency | Percentage |
|--|-----------|------------|
| A. In a quiet private place on your own (e.g. home) | 78 | 58.65% |
| B. Whenever there is the need or the opportunity arises | 68 | 51.13% |
| C. On the move (e.g. travelling on the train/bus, jogging/driving) | 54 | 40.6% |
| D. In places where free wifi is available | 32 | 24.06% |
| E. In a private place whilst doing something else (e.g. cleaning your room/preparing food) | 22 | 16.54% |
| F. In a public place in between meetings or waiting for others for meetings | 20 | 15.04% |
| G. During a lecture or class when tutors give you work to do | 9 | 6.77% |

Table 5. Situations to engage in mobile English language learning

| Situations | Frequency | Percentage |
|---|-----------|------------|
| A. More informally, in short bursts of time, as when and where the opportunity arises | 73 | 54.89% |
| B. In planned learning sessions (e.g. routine evening sessions at a fixed time to work with course materials, or on regular journeys) | 16 | 12.03% |
| C. Both of the above | 44 | 33.08% |

to the favourite time to do mobile learning, with the second highest number of students (45.11%) choosing while ‘commuting to work’ (see Table 3). This reinforces the previous research findings that the affordance of mobile technology has brought about otherwise unavailable opportunities for language learning (e.g. Demouy et al., 2016); and in the meantime such findings will inform the mobile learning design. For example, appropriate listening tasks could be designed for jogging or driving.

However, 15 students did not use mobile devices, and the most frequently cited reason was that “I prefer using print materials for English learning” (46.67%), followed by “I prefer using my computer or laptop” (40%), which suggests that some students were not used to and not ready for this novel type of learning. Interestingly, one third of the students chose “I have tried to use my mobile device for English learning but I have not found any useful applications” (33.33%), indicating the need for tutors to recommend good mobile learning resources. 20% students reported that they did not know how to use mobile devices to study English, which coincided with Stockwell (2010)’s findings that owning mobile devices did not literally mean that students would know how to use it for learning, which called for the need for learner training in mobile learning (Stockwell, 2015).

4.2. Supporting Formal University Courses

Nearly three-quarters of the participants (73.7%) reported that they used mobile devices to support the university courses they are studying. This finding helps to explain why the highest number of respondents chose ‘last thing at night’ as their favourite time as most of them work during the day and ‘in a quiet place on your own’ to carry out mobile learning activities (cf. Tables 3 and 4).

Regarding how learners engaged themselves in mobile learning, our finding was very similar to Demouy et al.’s study (2016), in which the largest number of students (over 54%) reported that they engaged in mobile learning informally (as when and where the opportunity arose), and followed by the third choice, which included both the formal and the informal learning (Table 5).

This seems to be contradictory: if their favorite study time is the last thing at night and in a quiet place, one would expect more respondents to choose ‘planned sessions’ at a fixed time. It could be that the question on ‘planned session’ was not clearly explained in the questionnaire, and students might have assumed that these learning sessions are planned by the teachers. It could also be that the respondents interpreted the term ‘informally’ as ‘not the work assigned by teachers’.

On the preferred mobile learning activities, the largest number of students (71.4%) indicated using mobile devices to practise the new vocabulary in the course materials, which supports the finding that 73.7% respondents carried out mobile learning to support formal courses, and it also verifies the popularity of learning vocabulary via mobile devices in previous research (Levy & Kennedy, 2005; Stockwell, 2010) (Table 6).

Not surprisingly, the next popular activity was to listen to the audio clips in the course materials, echoing earlier students’ course experience reflections in which they expressed the wishes of having the audio clips of the texts (Feng, 2015).

An overwhelming majority of the students (97.7%) reported that they engaged in learning English with mobile devices on their own, whilst only 3 students (2.3%) indicated that they engaged in some of the activities with other people. This was understandable as most students involved in mobile

Table 6. How to use mobile device (s) to support the university courses

| | Frequency | Percentage |
|---|-----------|------------|
| A. Practising the new vocabulary in the course materials | 70 | 71.43% |
| B. Listening to the audio clips in the course materials | 49 | 50% |
| C. Finding out more about the cultural points in the course materials | 32 | 32.65% |
| D. Translating the texts in the course materials | 30 | 30.61% |
| E. Checking the grammar points in the course materials | 25 | 25.51% |
| F. Completing coursework (e.g. drafting an essay or any piece of writing work) | 18 | 18.37% |
| G. Taking notes of difficult points you do not understand so you can ask your tutor later | 10 | 10.2% |
| H. Practising dialogues in the course materials with fellow students | 7 | 7.14% |

learning spontaneously in situations when and where an opportunity arose (see Table 5), therefore it would be difficult to find peers who were also available at the same time.

Participants' main motivation (47.37%) was that they want to maximize gaps in daily schedule to practice language skills (Table 7), i.e. they engaged in mobile language learning "more informally, in short bursts of time, as when and where the opportunity arises" (Table 5), and to support the university courses they were studying.

Mobile learning is more flexible, and can enable us to fill in the gaps, and to use the gaps to learn vocabulary and practice listening. (Student 3, email interview)

The next one was enriching English cultural knowledge (40.6%), as mobile devices could lend themselves to rich audio-visual resources of the English-speaking countries and students could listen and watch when or where there was an opportunity.

