Mobile Learning in English Listening and Speaking Skills: Challenges and Opportunities of Non-English Major Sophomores at a Public University in China

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Abstract

The rapid development of technology and the need to acquire English listening and speaking skills in China have brought opportunities and challenges to Chinese university students. This study thus used explanatory sequential mixed methods to investigate opportunities and challenges in mobile learning in English listening and speaking skills. Data collected from 344 non-English major sophomores at a public university in Yunnan, China, were randomly recruited to complete a questionnaire, followed by semi-structured interviews with 10 of them. The results indicated that mobile learning was deemed more supported than rejected by the students who found it easy to use, useful, resourceful and manageable in self-learning, so it brought them more opportunities to learn those two English skills actively and independently at anytime and anywhere easily than challenges demotivating them to learn the language. Such opportunities partly fulfilled the objectives of the Chinese government's Education Informatization 2.0 Action Plan

released in 2018. The learning purposes also reflected their extrinsic and intrinsic motivation, which was the driving force for opportunities to learn those two English skills.

Keywords: mobile learning, opportunities and challenges, English listening and speaking skills, Chinese EFL University students

Introduction

Integration of mobile technology into learning through portable devices known as mobile learning has meaningfully changed the traditional or passive learning approach in China. The Chinese government released the Education Informatization 2.0 Action Plan in 2018 to strengthen the online teaching system and increase the number of online learning resources so as to encourage students to make use of mobile technology actively and independently (Guo, 2018). Since then, mobile learning has gained more attention among Chinese university students and has gradually penetrated into their learning, providing them with opportunities to access relevant resources conveniently (Yu, 2020) and learn actively on their own (Wu, 2019; Hu, 2020) at anytime and anywhere easily (Lin, 2020). These opportunities can be applied to learning English, especially for non-English major students who study this subject for one hour per week, passively listening to their lecturers explain vocabulary, grammatical rules and sentence structures with a few-minute time for practice (Chen, 2020). This teacher-centered approach contradicts a growing need for English communicative competence for future work and international exchanges required by the Chinese government as “The English Teaching Requirements for University” (Zhou, 2015, pp. 2-3).

Such opportunities can be seen in three studies by Dong (2002), Liu (2010) and Pang (2017) conducted at Yunnan University in China. Although they investigated English classes of non-English major students of this university in different years, they found similar findings in that some students opted to depend on searching English learning materials available from various applications on their mobile devices after school or paid for online classes to meet the needs of English listening and speaking skills improvement. While non-English major sophomores spent more time learning English listening and speaking skills on their mobile devices than freshmen and had some understanding of in-class speaking instructions (Lin, 2010), juniors and seniors were more concerned about their future employment, internships and preparing for the graduation exam than learning English (Xin, 2019). It could imply that sophomores could identify opportunities in mobile learning in those two English language skills better than freshmen, juniors and seniors could.

Other studies also found challenges that Chinese non-English major students experienced when using mobile devices to learn English speaking independently after school such as obstacles from mobile device hardware (Zhang, 2019), the Internet connectivity (Yuan, 2020), lack of lecturers' supports (Ma, 2019) and personal innovation interest (Chen, 2020). In fact, research into both opportunities and challenges in mobile learning in English listening and speaking skills have been overlooked as more attention was paid to either the former or the latter. Therefore, it was worth to explore what opportunities and challenges non-English major sophomores at Yunnan University encountered when learning those two language skills through their mobile devices. The university was selected, for it was considered comprehensive offering 79 majors with professional teaching facilities. English classes were mainly conducted in face-to-face classroom and mobile devices were

partly used for students to complete their assignments independently after the class (Pang, 2017). Two research questions were sought to answer:

1) What were non-English major sophomores' opportunities in mobile learning in English listening and speaking skills?

2) What were non-English major sophomores' challenges in mobile learning in English listening and speaking skills?

