Enhancing Students' Mobile-Assisted Language Learning through Self-Assessment in a Chinese College EFL Context

Guo Pingping[1] ✉
Wang Qiuyao[2]
Bao Linyan[3]

[1,3]*Faculty of Educational Studies University Putra Malaysia, Serdang, Selangor, Malaysia.*
[1]*Email:* guoping0313@gmail.com *Tel: 8615513590958*
[3]*Email:* gs58470@student.upm.edu.my *Tel: 8618226966731*

[2]*Zhaoqing University, Duanzhou, Zhaoqing, Guangdong, China; Faculty of Educational Studies University Putra Malaysia, Serdang, Selangor, Malaysia.*
[2]*Email:* wangqiuyao1106@foxmail.com *Tel: 8615521329237*

(✉ Corresponding Author)

Abstract

The rapid development of mobile communication technology, high penetration of mobile devices as well as the increasing number of mobile English learning applications all together facilitate the feasibility and popularity of mobile-assisted English learning among Chinese college students. Self-assessment is always recommended as a powerful strategy to enhance learning by helping learners regulate their study and improve their motivation and engagement, so it may also offer the potential to evaluate students' mobile autonomous learning in the new era. This study investigates the current condition of Chinese college students' mobile-assisted English learning, and which self-assessment strategies are employed during the process. Data collected from the questionnaire, which surveyed about 300 undergraduates from 7 Chinese public and private universities, show the popularity of mobile-assisted English learning among Chinese undergraduates. However, in terms of self-assessment strategies, the results are less optimistic, for only about half of the respondents use it with a medium to high frequency. The reasons, analyzed through a follow-up interview, mainly lie in the lack of strong will and motivation, the loneliness of learning alone and the difficulty in finding the perfect application. Suggestions for strengthening self-assessment include improving knowledge of what self-assessment is and its benefits, planning one's study properly, improving collaboration with classmates, involving teachers as supporters and paying more attention to subsequent reflection.

Keywords: Mobile-assisted language learning, Autonomous learning, Self-assessment, Chinese college EFL context.

Contents

238

Contribution of this paper to the literature
The current study contributes to the literature by addressing self-assessment in the new era of mobile learning, using a mixed research method combining a quantitative survey and qualitative interviews. A relatively broad survey was conducted involving 7 universities in 5 provinces of China to investigate students' mobile-assisted language learning and use of self-assessment strategies. In addition, through follow-up interviews, the findings were further explained and implications provided, which offer practical solutions to guide students' mobile-assisted self-assessment behavior.

1. Introduction

Mobile Learning, although it has various definitions among academics, is mainly described in terms of its mobility, which allows learning to take place regardless of where the student is or the time of day. This is especially remarkable when it comes to learning outside of organized class times, as sitting in a classroom or at a computer is no longer the only way for learners to access learning material (Miangah & Nezarat, 2012), and it has become easy for students to learn and practice in their free time. Besides, with the support of technology, it is possible to enjoy personalized learning with easy and flexible access to a large number of high-quality learning resources. Thus, mobile learning has the potential to make the learning process personalized, spontaneous, informal and ubiquitous (Miangah & Nezarat, 2012).

Mobile-assisted language learning (MALL) refers to language learning that centers on mobile devices. It offers the possibility to "implement ubiquitous, interactive, collaborative, informal, individualized, situated and self-regulated language teaching and learning" (Zhang, 2016). MALL is not a new development; it came with the advent of hand-held computer-based devices. Since the mid-1990s, handheld mobile devices like MP3 players, personal digital assistants (PDAs), pocket electronic dictionaries, mobile phones, ultra-portable tablet PCs, smartphones and electronic readers have gradually taken their place in MALL (Burston, 2013). High-tech gadgets are continuously evolving and changing people's lives, but the current gadget of choice for mobile learning is the smartphone. In terms of the diverse areas MALL could be applied to, the most common ones are vocabulary, listening, reading, speaking and translation.