Mobile learning can adapt to our needs easily. In my spare time, I used my mobile phone to get to know the latest news, the interesting places and foods abroad, and to learn more practical words and expressions for travelling. (Student 2, email interview)

4.3. Favorite Apps/Resources and Skills Practiced

The questionnaire data demonstrated that the two main types of device used for language learning were smart phones and tablets/iPads. The top skill practiced is listening (63.91%), followed by speaking and pronunciation (56.39%), vocabulary (54.89%), reading (42.11%), and translating (27.82%). This finding is similar to that of Demouy et al.'s study (2016) where an overwhelming majority of the students reported using mobile devices for practising listening skill.

Table 7. Main motivation for mobile English learning

| | Frequency | Percentage |
|---|-----------|------------|
| A. You want to fill in / maximise gaps (e.g. whilst waiting for the bus) in your daily schedule to practice your language skills. | 63 | 47.37% |
| B. You use it to enrich your English cultural knowledge. | 54 | 40.6% |
| C. You want to achieve high scores in the exam. | 8 | 6.02% |
| D. You use it to complete homework set up by your tutor. | 2 | 1.5% |
| E. You use it to play language games. | 2 | 1.5% |
| F. You find it useful when working on a group project/homework with other students. | 1 | 0.75% |

Table 8. Language skills and their practising apps or resources

| Skills and Knowledge Areas | Practising Apps or Resources |
|----------------------------|---|
| Listening | VOA (11), BBC (9), Hu jiang ying yu (沪江英语) (6), Xi ma la ya (喜马拉雅) (6), TED Talk (5), Ke ke ying yu (可可英语) (4), You dao (有道) (4), WeChat (微信) (3), Bai ci zhan (百词斩) (3), Ying yu liu li shuo (英语流利说) (3) |
| Pronunciation and speaking | You dao (有道) (11), Ying yu liu li shuo (英语流利说) (7), BBC related (7), Ying yu qu pei yin (英语趣配音) (6), Bai ci zhan (百词斩) (6), VOA(5), Hu jiang ying yu (沪江英语) (4), Wang Yi Open Course (网易公开课) (4), Wei ruan bi ying (微软必应) (4), Jin shan ci ba (金山词霸) (3), Shan bei (扇贝口语) (3), Ying yu mo fang xiu (英语魔方秀) (2), Xi ma la ya (喜马拉雅) (2), Ke ke ying yu (可可英语) (2), TED (2) |
| Vocabulary | Bai ci zhan (百词斩) (26), You dao (有道) (21), Hu jiang ying yu (沪江英语) (8), Jin shan ci ba (金山词霸) (7), Ke ke ying yu (可可英语) (3), Shan bei (扇贝) (3), Wei ruan bi ying (微软必应) (2) |
| Translation | You dao (有道词典) (20), Bai du fan yi (百度翻译) (6), Google Translate (2), Hu jiang ying yu (沪江英语) (2), Ke ke ying yu (可可英语) (2), Zhi mi bei dan ci (知米背单词) (2) |
| Reading | Shan bei (扇贝) (7), BBC (6), WeChat (微信公众号) (6), You dao (有道词典) (3), Jin shan ci ba (金山词霸) (3), Hu jiang ying yu (沪江英语) (3), Xi ma la ya (喜马拉雅) (2), Ke ke ying yu (2) |

Listening is a key skill in language learning and is perfectly suited for mobile learning due to advanced affordances in smart technology, which allows users to listen to audios or watch videos while learners are on the move or are doing some other less demanding activities such as commuting and doing the ironing.

I mainly use app and other mobile resources to practice listening, e.g. listening to the texts. Due to work and family commitments, I cannot study at computer for a long time. The app is very convenient and can allow me to fill in the gaps and study. (Student 1, email interview)

The participants in our study chose speaking and pronunciation as the second preferred activities, while in Demouy et al. (2016) study it was grammar and vocabulary or reading in some cases in second position. This is because our learners have less access to native speakers of English so pronunciation is one of the main challenges in learning English. Also the majority of our respondents worked in corporate companies (see Table 1), which might demand better spoken English competence. Mobile devices could provide learners with more opportunities and better tools to practise speaking and pronunciation such as its synchronous communication tools in WeChat, as evidenced in the quote below:

I use apps to improve my listening, speaking and reading, as these apps can help me study at any time at any place. In addition, as these apps can remind and monitor my learning. (Student 3, data source: email interview)

Table 8 demonstrates that practising pronunciation and speaking claims the highest number of apps reported, reflecting the needs by learners of English. *You dao* (11) is the most popular app for practising pronunciation and speaking, followed by *Ying yu liu li Shuo* (7), BBC related (7), *Ying yu qu pei yin* (6) and *Bai ci zhan* (6).

The next highest number of apps and resources used is for practicing listening, with VOA (11) and BBC (9) unsurprisingly being the first two main listening resources for its authentic English and most up-to-date news on international current affairs. The availability of apps for vocabulary and translation is limited so the learners' choices are more focused on one or two apps compared with that for pronunciation and speaking, and listening. For example, in terms of vocabulary, *Bai ci zhan* (26) and *You dao* (21) are the two most frequently used apps, and the latter (20) is also the top choice for practicing translation skills.