Related Literature Review

Nowadays, it is common for Chinese English lecturers to integrate online teaching into face-to-face English listening and speaking classes. In general, they mainly explained English language knowledge and partly used mobile devices to show pictures, videos, and audio to the class (Chen, 2020); students were assigned to practice English listening and speaking skills through applications on their mobile devices on their own after the class (Qiu, 2019). This extensive use of mobile learning provided university students in China with opportunities in a wide range of learning materials allowing them to change their English learning behaviors gradually and positively. For one thing, it could help them to access more relevant, interesting and attractive materials than textbooks with only pictures and texts (Min, 2018) and improve both of their English expressive communication skills (Rong, 2018) and their English test scores by practicing through some applications on their own (Qiu, 2019). Concurrently, it brought challenges that demotivated them from using mobile learning, such as frequently charging mobile devices (Fang, 2018), the blue light from the screen (Zhang, 2019) and the instability of network connectivity (Ibrahim, 2019; Ma, 2019). Some English lecturers, who were older and incompetent in technology, may feel challenged to integrate mobile teaching in their class (Wang

et al, 2020), whereas some students preferred to learn the traditional way (Fang, 2018).

Past related studies into mobile learning in China have focused on these main areas: innovation and development of mobile devices; applications of mobile devices to English learning; effects of mobile devices in English learning; and attitudes towards using mobile devices as a learning tool (e.g., Zou and Yan, 2016; Pang, 2017; Meng et al, 2017; Zheng, 2018;). Some researchers also recommended these future studies: university students' both experiences in and frequent use of mobile learning, English language learning purposes, types of mobile devices and applications used (e.g., Liu, 2018; Qiu, 2019; He, 2020; Wang et al, 2020). Most of the university students had more than one year's experiences in using mobile devices to study English in China (Liu, 2018), and they practiced their English skills from free materials on LAIX and Shanbay applications (He, 2020), so that they could pass their final English exams. Some others used it because they either had an interest and desire to learn about Western cultures (Wang et al, 2020) or obey their parents and lecturers (Qiu, 2019).

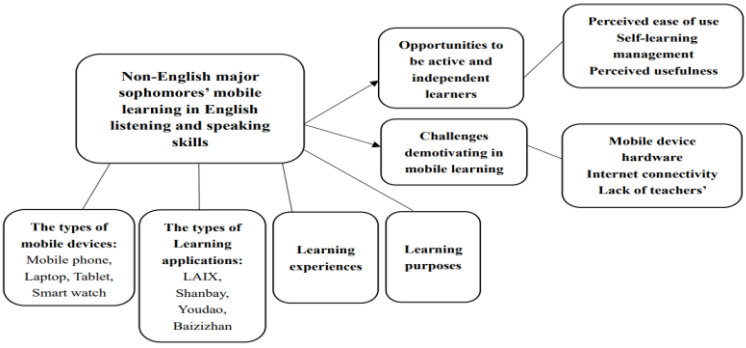
Recent studies focused on either opportunity or challenge in learning English on mobile devices. For example, Wu (2019) studied opportunities in mobile learning in English language skills of 460 Chinese university students in Nanjing from perspectives of perceived ease of use, self-learning management, perceived usefulness and mobile learning resource, made up of 13 questionnaire items. The opportunity they mostly had was availability of learning resources. Yuan (2020) examined challenges in mobile learning in English of 271 Chinese university students in Heilongjiang from perspectives of mobile device hardware, Internet connectivity, lack of teachers' supports and personal innovation, made up of 12 questionnaire

items. They were mostly challenged by stability of network connections and their personal ability to use new technology.

This study attempted to explore both opportunities and challenges that non-English major sophomores encountered when learning English listening and speaking skills on their mobile devices adapted from Wu's (2019) and Yuan's (2020) work. The former was defined as opportunities that enabled them to use mobile devices to learn English listening and speaking skills actively and independently. The latter referred to obstacles that demotivated them to learn English listening and speaking skills on their mobile devices. The types of mobile devices (e.g., mobile phone, laptop, tablet and smart watch) and of learning applications they used (e.g., LAIX, Shanbay, Youdao and Baicizhan) and their learning experiences and purposes were their personal information that may influence their mobile learning in those two language skills. This conceptual framework was displayed in Figure 1.