English learning plays quite a significant role in the college life of undergraduates. As of 2019, there were 2,688 institutes of higher education in China, in most of which the course College English is compulsory. In addition, for most undergraduates in China it is crucially important to pass the College English Tests Band 4 and 6, two high-stakes standardized tests that assess college students' English proficiency, as they are certificates that are widely accepted by employers and by all domestic universities if they intend to further their studies. Additionally, for those who want to further their studies abroad, obtaining an ideal IELTS or TOEFL score is usually a must. Thus, for undergraduates, high scores in English and good English proficiency are of great importance to their studies and future career.

In recent years, fast mobile infrastructure construction in China has generated a high penetration of mobile devices among the Chinese population, eliciting in turn a significant expansion of mobile learning. According to *The 46th China Statistical Report on Internet Development*, published by the Cyberspace Administration of China in 2020, by June 2020, 0.932 billion netizens were using mobile phones in China, accounting for 99.2% of the overall netizen population. Meanwhile, the number of mobile phone-based online education users has reached 0.377 billion. And a large number of smartphone- and pad-based English learning applications have arisen in response to the needs of English learners. These applications are being developed at a high speed to include more detailed classification, offering more user-friendly designs and higher quality resources. For example, Baicizhan, a popular mobile device-based application for helping learners with vocabulary learning, allows the user to easily create a daily plan for memorizing a certain number of new English words required for specific tests, for instance the CET-4. This new method for learning English, MALL, is trending and is becoming the norm among college students.

Self-assessment, as an alternative assessment method, is "the involvement of students in identifying standards and/or criteria to apply to their work and making judgement about the extent to which they have met these criteria and standards" (Boud, 1991). Self-assessment is commonplace, especially when the student is learning by himself or herself. Students will always autonomously carry out self-assessment, either consciously or unconsciously, while learning a language. For instance, they will usually consult the reference work after composing a short essay, to evaluate their work and learn how to improve it through a process of comparison, mistake correction and improved wording. According to Harris (1997), this encourages students to become part of the language learning process, and to become aware of their individual progress. Boud (1991) also stated that both informal and traditional individual self-monitoring and checking is an area where self-assessment is applied.

As our understanding of assessment has progressed from assessment *of* learning to assessment *for* learning, and further to assessment *as* learning (Dann, 2014), we have come to the realization that assessment can be part of the learning process and can be utilized to improve learning through self-reflection and self-regulation. However, our review of the literature shows that most of the studies around self-assessment have been conducted in the context of formal classroom teaching, either on the accuracy (Blanche, 1988; Brown, Andrade, & Chen, 2015) or the validity (Bergman & Kasper, 1993; Kathy Heilenman, 1990) of students' self-assessment. Self-assessment in the context of students' mobile-assisted autonomous language learning has seldom been touched upon. Therefore, this study will investigate the use of self-assessment in students' informal autonomous mobile-assisted language learning after class, aiming to foster self-assessment as a useful tool to improve students' language proficiency.

2. Literature Review

2.1. Mobile-Assisted Language Learning

As a combination of mobile learning and computer-assisted language learning (CALL), mobile-assisted Language Learning (MALL), has developed into a research field independent of both traditional language learning and CALL. Kukulska-Hulme and Shield (2008) stated that MALL was still in its infancy, as MALL activities mimicked those developed in CALL.

Due to the continuous effort of numerous researchers, MALL has been proven an effective means for foreign language learners to improve their language skills. Abdous, Facer, and Yen (2012) conducted a comparative study to examine whether integrated use or supplemental use of podcasting showed higher effectiveness in second language learning, and their results demonstrate that, in upper-level classes, there is a strong positive relationship between the use of MALL, podcasting in this case, as supplemental material and the students' final grades. They indicated that, when used as a revision tool, MALL is predicted to improve students' learning. In recent years, relevant research has been carried out in China. According to the experimental study conducted by Zhang and Wang (2011), college students in the experimental group (who experienced blended teaching -- classroom teaching combined with carrying out assignments with the support of mobile technology) achieved improved progress in terms of listening, speaking, reading and writing, compared with the control group.