Table 9. Top five most frequently used resources: main uses and key features

| No. | Name | Skills Practiced | Key Features | Website |
|-----|------------------------|---|---|--|
| 1 | You dao(有道) | - Translate - Build and test vocabulary - Checking new words - Check example sentences where the new word appears - Listen to pronunciation | - Fast on mobile devices - Multifunctional (reading, translation, video clips, dictionary with example sentences, pronunciation) - Can translate individual words and longer sentences | cidian.youdao.com |
| 2 | Bai ci zhan (百词斩) | -Vocabulary building - Checking new words - Memorising new words | - Interesting visual aid with sound and video - Personalised to build one's own list - Make study plan and revise it - Simple and clear | www.baicizhan.com |
| 3 | Hu jiang ying yu(沪江英语) | - Listening -Speaking and pronunciation -Vocabulary building | -A good range of materials covering all subjects - Rich in listening materials - Gaming feature for vocabulary learning - in the form of breaking a blockade | www.hujiang.com |
| 4 | BBC | -Listening -Speaking and pronunciation | -Native pronunciation -Wide range of materials from news to current topics -Authentic materials | www.bbc.co.uk |
| 5 | Shan bei (扇贝) | -Listening -Reading -Speaking and pronunciation -Vocabulary building | -Covers news and current affairs with audio -One can make study plans and the system can remind learners -Reward system when the plan is accomplished (motivational) -App itself in constant upgrading and improvement | www.shanbay.com |

The top five most frequently used apps/resources reported are: *You dao* (有道), *Bai ci zhan* (百词斩), *Hu jiang ying yu*(沪江英语), BBC , *Shan Bei*(扇贝).

The main uses, features of the top five most frequently used apps/resources are listed in Table 9.

It is noticed that each app focuses on one particular skill or knowledge area, for example, *You dao* has different apps with each specialising in one skill/area. More importantly, the apps maximize the use of mobility and multimedia features, *Bai ci zhan* uses images and videos to teach new words, while *Shan bei* provides authentic audio materials to practise listening. In addition, all the apps include gaming features to motivate learners. For example, *Hu jiang ying yu* has a feature called “breaking the blockade” which is a series of “blockades” like hurdles with vocabulary learning activities for learners to do. The app keeps a record of the “blockades” that are successfully “broken”. Furthermore, these apps offer a personal path of learning with a built-in revising and testing function, e.g. the system records and tracks learners’ learning process, e.g. study hours in the system, the number of words they have learned, etc. so as to foster learners’ independent learning.

In addition, the apps encouraged community building, process monitoring and sharing. *Bai ci zhan* allows the learner to share their progress with friends in the WeChat, e.g. the number of days the learner has been learning words with *Baici zhan*, and how many words they have mastered on a particular day. Through sharing daily gains with friends and community, learners can acquire a sense of achievement and feel motivated to keep on learning. Most of the apps used authentic English materials, and can be used offline except BBC.

Table 10. Perceived tutor role in the out-of-class mobile English learning

| | Frequency | Percentage |
|---|-----------|------------|
| A. Mobile learning is my own business and I don't want my tutor to get into it. | 7 | 5.26% |
| B. Tutors do not need to do anything except recommending some resources. | 28 | 21.05% |
| C. Tutors guide out-of-class mobile learning, including recommending resources and monitoring learning efficacy. | 43 | 32.33% |
| D. Tutors provide full support for out-of-class mobile learning, including participating in online forum discussions such as expressing opinions in the WeChat group. | 54 | 40.60% |
| E. Others, please specify. | 1 | 0.75 |

4.4. Learner Perception of and Attitudes Towards the Tutor's Role in MALL

Only 30.83% of the participants indicated that their teacher recommended mobile learning apps and resources for their English learning, and 15.79% reported that their teachers monitored students' use of mobile language resources, which demonstrated that teachers played a very limited role in students' mobile learning in this study.

An overwhelming majority of the participants (93.98%) expected their tutors to offer support to their out-of-class mobile English learning ranging from recommending resources and monitoring learning efficacy, to teachers' participation in the online forum discussions (Table 10), which supported Hsu's (2013) findings that students of Asian heritage welcomed teacher intervention in their mobile learning.

This finding also corresponded with that in another similar study in a developing country context (see Imtinan, 2013), in which the majority of the university students expected tutors to play an active part in their mobile learning instead of taking full responsibilities for their mobile learning.

Over 40% students anticipated that teachers would provide full support including contributing to their online forum discussion, which reinforced the research findings from previous similar studies (cf. Lamy, 2013; Plutino, 2017).

As I am not so sure about the answers or sometimes I forgot things easily, with teacher support, I can get accurate answers and also can remember better. For example, I can remember better the words and short phrases with teachers' instruction. The main reason is that we distance learners lack spoken English peer practice, we hope that university can help provide more support, such as assigning a topic and asking students to upload their recording, then teachers can offer feedback and can comment on students who are making progress, which can motivate students to work harder. (Student 3, email interview)

Our study found out that the key barrier to mobile language learning was that learners worried about being interrupted (42.86%) (Table 11), which is in line with our finding that the most favourite place for learning is in a quiet private place (cf. Table 4). This is an understandable concern as the likelihood of the learning being interrupted is high due to various external distractions such as other people on the phone or watching movie, and the distraction from the device itself such as notices from the various applications (Stockwell, 2015).

Most remaining barriers were related to technology, echoing the technological disadvantages of mobile devices identified by previous studies such as small screens causing reading difficulties, data storage and multimedia limitations (Miangah & Nezarat, 2012).

5. DISCUSSION AND CONCLUSION

Chwo et al. (2018) argued that "...there are significant discrepancies between how teachers and instructional designers anticipate that MALL devices will be used and how the students actually use

Table 11. Key barriers of mobile English learning

| | Frequency | Percentage |
|--|-----------|------------|
| A. Likelihood of being interrupted | 57 | 42.86% |
| B. No free wifi | 41 | 30.83% |
| C. Not enough storage on my mobile | 39 | 29.32% |
| D. Not having sufficient time | 32 | 24.06% |
| E. Slow download speed | 27 | 20.3% |
| F. Not used to the small screen of my mobile phone | 22 | 16.54% |
| G. Lack of privacy | 10 | 7.52% |

them...” (Chwo et al. 2018, p. 70). We hope that this exploratory study offered a comprehensive picture of how adult Chinese distance language learners use mobile devices for English learning, their habits and preferences, the language skills they practiced with their favourite apps/resources and their perceptions of the tutor’s role. Below are the key findings of our study.