Figure 1

Conceptual framework



Research Methodology

The explanatory sequential mixed method was suitable for this study because it allowed not only intuitive quantitative data, but also deeper and comprehensive qualitative data (Kothari, 2004). A questionnaire was firstly used to answer the two research questions and then semi-structured interviews to examine and supplement the quantitative data.

Population and samples

The population included 3,461 non-English major sophomores enrolled in academic year 2022 at Yunnan University in China (N = 3,461). Based on Johnson and Larry (2016), the appropriate sample size could be between 344 and 346 (n = 344 - 346), randomly recruited from 79 different majors. The participants included 173 males and 171 females from 13 different majors; their age ranged between 18 and 21. Ten interviewees (5 males and 5 females) from 10 different majors with experiences of learning English listening and speaking skills on mobile devices were purposively selected for the semi-structured interviews.

Research instruments

There were two research instruments: a questionnaire and questions for semi-structured interviews. The questionnaire had three parts. The first part asked about the participants' personal information (i.e., gender, age, major, learning experiences and purposes in using mobile devices to learn English listening and speaking skills, and the types of mobile devices and applications used). The second measured opportunities in mobile learning in those two language skills adapted from Wu (2019), consisting of 13 items with 5-Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Items 1-3, 4-6, 7-9 and 10-13 were about perceived ease of use, self-learning management, perceived usefulness and mobile learning

resources, respectively. The third measured challenges in mobile learning in those two language skills adapted from Yuan (2020), comprising 12 items and using 5-Likert scales ranging from 1 to 5 (i.e., rarely, sometimes, often, usually and always). Items 1-3, 4-6, 7-9 and 10-12 regarded obstacles from mobile device hardware, Internet connectivity, lack of teachers' supports and personal innovation. Three experts were invited to validate the questionnaire, considered valid because the evaluation resulted in 0.71 over 0.67 (Carlson & Turner, 2013). A pilot study with 30 students from a different university confirmed its reliability as the result of the Cronbach's coefficient was 0.87 (Seonghoon, 2015).

There were 12 questions for semi-structured interviews, validated by the same three experts; they were considered valid because the evaluation resulted in 0.82. The sample questions were as follows:

1) how did you feel when using your mobile device to learn English listening and speaking skills?
2) what opportunities did your mobile device bring to your English listening and speaking skills learning?
3) what challenges did you encounter when using your mobile device to learn English listening and speaking skills?

Data collection

After research ethics clearance was approved, the researcher approached two friends studying at the target university and posting an invitation to complete the questionnaire in a WeChat group the sophomores were members on June 1, 2022 through https://www.wjx.cn/vm/wN6SYC0.aspx. Then on June 21, 2022, a number of 344 students completed it (n = 344). Another invitation was posted in the same WeChat Group on August 12, 2022, and 10 students voluntarily participated in semi-

structured interviews, conducted in Chinese via voice calls on WeChat about ten minutes each.

Data analysis

SPSSPRO software with frequency and percentage were used to analyze the participants' personal information while mean and standard deviation used for the analysis of opportunities and challenges they encountered when learning English listening and speaking skills through their mobile devices. These data were then interpreted based on the 5-rating scales shown in Table 1.

Table 1

Interval scale of the options in the questionnaire

5-rating scale	Descriptive Rating (Opportunities)	Descriptive Rating (Challenges)
4.21 – 5.00	Strongly agree	Always
3.41 – 4.20	Agree	Usually
2.61 – 3.40	Uncertain	Often
1.81 – 2.60	Disagree	Sometimes
1.00 – 1.80	Strongly disagree	Rarely

Zotero software with thematic analysis were used to analyze the qualitative data, translated from Chinese to English and saved in 10 files in this software. The data were commonly grouped into these four themes: 1) positive and negative feelings about the use of mobile devices to learn English listening and speaking skills; 2) opportunities in mobile learning in English listening and speaking skills; 3)

challenges in mobile learning in English listening and speaking skills; and 4) additional opportunities and challenges.