The investigation of the use of MALL in teaching and learning can be generally classified into two categories: one concerns the application of MALL combined with other learning theories; for example, Yin (2013), guided by micro-learning theory, conducted a study of the WeChat public platform, to explore whether it could help students' preparation for College English Band 4, with rather positive results. Lin et al. (2020) conducted a literature review, reviewing 28 empirical studies on MALL and reading development published during the period of 2008 to 2018 which were evaluated according to the Activity Theory (AT) model. The other category, which accounts for the majority of research, explores how the MALL model is supported by various mobile terminal technologies or platforms. For instance, Li (2012) conducted an experimental study on the use of podcasting technology to assist in the teaching of listening skills and found out that it is helpful to improve students' English listening. Research conducted by Hwang and Chen (2013) shows that primary school students improved their listening and speaking skills after practicing with their peers on personal digital assistants (PDA).

Putra, Saukah, Basthomi, and Irawati (2019) conducted research in Indonesia to determine university students' degree of acceptance of the mobile phone application *Hello English*. Elaish, Ghani, Shuib, and Al-Haiqi (2019) conducted an experimental study using the mobile application VocabGame to examine whether it could help motivate Arab primary school students' in terms of vocabulary learning. GhouNane (2019) conducted a study in the Algerian context through interviews with university English teachers, together with an experiment in teaching English pronunciation with the help of the application *Sounds: The Pronunciation App*. The participants in this study enjoyed the experiment, stating that with the help of mobile phones they can achieve progress in language learning wherever they are and whenever the time. A study conducted by Al Fadda (2020) tried to identify the effects of social media, specifically Snapchat and Instagram, on the acquisition of English speaking and reading skills. Rafiq, Hashim, Yunus, and Norman (2020) conducted a questionnaire survey to identify support staff's perceptions of ìSPEAK: Communicative English Module MOOC, a Communicative English Module in MOOC.

Viberg and Grönlund (2012) conducted a literature review of mobile assisted language learning, presenting and analyzing empirical research published during the period 2007-2012 in highly ranked and cited journals. Their research demonstrates that it is often individuals' stated perceptions that are used to measure the effects of mobile technology on language learning (Viberg & Grönlund, 2012). And, when adopting mobile devices for language learning, learners paid very little attention to their language learning strategies and learning styles (Viberg & Grönlund, 2012) which may have an impact on their learning achievement. More research is needed to investigate those effects to improve the effectiveness of language acquisition, as well as second and foreign language proficiency.

In the experimental trial of Alamer and Al Khateeb (2021) to exam the effects of MALL, specifically WhatsApp, on students' motivation, they found out that without teachers offering feedback on learners' responses, students may be unable to properly respond to the assignments on WhatsApp, which could be regarded as a shortcoming of MALL self-learning. Because of that, self-assessment plays an important role and could be turned to as a solution.

2.2. Self-Assessment

Self-assessment encourages students to become active, self-regulated, independent and life-long learners (Benson & Brack, 2010). It involves two steps for students: identifying standards and/or criteria to apply to their work, and making judgements about the extent to which they have met these criteria and standards (Boud 1991). Self-assessment can not only be adopted by teachers as an instructional process and educational resource within the classroom context (Panadero & Alonso-Tapia, 2013), but can also facilitate autonomous learning by helping learners to become aware of the difference between their learning goals and their current level, and consequently determine what measures need to be taken to narrow the identified gap (Black & Wiliam, 2010).

In general, studies about self-assessment can be roughly divided into two categories: one examines the reliability and validity of students' self-assessment as an assessment method, and the other examines the impact of self-assessment on teaching and learning. According to Jurkovic (2010) and Peréz (2012), there is a positive correlation between students' self-assessment, teachers' assessment and proficiency test scores, suggesting that students are competent to carry out nearly accurate and effective assessment of their own language proficiency. In contrast, in the study conducted by Escribano and McMahon (2010), students' self-assessment was shown to be irrelevant to their class performance, placement test and proficiency test, or the degree of correlation was very low, raising doubts about students' self-assessment competence. Although the reliability and validity of self-assessment is controversial, its significance to teaching and learning is deeply rooted in people's minds. Escribano and McMahon (2010) proposed that self-assessment may be beneficial to teaching in terms of promoting students' learning, improving students' self-awareness, deepening students' understanding of learning objectives, expanding the scope of assessment, reducing teachers' burden, and cultivating students' ability for independent learning outside class.