Firstly, Chinese distant language learners in our study are overall similar in their habits and preferences in terms of time and place compared to distant learners in the UK in that the majority of Chinese students engaged in mobile learning informally and spontaneously in situations as when and where the opportunity arose, and they reported that more time was spent on English learning as a result of using mobile devices than previously. In terms of motivation for engaging in mobile English learning, it is also similar to Demouy et al.’s study in that they want to maximize the gaps in their daily schedule.

Secondly, the most favourite time for mobile learning was “the last thing at night” and the most favourite place for learning was “a quiet private place on their own”. This finding supports Chwo et al.’s (2018) challenge to the common wisdom of MALL taking place at any time and at any place. Our data clearly indicates that some learners have specific places and preferred times for mobile language learning. This result also aligns with our other finding that the majority of respondents in our study engaged in mobile language learning in order to support their formal course learning, which was not revealed in previous research, particularly in vocabulary-building and improving listening competency and spoken English. This also relates to the learners’ profile, as all of them are working full time, learning English for business purposes.

Thirdly, our study has identified the top five most frequently used mobile learning apps and resources: *You dao*, *Bai ci zhan*, *Hu jiang ying yu*, BBC, and *Shan bei*. The common features shared by them are: focusing on one language skill or knowledge area; maximizing multimedia functionalities; and with motivational and personalised learning features. These findings can inform app designers, so they can include these features that are valued by language learners.

Fourthly, the study also reveals that currently teachers play a very limited role in students’ mobile learning, as perceived by students. However, students expect more support from teachers for out-of-class hour mobile assisted language learning, including participating in online forum discussions such as providing support by setting up WeChat group, recommending learning resources, and monitoring learning efficacy.

We suggest that the above four key findings of this study have significant potential pedagogical implications for MALL use for tertiary English language teaching practices in both distance learning and face-to-face settings in three aspects: language learning pedagogy, learner support and teacher training. Regarding language learning pedagogy, the study indicates that the use of mobile applications as both a learning and revision tool needs to be embedded in the curriculum design; and educators need to design more engaging and bite-size language activities in accordance with learners’ expectations

and “pre-existing habits of uses” (Chwo et al., 2018, p. 69) so that learners can engage in outside the class hours to support their formal learning. Learner support is crucial in distance learning and our study reveals that learners welcome appropriate tutor guidance and intervention such as creating a common virtual space so that tutors can share good learning resources and study tips with learners. Finally, continuous teacher training is needed to equip teachers with the knowledge and confidence so as to play a more active role in MALL.

One of the limitations of this study is that we did not offer definitions of the terms ‘informal’ and ‘formal’ in our questionnaire, so some learners might interpret ‘informal learning’ as learning that is not related to their formal course, or only things that the teacher did not ask them to do. Also we did not explore this in the email interviews. In future research, we will investigate respondents’ understanding and perception of ‘informal learning’ and ‘formal learning’. As evidence from our data has backed up previous research that language learning has started to move out of the classroom and into the real world (Stockwell, 2010), further research is urgently needed on how to design effective language learning activities that maximize the affordances of mobile devices so that ‘informal’ learning can better support ‘formal’ learning.

ACKNOWLEDGMENT

This study was partly funded by China Scholarship Council. The authors would like to extend their thanks to colleagues Ms. Hu Xiaona and Ms. Cui Wei at the Institute of Online Education, Beijing Foreign Studies University for helping with data collection. The authors would also like to express their gratitude to the anonymous reviewers for their insightful feedback on the earlier versions of this paper.