Results

The number of 344 non-English major sophomores from 13 majors (i.e. Law, Pedagogy, Economics, Literature, Engineering, Agriculture, History, Science, Philosophy, Art, Medicine, Management and Military Science) completed the questionnaire. Nearly half of them (41.86%) had 1-2 year experiences in using their mobile devices to learn English listening and speaking skills; almost half of them (44.77%) spent 1-2 hours per week on mobile learning as shown in Table 2.

Table 2

Number of years and hours per week students learned English listening and speaking skills on their mobile device

Categories		Frequency	Percentage
Number of years	1-2 years	144	41.86%
	Less than 1 year	93	27.03%
	3-4 years	77	22.38%
	More than 4 years	30	8.72%
Hours per week	1-2 hours	154	44.77%
	2-3 hours	118	34.30%
	More than 4 hours	44	12.79%
	Less than 1 hour	28	8.14%

The majority of them (74.13%) used their mobile devices to learn the language skills both in and out of the classroom. Mobile phones (41.80%), and LAIX (34.00%) were top two popular applications. A desire to pass the English final exam every semester appealed to them most (23.7%).

Opportunities in Mobile Learning in English Listening and Speaking Skills

Table 3 revealed the overall mean of opportunities in mobile learning in English listening and speaking skills ($\bar{X}$= 4.16), meaning the participants agreed that they had opportunities to learn these two language skills actively and independently on their mobile devices perceived to be easy to use, useful, manageable in self-learning, and resourceful. They strongly agreed that mobile learning materials were more interesting than textbooks ($\bar{X}$= 4.38); they were given the most opportunity to learn those English skills. Similar to the qualitative results, two participants mentioned “mobile learning resources were much more interesting than textbooks” (Students 1 and 2).

The participants also strongly agreed that they could learn those two English skills at any time easily ($\bar{X}$= 4.29), access a large number of learning materials ($\bar{X}$= 4.27), and find these materials easily ($\bar{X}$= 4.23), in line with the qualitative results, six participants stated that mobile devices allowed them to “search many learning materials easily and study without time constraints” (Students 1, 3, 4, 5, 6 and 7). They strongly agreed that they could access different types of learning materials ($\bar{X}$= 4.22), the same with qualitative results, two participants said mobile devices provided them with audio, pictures, videos and learning applications (Students 2 and 6). However, they agreed that mobile devices allowed them to learn English listening and speaking skills actively ($\bar{X}$= 4.12) and independently ($\bar{X}$ =

4.15), consistent with the qualitative results, three people said they “enjoyed the process of active exploration using mobile devices by [themselves] ” (Students 3, 8 and 9).

Table 3

Opportunities in mobile learning in English listening and speaking skills

No.	Items	Mean	SD	Meaning
	Mobile devices enabled me to...			**Strongly**
1.	**learn English listening and speaking skills at any time easily.**	**4.29**	**0.56**	**agree**
2.	learn English listening and speaking skills at anywhere easily.	4.13	0.55	Agree
3.	**find learning materials for English listening and speaking skills easily.**	**4.23**	**0.59**	**Strongly agree**
4.	learn English listening and speaking skills actively.	4.12	0.76	Agree
5.	learn English listening and speaking skills independently.	4.15	0.58	Agree
6.	improve my English expression skills.	4.06	0.68	Agree
7.	improve my test scores of English listening and speaking skills.	4.08	0.76	Agree
8.	increase my interest in learning English listening and speaking skills.	4.05	0.58	Agree
9.	share my experience in learning English listening and speaking skills with my net friends.	4.09	0.68	Agree
10.	**access a large number of learning materials of English listening and speaking skills.**	**4.27**	**0.76**	**Strongly agree**
11.	**access different types of learning materials of English listening and speaking skills.**	**4.22**	**0.58**	**Strongly agree**
12.	**access more interesting learning materials for English listening and speaking skills than textbooks.**	**4.38**	**0.68**	**Strongly agree**
13.	practice my English listening and speaking skills in applications on my mobile device.	4.04	0.58	Agree
	Overall Mean	**4.16**	**0.65**	**Agree**