As Boud (1995) stated, self-assessment is not merely another assessment technique among many, instead it is about students developing their learning skills. One area where self-assessment is applied is informal and traditional individual self-monitoring and progress checking. Kennedy, Bruen, and Péchenart (2012) argued that self-assessment is conducive to cultivating students' autonomous learning, although the accuracy of the assessment is the prerequisite. Based on an empirical study, Jamrus and Razali (2019) found that students could significantly

improve their English reading performance through self-assessment, indicating that students should be trained to carry out self-assessment. Additionally, Goral and Bailey (2019) suggest that only when students have a clear understanding of their own level, as well as their strengths and weaknesses, can they conduct purposeful and efficient learning, without needing to rely on one-sided information provided by teachers or examinations.

3. Methodology

3.1. Research Questions

During the process of autonomous English learning using mobile devices, learners rarely receive any assessment or feedback from teachers or peers. Only learners themselves can assess their learning and make adjustments. Self-assessment is thus a vital part of this process. Therefore, this study aims to answer the following three research questions:

Research question 1: how is mobile-assisted autonomous English learning conducted among Chinese college students?

Research question 2: how are self-assessment strategies used in the process of mobile-assisted autonomous English learning?

Research question 3: how can self-assessment be enhanced as a useful tool to improve English proficiency in students' mobile-assisted autonomous English learning?

3.2. Research Methods

The main methodology adopted in this study is mixed, combining quantitative and qualitative methods.

3.2.1. Survey-Questionnaire

The quantitative method is used to answer the first two research questions, specifically a survey, which is divided into four parts. Part one consists of demographic questions, including gender, age, university, major, grade and current English proficiency; part two concerns mobile-assisted English learning behavior, including whether the respondent uses mobile devices to learn English, the device types, platforms and time spent on mobile-assisted English learning; part three concerns self-assessment behaviors, including 15 questions relating to students' self-assessment behaviors in the process of mobile-assisted English learning, as shown in Table 1.

Table-1. Survey on self-assessment strategies used in mobile-assisted English learning.

No.	Items	Options				
1.	I preview the textbook with mobile devices, try to understand the text by myself first and then check and revise my understanding according to the translation and explanation searched on mobile devices.	1	2	3	4	5
2.	When studying vocabulary with mobile devices, I try to type the new word from memory to check whether I have mastered this new word.	1	2	3	4	5
3.	When learning writing with mobile devices, I try to make an outline or first write based on the requirements and then check the referenced version and revise.	1	2	3	4	5
4.	I do listening exercises using mobile devices and check my answers against the criteria after finishing and then revise.	1	2	3	4	5
5.	When practicing speaking via mobile devices, I construct my words according to requirements and check against the criteria and then revise.	1	2	3	4	5
6	I read using mobile devices and try to raise questions afterwards to check my understanding of the reading material.	1	2	3	4	5
7	When learning translation through mobile devices, I translate first and then check against the criteria or referenced version and finally revise.	1	2	3	4	5
8.	I search for standard answers to the textbook exercises to check my own answers and revise.	1	2	3	4	5
9.	I use the self-assessment function of the vocabulary learning app to check whether I have mastered the new words and to get reinforcement.	1	2	3	4	5
10.	When listening to English songs, I check the lyrics whenever I have difficulty catching the exact words.	1	2	3	4	5
11.	I do reading exercises using mobile devices, check against the criteria afterwards and revise.	1	2	3	4	5
12.	I repeat, follow or repeatedly imitate the words/sentences in English video or audio to achieve correct pronunciation.	1	2	3	4	5
13.	I polish my writing by submitting my composition many times to writing apps or websites for scoring and revision suggestions.	1	2	3	4	5
14.	I take online simulated tests to test my English proficiency and then revise according to the criteria.	1	2	3	4	5
15.	I search for the audio of text in the textbook using mobile devices and follow along to practice pronunciation.	1	2	3	4	5

Note: Option 1 stands for "never", 2 for "seldom", 3 for "sometimes", 4 for "usually", and 5 for "always".