REFERENCES

- Arvanitis, P., Krystalli, P., & Panagiotidis, P. (2016). Applications for mobile assisted language learning: a current field research. In *Proceedings of INTED2016 Conference*, Valencia, Spain, March 7-9. 10.21125/inted.2016.0803
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. Retrieved from <http://eprints.uwe.ac.uk/11735>
- British Council. (2013). The English effect. Retrieved from <https://www.britishcouncil.org/sites/default/files/english-effect-report-v2.pdf>
- Bryman, A. (2008). Of methods and methodology. *Qualitative Research in Organizations and Management*, 3(2), 159–168. doi:10.1108/17465640810900568
- Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994–2012. *Language Learning & Technology*, 17(3), 157–224. Retrieval from <http://llt.msu.edu/issues/october2013/burston.pdf>
- Burston, J. (2014). MALL: The pedagogical challenges. *Computer Assisted Language Learning*, 27(4), 344–357. doi:10.1080/09588221.2014.914539
- Chai, Y. L. (2014). Investigating the non-English majors' views on using WeChat in English speaking and listening instruction. [in Chinese]. *Computer Assisted Foreign Language Education*, 159, 34–39.
- Chang, C. K., & Hsu, C. K. (2011). A mobile-assisted synchronously collaborative translation-annotation system for English as a foreign language (EFL) reading comprehension. *Computer Assisted Language Learning*, 24(2), 155–180. doi:10.1080/09588221.2010.536952
- China Ministry of Education. (2016). *College English Curriculum Requirements*. Retrieved July 22, 2018 from http://www.360doc.com/content/17/02/03/14/413468_626210661.shtml
- Chwo, S. M. G., Marek, M. W., & Wu, W.-C. V. (2018). Meta-analysis of MALL research and design. *System*, 74, 62–72. doi:10.1016/j.system.2018.02.009
- Coleman, J. A., & Furnborough, C. (2010). Learner characteristics and learning outcomes on a distance Spanish course for beginners. *System*, 38(1), 14–29. doi:10.1016/j.system.2009.12.002
- Conole, G., De Laat, M., Dillon, T., & Darb, J. (2008). 'Disruptive technologies', 'pedagogical innovation': What's new? Findings from an in-depth study of students' use and perception of technology. *Computers & Education*, 50(2), 511–524. doi:10.1016/j.compedu.2007.09.009
- Cross, S., Sharples, M., & Healing, G. (2015). E-Pedagogy of Handheld Devices 2013 Survey: Patterns of student use for learning. The Open University, UK.
- Demouy, V., & Kukulska-Hulme, A. (2010). On the spot: Using mobile devices for listening and speaking practice on a French language programme. *Open Learning*, 25(3), 217–232. doi:10.1080/02680513.2010.511955
- Demouy, V., Jones, A., Kan, Q., Kukulska-Hulme, A., & Eardley, A. (2016). Why and how do distance learners use mobile devices for language learning? *The EuroCALL Review*, 24(1), 10–24. 10.4995/eurocall.2016.5663
- European Commission. (2001). *Communiqué Making a European Area of Lifelong Learning a Reality* (Brussels). Retrieved from http://www.viaa.gov.lv/files/free/48/748/pol_10_com_en.pdf
- Feng, X. (2015). Investigating Chinese distance language learners' experience with online courses. *Presentation at the faculty research conference at the Institute of Online Education*, Beijing Foreign Studies University.
- Glogowska, M., Young, P., & Lockyer, L. (2007). Should I go or should I stay? *Active Learning in Higher Education*, 8(1), 63–77. doi:10.1177/1469787407074115
- Godwin-Jones, R. (2011). Emerging technology: Mobile apps for language learning. *Language Learning & Technology*, 15(2), 2–11.
- Graddol, D. (2006). English Next. Why global English may mean the end of 'English as a Foreign Language.' The British Council & The English Company (UK) Ltd.

- Hao, S., Dennien, V. P., & Li, M. (2017). Influential factors for mobile learning acceptance among Chinese users. *Educational Technology Research and Development*, 65(1), 101–123. doi:10.1007/s11423-016-9465-2
- Hsu, L. (2013). English as a foreign language learners' perception of mobile assisted language learning: A cross-national study. *Computer Assisted Language Learning*, 26(3), 197–213. doi:10.1080/09588221.2011.649485
- Huang, C., & Sun, P. (2010). Using mobile technologies to support mobile multimedia English listening exercises in daily life. *Paper presented at the International Conference on Computer and Network Technologies in Education*, Beijing.
- Liu, J., Yu, S., & Ran, M. (2008). Research on the communicative mobile English learning model. In *Fifth IEEE International Conference on Wireless, Mobile, and Ubiquitous Technology in Education*, Wuhan, China (pp. 60–64).
- Kan, Q., Owen, N., & Bax, S. (2018). Researching mobile-assisted Chinese-character learning strategies among adult distance learners. *Innovation in Language Learning and Teaching*. doi:10.1080/17501229.2018.1418633
- Kukulska-Hulme, A. (2012a). Language learning defined by time and place: A framework for next generation designs. In J. E. Díaz-Vera (Ed.), *Left to My Own Devices: Learner Autonomy and Mobile Assisted Language Learning* (pp. 1–13). Bingley, UK: Emerald Group Publishing Limited.
- Kukulska-Hulme, A. (2012b). How should the higher education workforce adapt to advancements in technology for teaching and learning? *The Internet and Higher Education*, 15(4), 247–254. doi:10.1016/j.iheduc.2011.12.002
- Kukulska-Hulme, A., & De los Arcos, B. (2011). Triumphs and frustrations of self-motivated language learners using mobile devices. *Paper presented at the CAL Conference 2011—Learning Futures: Education, Technology and Sustainability*, Manchester, UK.
- Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271–289.
- Kukulska-Hulme, A. (2005). Mobile usability and user experience. *Mobile Learning: A handbook for educators and trainers*. In A. Kukulska-Hulme & J. Traxler (Eds.), *Mobile Learning: A Handbook for Educators and Trainers* (pp. 45–56). London: Routledge.
- Lai, C., & Gu, M. Y. (2011). Self-regulated out-of-class language learning with technology. *Computer Assisted Language Learning*, 24(4), 317–335. doi:10.1080/09588221.2011.568417
- Imtinan, U. (2013). The teacher's role in mobile learning – Perceptions of university students in Pakistan. *Transactions on Mobile Learning*, 2, 20–23.
- Jia, L. Y., Zhang, G. Y., & Shi, C. (2016). Flipping medical English reading class based on WeChat public platform and WeChat community. [in Chinese]. *Computer Assisted Foreign Language Education*, 168, 65–69.
- Lamy, M.-N. (2013). “We don't have to always post stuff to help us learn”: Informal learning through social networking in a beginners' Chinese group. In C. Meskill (Ed.), *Online Teaching and Learning: Sociocultural Perspectives* (pp. 219–238). London: Bloomsbury Academic.
- Levy, M., & Kennedy, C. (2005). Learning Italian via mobile SMS. In A. Kukulska-Hulme & J. Traxler (Eds.), *Mobile Learning: A Handbook for Educators and Trainers* (pp. 76–83). London: Routledge.
- Mason, A., & Zhang, W. (2017). An exploration of the use of mobile applications to support the learning of Chinese characters employed by students of Chinese as a foreign language. In Kan & Bax (Eds.), *Beyond the Language Classroom: Researching MOOCs and Other Innovations* (pp. 99–112). Dublin Ireland: Researchpublishing.net. 10.14705/rpnet.2017.mooc2016.674
- Martin, F., & Ertzberger, J. (2013). Here and now mobile learning: An experimental study on the use of mobile technology. *Computers & Education*, 68, 76–85. doi:10.1016/j.compedu.2013.04.021
- Miangah, T. M., & Nezarat, A. (2012). Mobile-Assisted language learning. *IJDPS Journal*, 3(1), 309–319. 10.5121/ijdps.2012.3126
- Palalas, A. (2011). Mobile-assisted language learning: designing for your students. In Thouěšny & Bradley (Eds.), *Second Language Teaching and Learning with Technology: Views of Emergent Researchers* (pp. 71–94). Dublin: Research-publishing.net. 10.14705/rpnet.2011.000007