Two additional opportunities in mobile learning in English listening and speaking skills from the qualitative findings emerged. First, mobile learning improved two students' English pronunciation as they mentioned:

"The applications scored and corrected my English pronunciation; I'm getting higher and higher scores now." (Student 1)

"Use of mobile devices makes my English pronunciation better." (Student 2) Second, mobile devices allowed three students to practice those two English skills with native speakers online, saying that:

"I practiced my English listening and speaking skills with my American Friends via Internet." (Student 2)

"I met native English speakers through Facebook on my mobile device and they often talked to me via video call." (Student 3)

"My mobile phone allowed me to use WeChat to communicate with native English speakers." (Student 4)

Challenges in Mobile Learning in English Listening and Speaking Skills

Table 4 demonstrated the overall mean of challenges in mobile learning in English listening and speaking skills ($\bar{X}$= 3.77), indicating that the participants were usually demotivated to learn these two language skills on their mobile devices because they had obstacles in mobile device hardware, Internet connectivity, lack of lecturers' supports and personal innovation. Their most affirmed challenges were a need to charge their mobile devices frequently ($\bar{X}$= 4.20). In parallel with the qualitative findings, two participants stated that their "mobile device consumed power very fast" (Students 7 and 9). Their English lecturers' lack of technology knowledge ($\bar{X}$= 4.18), similar to the qualitative

results, two participants said their English lecturers were not good at operating mobile devices as teaching tools (Students 9 and 10). Their preference to learn what their lecturers taught them ($\bar{X}$= 4.18), the same as the qualitative results, two people "were used to relying on the knowledge taught by the English lecturer" (Students 8, 9 and 10).

Table 4

Challenges in mobile learning in English listening and speaking skills

No.	Items	Mean	SD	Meaning
	I was demotivated to learn English listening and speaking skills on my mobile device by...			
1.	the small screen of my mobile device.	2.97	0.90	Often
2.	**the need to charge my mobile device frequently.**	**4.20**	**0.82**	**Usually**
3.	the blue light exposure from my mobile device screen.	4.00	0.94	Usually
4.	the inadequate network coverage in my classroom.	3.86	0.86	Usually
5.	the unstable Internet connection at my house.	3.52	0.93	Usually
6.	there is no wireless network coverage in some outdoor areas.	4.13	0.79	Usually
7.	my unsupported English lecturers to use technology in the classroom.	3.72	0.79	Usually
8.	the inexperience of my English lecturers in teaching with technology.	4.13	1.23	Usually
9.	**my English lecturers who are not proficient at using technology.**	4.18	0.95	Usually
10.	my unwillingness to try new technology as a learning tool.	3.14	1.05	Often
11.	my unwillingness to try learning innovations in technology.	3.17	1.05	Often
12.	**my unwillingness to learn from other learning sources than my English lecturers.**	4.18	0.84	Usually
	Overall Mean	**3.77**	**0.93**	**Usually**

One additional challenge in mobile learning in English listening and speaking skills from the qualitative findings emerged as three students shared the same experiences in selecting suitable learning materials on mobile devices:

"I couldn't choose the right learning materials for me." (Student 7)

"I didn't know which learning materials offered by my mobile device were good and which were bad." (Student 8)

"Mobile devices provided me with a lot of materials that I didn't know how to choose." (Student 9)

All in all, the students had more opportunities to learn English listening and speaking skills through their mobile devices than obstacles that demotivated them to learn these English language skills because the overall mean of the former was higher ($\bar{X}$= 4.16) than the latter ($\bar{X}$= 3.77).

Discussion

The quantitative and qualitative findings answered the two research questions.