These 15 items represent 15 mobile-assisted English learning situations where learners might use self-assessment to check, consolidate and improve their learning, with content ranging from the four basic skills: listening (items 4, 10), speaking (items 5, 12), reading (items 6, 11) and writing (items 3, 13), to vocabulary (items 2, 9), translating (item 7), course-related (items 1, 8, 15) and test-related (item 14) learning. They are designed based on the author's learning experience and observations and discussion with other group members in the same research project. Each item is scored, ranging from 1 (never) to 5 (always). This study avoids the use of the traditional 5-point Likert scale, ranging from "strongly disagree" to "strongly agree", mainly because of the Golden Mean of Chinese people, who are moderate and quite unlikely to show strong emotions, and who therefore, when faced with such options, usually avoid choosing "strongly disagree" or "strongly agree". The total score ranges

from 15 to 75, with the assumption that the higher the score, the more frequently self-assessment is used by the student in question. Moreover, the validity was tested through a pilot survey involving a small scope of 15 students and the alpha reliability coefficient was estimated at 0.946, indicating a quite high validity. Part four of the survey asks about participants' willingness to take part in a post-survey interview. If the answer is yes, they are requested to leave their contact information at the end of the questionnaire, which is considered to be an informed consent to show respect to the participants.

3.2.2. Interview

A semi-structured interview was conducted after the survey, aiming to discover students' own perceptions towards the effectiveness of self-assessment, their underlying motivation, and the difficulties that keep them from carrying it out. Then, based on the interview, we intend to explore strategies to achieve successful self-assessment to help improve English proficiency.

3.3. Research Participants

The participants in the questionnaire phase include around 350 college students in 7 different universities, both public and private, located in different regions of China. This will provide an overview of the mobile-assisted English learning condition and utilization of self-assessment during this process of Chinese students as a whole. To ensure that the participants of the study should be as many and scattered as widely as possible, while limiting the sample to a manageable size, approximately 350 participants were chosen based on a purposeful sampling method. Seven teachers at different universities were first selected out of convenience, and each shared the QR code of the questionnaire with their students within a class unit of around 50 members before or during class, thus forming a relatively large sample, which at the same time promised a serious attitude and high recovery rate.

In order to explore in detail the utilization of self-assessment in college students' mobile-assisted autonomous English learning, and discover why they tend to use it frequently or infrequently and their motivations to do so or difficulties they might encounter during the process, a semi-structured interview was conducted after the survey. One of the selection criteria of these participants was their performance on the questionnaire, based on which 5 students who used self-assessment frequently and successfully and 5 others who used it infrequently and unsuccessfully were chosen. At the same time, other criteria with regard to the university they study at, gender and grade diversity and their willingness to join the interview were also taken into consideration, with the aim of providing information from as many perspectives as possible.

3.4. Data Collection and Analysis

Data collection consisted of two main phases.

Phase 1: questionnaire distribution. Since all the participants are Chinese students of various English proficiency levels, the questionnaire was prepared in Chinese Mandarin in order to avoid misunderstanding. It was then converted into wjx.cn (a popular website for the distribution and analysis of online questionnaires in China) and a QR code was created accordingly, which was then shared with participants via their teachers.

Phase 2: analysis of the questionnaire results of and conducting interview. During this phase, the authors first analyzed the results of the questionnaire to calculate the frequency with which participants use self-assessment in mobile-assisted English learning and identified groups with relatively high and low frequency. Then, with combined consideration of different universities, genders and grades, as well as their willingness to participate in the interview, they selected the final 10 participants from each group for the post-survey interview. Due to the considerable distance between researchers and participants, a voice interaction through WeChat (a social media platform popular in China) was chosen as the main method for the interview, and the conversations were recorded and then transcribed into a document for later analysis.

Data analysis: the quantitative data collected from the questionnaire is analyzed using wjx.cn, as well as SPSS; while a thematic analysis is conducted of the qualitative data collected from the interviews.

4. Results and Discussion

The analysis of the data collected from the questionnaire and interviews led to the results shown below.