- Plutino, A. (2017). Teachers as awakers: a collaborative approach in language learning and social media. In *Innovative Language Teaching and Learning at University* (pp. 1–11). Enhancing Employability; . doi:10.14705/rpnet.2017.innoconf2016.661
- Price, S., & Rogers, Y. (2004). Let's get physical: The learning benefits of interacting in digitally augmented physical spaces. *Computers & Education*, 43(1), 137–151. doi:10.1016/j.compedu.2003.12.009
- Read, T., Bárcena, E., & Kukulska-Hulme, A. (2016). Mobile and massive language learning. In *Technology-Enhanced Language Learning for Specialized Domains: Practical Applications and Mobility* (pp. 151–161). Abingdon: Routledge.
- Read, T., & Kukulska-Hulme, A. (2015). The role of a mobile app for listening comprehension training in distance learning to sustain student motivation. *Journal of Universal Computer Science*, 21(10), 1327–1338.
- Palalas, A., & Ally, M. (Eds.). (2016). *The International Handbook of Mobile-Assisted Language Learning* (pp. 399–434). Beijing: China Central Radio & TV University Press.
- Rosell-AguilarF.KanQ. (2016). Design and user evaluation of a mobile app to teach Chinese characters.
- Rueckert, D., Kiser, R., & Cho, M. (2012). Oral language assessment made easy via Voice Thread! In *TESOL International Convention and English Language Expo*, Philadelphia, PA, March 28–31.
- Sharples, M. (2016). Trends in Learning 2016 - 7: Mobile Learning, Free open learning [YouTube video]. Retrieved from <https://www.youtube.com/watch?v=mvn2yudjzca>
- Sharples, M., de Roock, R., Ferguson, R., Gaved, M., Herodotou, C., Koh, E., & Wong, L. H. (2016). *Innovating Pedagogy 2016: Open University Innovation Report 5*. Milton Keynes: The Open University.
- Steel, C. (2012). Fitting learning into life: Language students' perspectives on benefits of using mobile apps. In M. Brown, M. Hartnett, & T. Stewart (Eds.), *Future Challenges* (pp. 875–880). Sustainable Futures.
- Stockwell, G. (2015). Mobile learning for language learning - Trends, issues and way forward [YouTube video]. *Presented at Digital Education Show Asia 2015*. Retrieved from https://www.youtube.com/watch?v=f_OrRXHwsb0
- Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of the platform. *Language Learning & Technology*, 14(2), 95–110.
- Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Language Learning*, 21(3), 217–228. doi:10.1111/j.1365-2729.2005.00129.x
- Van Marsenille, A. (2015). Informal language learning: the perspective of higher education students in Brussels. A case study [Doctoral thesis]. The Open University.
- Wang, S., & Smith, S. (2013). Reading and grammar learning through mobile phones. *Language Learning & Technology*, 17(3), 117–134.
- Wang, W., Zhong, S. C., & Lv, S. L. (2009). Empirical research on mobile learning of college students. [in Chinese]. *Open Education Research*, 15(2), 81–86.
- Wu, Yi'an (2001) English language teaching in China: Trends and challenges. *TESOL Quarterly*, 35(1), 191-94.
- Xiao, J. H., & Hurd, S. (2007). Language learning strategies in distance English learning: A study of learners at Shantou Radio and Television University, China. *The Journal of Asia TEFL*, 4(2), 141–164.
- Yan, J. X., & Horwitz, E.K. (2008). Learners' perceptions of how anxiety interacts with personal and instructional factors to influence their achievement in English: A qualitative analysis of EFL learners in China. *Language Learning*, 58(1), 151-183.
- You, C., & Dörnyei, Z. (2016). Language learning motivation in China: Results of a large-scale stratified survey. *Applied Linguistics*, 37(4), 495–519.
- Zhang, X. Y. (2017). Researching into a MOOC embedded flipped classroom model for college English Reading and Writing course. In Kan & Bax (Eds.), *Beyond the Language Classroom: Researching MOOCs and Other Innovations* (pp. 15-27). Dublin Ireland: Researchpublishing.net. 10.14705/rpnet.2017.mooc2016.668

Zhao, C. Y., & Liu, Y. Q. (2012). An exploration on distance English oral test —An empirical study on English oral test through Web phone Skype. [in Chinese] *Modern Educational Technology*, 22, 95–98.