1. What were non-English major sophomores' opportunities in mobile learning in English listening and speaking skills?

The quantitative and qualitative results revealed that mobile learning gave the students opportunities to learn English listening and speaking skills actively and independently through these applications: LAIX, Shanbay, Youdao and Baicizhan, on their mobile phones, laptops, tablets and smart watches. Having access to more interesting learning materials than textbooks, to a large number of materials and to different types of materials as well as learning English at any time easily and finding materials easily appealed to them most.

Notably, the materials found to be more interesting than textbooks were the most attractive opportunity for the students, similar to Wu (2019). University students could search for the English learning materials they needed on their mobile phones, laptops and tablets at any time easily both in and outside the classroom (Xue, 2018; Lin, 2020; Hu, 2020). LAIX and Shanbay offered plenty of free English materials to students to practice the two language skills (Rong, 2018; Qiu, 2019; Zhang, 2019); they were more interesting than textbooks as they had pictures, audio, video and interactive games (Li, 2016; Min, 2018).

Most of the students wanted to pass the English final exam, so they used mobile devices to learn English after class on their own; some who liked English and Western cultures practiced the two English skills in their free time actively and independently (Xin, 2019; Chen, 2020; Song et al, 2021). The students with more than one year of mobile learning experience enjoyed the convenience of learning English at anytime and anywhere, in and out of the classroom (Liu, 2018), while they achieved their different learning goals by using different learning applications to access many learning materials (Qiu, 2019; Wang et al, 2020). These mentioned findings differed from others since mobile learning allowed the students to communicate with English native speakers via the Internet and improved their English pronunciation.

2. What were non-English major sophomores' challenges in mobile learning in English listening and speaking skills?

The quantitative and qualitative results revealed that the students were usually challenged by mobile learning because they encountered obstacles from mobile device hardware, Internet connectivity, lack of lecturers' supports and personal innovation. Challenges that most hindered their mobile learning were

frequency of charging mobile devices, English lecturers' lack technology skills and students' preference to receive knowledge directly from their lecturers. Consistent with others' findings, the greatest challenge they encountered was charging mobile devices frequently (Yuan, 2020); mobile phones in particular consumed power quickly (Alhajri, 2016; Zhang, 2019; Ibrahim, 2019). Some English lecturers were skeptical about integrating mobile learning as they were disoriented in this kind of technology (Liu, 2018, Ma, 2019, Wang et al, 2020). Many Chinese students culturally accepted knowledge taught by their lecturers (Guo, 2018; Fang, 2018; Chen, 2020). A particular finding different from others was that the students were not sure how to select suitable learning resources from the applications they used.

It can be concluded that mobile learning was deemed more supported than rejected by the students who found it easy to use, useful, resourceful and manageable in self-learning, so it brought them more opportunities to learn English listening and speaking skills actively and independently at anytime and anywhere easily than challenges demotivating them to learn the language. Such opportunities partly fulfilled the objectives of the Chinese government's Education Informatization 2.0 Action Plan released in 2018. The learning purposes the participants responded to the personal information also reflected their extrinsic and intrinsic motivation, which was the driving force for opportunities to learn those two English skills. Extrinsically, they wanted to pass the exam (23.70%); their lecturers (10.80%) and parents (8.30%) required them to study. Intrinsically, they were personally interested in English (13.40%), they wanted to learn about Western cultures (13.30%), and their favorite stars were native English speakers (12.40%). Additionally, some of them watched English movies without subtitles (10.90%) as well as studied and traveled abroad (7.20%).

Recommendations

There are two recommendations: First, it is recommended that Chinese lecturers of English urgently equip themselves with technological skills, integrate mobile learning inside and outside of the class more often and assist their students in practical selections of online resources. Second, investigating other perspectives of both opportunity (i.e., influences of native English speakers and effects on English pronunciation) and challenge (i.e., lack of digital literacy) in mobile learning in English listening and speaking skills are recommended for future studies.

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