4.1. Results and Discussion of the Questionnaire

This digital questionnaire was distributed among approximately 350 college students in 7 universities located in different regions of China, including Guangdong province, Fujian province, Shanxi province and Henan province. In the end, 327 completed questionnaires were received, indicating a recovery rate surpassing 90 percent. Among the 327 students, 292 (89.3%) reported that they learn English via mobile devices outside of class. After removing the questionnaires of the respondents who did not report mobile-assisted English learning behavior, the remaining 292 surveys were analyzed. Table 2 shows the composition of the final 292 participants, with an average age of 19.64. It happened that the number of female respondents far surpassed that of male respondents, probably because more liberal arts majors were surveyed than science majors, and it is a Chinese tradition that girls tend to major in liberal arts. Moreover, with the development of society and the increasing status of women, the ratio of male to female students in Chinese higher education has started to reverse. The proportion of female students reached 51.35% in 2012, surpassing male students by 0.65 million, and the proportion is still increasing (Li., 2016). All the participants are undergraduates, covering all four grades, among whom 75.23% are first- or second-year students.

To answer research question 1 "What's the current condition of Chinese college students' mobile-assisted English learning?", Table 3 demonstrates that 96.58% of the surveyed participants use a smart phone as their device for mobile learning, followed by 24.32% a tablet PC, and only a few students use an electric reader or laptop. This is probably because smart phones are the most convenient and combine multiple functions, as well as having a high penetration among Chinese college students. Tablet PCs are also developing rapidly these days as a substitute

for laptops and bulky computers, particularly in a college setting. However, electric readers are not very popular among college students, due to their limited functions as compared to smart phones and tablet PCs.

Table-2. The composition of participants.

Feature	Category	N	Percentage (%)
Gender	Male	59	18.04
	Female	268	81.96
Grade	First year	108	33.03
	Second year	138	42.2
	Third year	69	21.1
	Fourth year	12	3.67

Table-3. Mobile devices used by participants.

Mobile devices	Option count	Percentage (%)
Smart phone	282	96.58
Tablet PC	71	24.32
Electric reader	25	8.56
Laptop	12	4.11

The platform type chosen by students for their mobile-assisted English learning might well reflect their learning objectives. Table 4, below, shows that more than half the participants surveyed utilize mobile devices to learn vocabulary (80.48%) and to look up new words (dictionary 58.22%), followed by listening (42.12%), speaking (33.9%), writing (31.16%), reading (20.55%), comprehensive use (19.18%) and translating (16.78%). The least attention is paid to course-related (4.79%) and test-related (5.48%) platforms. Meanwhile, the subsequent item about "the apps, websites or social media platforms you usually use" demonstrates that most of the mobile learning platforms students list are vocabulary-oriented, such as Baicizhan, Shanbei, Bubeidanci, Leci, Zhimi, etc., and dictionary-related, such as Youdao dictionary, Oulu dictionary, Jinshan dictionary, etc. Other popular platforms mentioned by the participants are TED, VOA and BBC English for listening; Speak English fluently (Yingyuliulishuo), FIT English speaking, Xunfei spoken English, etc. for speaking; China Daily and Liulishuo for reading; iwrite and Pigai for writing; and some other comprehensive apps or websites like Keke English, Spark English and Hujiang English, which offer learning resources targeting all English skills. Some of these comprehensive apps or websites are course and test related, others not. Besides, few apps or websites are specifically designed for courses, which might be due to the abundant and complicated courses and frequently changing textbooks. And the reason why few test-related platforms are used might be that nowadays most of the exams are still operated off-line using the pen-and-paper method. Thus, Chinese students, who are more familiar with off-line tests, prefer to do pen-and-paper mock tests to check their achievement rather than take online mock tests, especially when they are preparing for a high-stakes English proficiency test.

Table-4. Platform types used by participants.

Platform type	Option count	Percentage (%)
Vocabulary	235	80.48
Listening	123	42.12
Speaking	99	33.9
Reading	60	20.55
Writing	91	31.16
Translating	49	16.78
Dictionary	170	58.22
Course-related	14	4.79
Test-related	16	5.48
Comprehensive	56	19.18
Unknown	4	1.37
Others	9	3.08

Table-5. Time spent on mobile-assisted English learning.