APPENDIX

Questionnaire on Mobile English Language Learning

Note that this is the English translation of the original questionnaire which was in Chinese. Due to limited space, we only provide the English version here.

Please tell us your ...

Age:

- A. Under 25
- B. 26-35
- C. 36-45
- D. 46-66
- E. Over 56

Gender:

- A. Male
- B. Female

Occupation:

- A. Corporate staff
- B. Teachers
- C. Non-corporate staff
- D. Others, please specify

Educational background

- A. High school diploma
- B. Diploma
- C. BA degree
- D. MA degree or above

Q1a Do you use a mobile device (such as a tablet or a phone) for English learning (e.g. check new words, practice pronunciation)?

- A. Yes
- B. No

[If **B** is selected, direct to Q1b]

Q1b Please tell us why you do not use a mobile device for English learning. (Please select all that apply)

- A. I do not own a mobile device.
- B. I only use my mobile to make phone calls or send text messages etc., not for English learning.
- C. My mobile device does not allow me to connect to the Internet.
- D. I am not aware of how I could use my mobile device for English learning.
- E. I have tried to use my mobile device for English learning, but I have not found any useful applications.
- F. My mobile device does not have enough data, so I keep it for essential use.
- G. I prefer using my computer or laptop.
- H. I prefer using print materials for English learning.
- I. Other, please specify: _____

[After answering Q1b, direct to the following page:

Thank you for letting us know you do not use mobile devices for your English learning. There are no more questions for you. Please click on the “ ” button below to record your response.]

Q2 Which mobile device(s) do you use for English learning? (Please select all that apply)

- A. A smartphone (e.g. Android, iPhone), an iPad or tablet

- B. A kindle
- C. Other, please say which: _____

Q3 What was your initial motivation for using your mobile device for English learning? (**Please select one only**)

- A. Out of curiosity because you had acquired the device and were interested in what it could do.
- B. You already used your device regularly and wanted to see if you could use the tools, apps (e.g. games) or services for English learning.
- C. You used mobile BeiwaiOnline to check course notices and assignments.
- D. You were instructed by your tutor to use an App, a specific resource or functionality.
- E. You were inspired by a fellow student or a friend who pointed out an App, a specific resource or functionality.
- F. You wanted to fill in / maximize gaps (e.g. whilst waiting for your flight) in your daily schedule to practice your language skills.
- G. Other, please say what: _____

Q4a Which resources, social media or apps do you use most for English learning? (Please select all that apply)

- A. Communication apps (e.g. Skype, WeChat, QQ, WhatsApp etc.)
- B. Forums or social networks (e.g. Weibo, LinkedIn, WeChat groups)
- C. English learning websites and apps (e.g. Pleco, Duolingo, Busuu, Memrise, Quizlet, etc.)
- D. Authentic audio-visual resources (e.g. TV programmes, TED Talks, YouKu films, audio-books, songs)
- E. Authentic reading material online (e.g. online newspapers/magazines/novels, etc.)
- F. Reference material (e.g. Wikipedia, Baidu, dictionaries, online translation tools, etc.)
- G. Other, please specify: _____

Q4b Name one of your most favourite apps, websites or resources that you access via your mobile device for English learning and briefly explain why you like it. (Maximum 200 words)

Q5a Which language skill(s)/knowledge do you practice/acquire most with your mobile device(s)? (Please select maximum of three)

- A. Speaking and pronunciation
- B. Listening
- C. Writing
- D. Reading
- E. Building up vocabulary
- F. Building up grammar
- G. Translating
- H. Other, please specify: _____

[If A. Speaking and pronunciation is selected, direct to Q5b]

Q5b Please tell us the top resources (e.g. app, software, social media, website) you use for practicing speaking and pronunciation (name maximum three)

[If B. Listening is selected, direct to Q5c]

Q5c Please tell us the top resources (e.g. app, software, social media, website) you use for practicing listening (name maximum three)

[If C. Writing is selected, direct to Q5d]

Q5d Please tell us the top resources (e.g. app, software, social media, website) you use for practicing writing (name maximum three)

[If D. Reading Is Selected, direct to

Q5e Please tell us the top resources (e.g. app, software, social media, website) you use for practicing reading (name maximum 3)

[If E. Building up vocabulary is selected, direct to Q5f]

Q5f Please tell us the top resources (e.g. app, software, social media, website) you use for building up vocabulary (name maximum three)

[If F. Building up grammar is selected, direct to Q5g]

Q5g Please tell us the top resources (e.g. app, software, social media, website) you use for building up grammar (name maximum three)

[If G. Translating is selected, direct to Q5h]

Q5h Please tell us the top resources (e.g. app, software, social media, website) you use for practicing translating (name maximum three)

Q6 Apart from practicing/acquiring the language skills/knowledge listed in Q5 above, what other activities do you usually do for English learning on mobile device(s)? (Please select maximum of two)

- A. You make short video clips (e.g. a speech competition) and share with others via social media/communication apps
- B. You take photos (e.g. signs, menus) and share with others via social media/communication apps
- C. You collect new words/interesting phrases and share with others via social media/communication apps
- D. Other, please specify: _____

Q7a Do you use mobile device(s) to support the university courses you are studying (e.g. doing coursework, practising new words, taking notes, accessing course materials)?