	Options	Option count	Percentage (%)
Length of years	Less than half a year	76	26.03
	One year	65	22.26
	Two years	55	18.84
	Three years and more	96	32.88
Hours/week	Less than one hour	98	33.56
	One to three hours	141	48.29
	Four to six hours	33	11.3
	Seven hours and more	20	6.85

The information in Table 5 indicates that 74% of participants have been learning English through mobile devices for more than one year, and 32.88% of them have even been learning for three years and more, which implies that mobile-assisted English learning is really popular among Chinese college students. Regarding time spent on mobile-assisted English learning, 66.4% of the participants spend one to three hours every week, which translates to 10 to 30 minutes or more spent on mobile-assisted English learning every day. Therefore, it might be safe to conclude that for most participants, learning English through mobile devices is a learning habit that has infiltrated into their daily lives.

The following section concerns the self-assessment strategies students employ in mobile-assisted English learning, and aims to answer research question 2: "How are self-assessment strategies used in the process of

mobile-assisted English learning?" Table 6 demonstrates that for the 15 statements related to self-assessment behavior in different learning areas, the mean score of most items is slightly below but very close to medium 3, implying that generally self-assessment utilization in college students' mobile-assisted English learning is still at the medium level or lower. However, there are the exceptions of Q8 (I search for standard answers to the textbook exercises to check my own answers and revise) with 3.10, Q9 (I use the self-assessment function of the vocabulary learning app to check whether I have mastered the new words and to get reinforcement) with 3.21, Q10 (When listening to English songs, I check the lyrics whenever I have difficulty catching the exact words) with 3.06, and Q12 (I repeat, follow or repeatedly imitate the words/sentences in English video or audio to achieve correct pronunciation) with 3.05, the figures for which are all above medium 3, with Q9 being the highest (3.21). In congruence with the previous analysis that most students use mobile devices to learn vocabulary, self-assessment in vocabulary learning is also more frequent than in other areas. Additionally, using mobile devices to search for the answers to textbook exercises is also a common practice among students of all grades, not just college undergraduates. And listening to and learning English songs and imitating to achieve correct pronunciation are traditional ways of learning English which have long been popular among Chinese students.

Table-6. Self-assessment condition.

Type	Item	N	Min	Max	Mean	Sd.
Course-related	Item 1	292	1	5	2.99	0.899
	Item 8	292	1	5	3.10	0.850
	Item 15	292	1	5	2.86	0.877
Vocabulary	Item 2	292	1	5	2.86	0.847
	Item 9	292	1	5	3.21	0.854
Writing	Item 3	292	1	5	2.91	0.879
	Item 13	292	1	5	2.93	0.996
Listening	Item 4	292	1	5	2.99	0.904
	Item 10	292	1	5	3.06	0.989
Speaking	Item 5	292	1	5	2.85	0.798
	Item 12	292	1	5	3.05	0.821
Reading	Item 6	292	1	5	2.80	0.818
	Item 11	292	1	5	2.96	0.939
Translating	Item 7	292	1	5	2.98	0.867
Test-related	Item 14	292	1	5	2.93	0.886
Total score	Item 1-15	292	19	75	44.5	8.66

To approach the data from another perspective, we calculated the total score of all 15 items, which ranged from 19 to 75, with the assumption that the higher the score, the more frequently self-assessment is employed. Then the mean 44.5 (again very close to medium score 45) was calculated, with a standard deviation of 8.66. But when the score scales were subdivided, as shown in Table 7, more than half (54.45%) of the surveyed students scored over 45, which means a little more than half of students adopt self-assessment strategies with a medium to high frequency.

Table-7. Distribution of self-assessment scores in different scales.

Score scales	N	Percentage (%)
15-29	14	4.80
30-44	119	40.75
45-59	141	48.29
60-75	18	6.16

4.2. Results and Discussion of the Interview

In the final part of questionnaire, about their willingness to participate in an interview, 94 (32.19%) students gave their consent and left the contact information of their WeChat account, from whom 5 participants were chosen who scored high in the self-assessment part of the questionnaire and 5 who scored low. Meanwhile, the selection criteria also involved considerations of varying universities, grades and genders. As a result, Ali, Betty, Cathy, Dora and Eva were selected as frequent users, and Frank, Glory, Hero, Jack and Kelly (pseudonyms in consideration of confidentiality) were selected as less frequent users to participate in the interview. Their demographic information is listed in Table 8.

Table-8. Information of the interviewees.