- A. Yes
- B. No

[If A is selected, direct to Q7b]

Q7b How do you use your mobile device(s) to support the university courses you are studying? (Please select maximum three)

- A. Practising the new vocabulary in the course materials
- B. Checking the grammar points in the course materials
- C. Listening to the audio clips in the course materials
- D. Practising dialogues in the course materials with fellow students
- E. Translating the texts in the course materials
- F. Taking notes of difficult points you do not understand so you can ask your tutor later
- G. Completing coursework (e.g. drafting an essay or any piece of writing work)

H. Finding out more about the cultural points in the course materials

I. Other, please specify: _____

Q8a With whom do you usually do the above English learning activities on your mobile device?

A. You mostly engage in the activities on your own

B. You engage in some of the activities with other people

[If B is selected, direct to Q8b]

Q8b Briefly describe one activity you usually do with others. Name the activity and say with whom, where and when you do this activity with (e.g. making video clip with my fellow students).

Q9 How often do you use your mobile device(s) to carry out English learning activities? (Please select one only)

A. Several times a day

B. Once a day

C. Once a week

D. Several times a week

E. Less often

Q10 How do you use your mobile device(s) to engage in English learning activities? (Please select one only)

A. In planned learning sessions (e.g. routine evening sessions at a fixed time to work with course materials, or on regular journeys)

B. More informally, in short bursts of time, as when and where the opportunity arises

C. Both of the above

Q11 When is your favourite time to engage in language activities on your mobile device(s)? (Please select one only)

A. At breakfast

B. Commuting to work

C. At lunch breaks

D. Daily walks/jogging

E. Last thing at night

F. Weekends

G. Other time, please specify _____

Q12 Where do you usually engage in English learning on your mobile device(s)? (Please select maximum of three)

A. During a lecture or class when tutors give you work to do

B. On the move (e.g. travelling on the train/bus, jogging/driving)

C. In a public place in between meetings or waiting for others for meetings

D. In places where free wi-fi is available

E. In a quiet private place on your own (e.g. home)

F. In a private place whilst doing something else (e.g. cleaning your room/preparing food)

G. When you socialize with friends and fellow students

H. Whenever there is the need, or the opportunity arises

I. Other, please say where:

Q13 Give an example if you can of a typical English learning activity you engage in and say where and when you do it: (Maximum 200 words) (optional)

Q14 What is your current main motivation for using your mobile device for English learning? (Please select one only)

A. You want to fill in / maximise gaps (e.g. whilst waiting for your flight) in your daily schedule to practice your language skills.

B. You want to achieve high scores in the exam.

- C. You use it to complete homework set up by your tutor.
- D. You use it to enrich your English cultural knowledge.
- E. You find it useful when working on a group project/homework with other students.
- F. You use it to play language games.
- G. Other, please say what: _____.

Q15a Has the use of a mobile device enabled you to study at times, or in places you would not have normally studied in the past?

- A. Yes
- B. No

[If A is selected, direct to Q15b]

Q15b Do you think you are spending more time on English learning as a result?

- A. Yes
- B. No
- C. Don't know

Q16 Are there any other ways you would like to be able to use your mobile device(s) for English learning? (Maximum 200 words) (optional)

Q17 Do your teachers recommend mobile learning apps and resources for your English learning?

- A. Yes
- B. No

[If A is selected, direct to the following open text box]

Please list the mobile learning apps and resources recommended by your teacher (maximum three):

Q18a Do your teachers monitor your use of mobile learning resources?

- A. Yes
- B. No

[If A is selected, direct to Q18b]

Q18b Please tell us how your teacher monitors your use.

- A. Setting up homework which requires the use of apps or online resources
- B. Asking you questions regarding your mobile English learning
- C. Checking your progress through the mobile platform
- D. Others, please specify: _____

Q19 What do you think of tutor role in out-of-class mobile English learning? (Please select one only)

- A. Mobile learning is my own business and I don't want my tutor to get into it.
- B. Tutors do not need to do anything except recommending some resources.
- C. Tutors guide out-of-class mobile learning, including recommending resources and monitoring learning efficacy.
- D. Tutors provide full support for out-of-class mobile learning, including participating in online forum discussions such as expressing opinions in the WeChat group.
- E. Others, please specify _____

Q20 What are the key factors that sometimes prevent you from engaging in English learning on mobile device(s)? (Please select maximum of three)

- A. Not used to the small screen of my mobile phone
- B. Not enough storage on your mobile

- C. Slow download speed
- D. Lack of privacy
- E. No free wi-fi
- F. Not having sufficient time
- G. Likelihood of being interrupted
- H. Other, please say what _____

*Kan Qian is a Senior Lecturer in the School of Languages and Applied Linguistics, The Open University (UK). She has a PhD in Linguistics from Lancaster University, and is Senior Fellow of the British Higher Education Academy. She led the development of the 'Chinese Characters First Steps' (CCFS) app, which won the Ed2.0Work Network European Competition 2.0 - Using Internet & mobile apps in education in 2014. Her research focuses on the use of technologies for the learning and teaching of languages: mobile language learning, mobile-assisted Chinese language learning, interactions in online discussion forums, and online language learning design including MOOC design. *Kan' is her surname.*

Jinlan Tang is the Deputy Dean and Professor of English in the School of Online and Continuing Education, Beijing Foreign Studies University, China. Her research has covered the areas of language assessment, tutor feedback, EFL teaching and learning in the e-learning environment. She has published over 30 research papers in academic journals, two books, and served as the principal investigator on a number of research projects. She is also the Secretary-General of the China Computer-Assisted Language Learning Association (2016–2020) (ChinaCALL, www.chinacall.org.cn) and a researcher of the China Language Assessment Centre, Beijing Foreign Studies University. She holds a PhD from the University of Nottingham in the area of EFL assessment in the e-learning environment.