Category	Frequent users					Less frequent users				
Name	Ali	Betty	Cathy	Dora	Eva	Frank	Glory	Hero	Jack	Kevin
Gender	M	F	F	F	F	M	F	M	M	M
University	A	H	A	H	G	B	C	D	E	G
Grade	4	2	4	3	2	3	1	1	4	2
Major	Sci	Art	Art	Art	Art	Sci	Art	Art	Sci	Sci

Note: M stands for male and F for female; A, B, C, D, E, G, H are the code letters for different universities, without revealing the true name due to confidentiality; 1, 2, 3 and 4 stands for the grades from one to four; "Sci" means science, while "Art" means liberal art.

Since a semi-structured interview was selected as the tool to collect qualitative data, an interview protocol for both groups was drafted beforehand. For frequent users, the interview questions mainly revolve around their length of mobile English learning, the apps or platform used, their favorite app or platform, their self-assessment methods and reasons for self-assessment; while for less frequent users, the questions mainly focus on their length of mobile English learning, the apps or platforms used, their reasons for not or seldom doing self-assessment, their difficulties in carrying out self-assessment, their willingness to use self-assessment in the future. Based on but not

restricted to the scope of this outline, the researchers tried to encourage participants to speak more about their experiences in mobile-assisted English learning and self-assessment.

The results show that with respect to the length of mobile English learning, all five frequent users started learning English via mobile devices since graduating from senior high school, simply because they had a heavy learning burden and were not allowed to use mobile phones as senior high school students. But they were so interested in mobile-assisted English learning that they started to learn once they possessed a smartphone. The time they spend on mobile English learning each day averages more than 1 hour, and Ali even spends 2-3 hours a day. They usually learn during morning reading or night self-study time, and Betty said she also learnt during fragmented time throughout the day, such as while on the bus, during class breaks etc. Therefore, we may conclude that the frequent users might have a strong interest in English and mobile-assisted learning.

According to their responses regarding the apps and platforms they usually use, we can distinguish several categories of English learning. First, regarding vocabulary and dictionary, the apps most mentioned are Youdao Dictionary, Shanbei Vocabulary, Oulu Dictionary, Duolingo, Bubeidanci Vocabulary, Baicizhan Vocabulary and Momo Vocabulary; regarding reading, Shanbei Reading, China Daily and BBC English were mentioned many times; for writing, some mentioned iWrite, an English writing teaching and assessment desktop and mobile app launched by FLTRP (Foreign Language Teaching and Research Press, China); Yidian English, Keke English and Little Redbook were used for comprehensive improvement; the test-related app Xiaozhan IELTS was used for higher achievement in the IELTS international English proficiency test; in addition, the Bilibili and Buzz websites were utilized for listening and speaking. Most of the above platforms are easy and free to access and can be installed on almost all mobile devices that use various operating systems, like iOS, Android, and Windows.

From the participants' answers to the question concerning their favorite apps or platforms, we can begin to list a number of characteristics of these English learning platforms which attract more attention from learners. First, the richness of the learning resources; for example, Ali prefers Yidian English, because "it offers a wide range of knowledge and resources for comprehensive English skills, including listening, speaking, reading and writing, which can greatly improve my learning efficiency and quality." Secondly, peer collaboration; for example, Cathy emphasized the positives of Shanbei Reading, due to its function of finding an online desk mate "so that you can find a partner to help and encourage each other to learn." Thirdly, apps offering multiple functions; for instance, Cathy mentioned the convenience of looking up new words on Shanbei Reading as "it has a powerful vocabulary bank so you do not have to search in a dictionary when you encounter unfamiliar words while reading, what you need to do is to click the word and its meaning will pop up automatically." Besides, Dora also remarked on the alarm function of Keke English, which she said helped her to control her time and increase her self-discipline. Fourth, the apps' science-based features; for instance, Betty mentioned her favorite app Bubeidanci as "it regularly helps me review words that I have learnt based on an Ebbinghaus curve. It's more scientific." Similarly, Eva also emphasized the scientific design of Momo Vocabulary that bases study and review plans on Ebbinghaus curves. Fifth, authentic learning materials; as mentioned by Betty, "all the examples given in Bubeidanci are original sentences from movies, TV series and VOA, BBC. It emphasizes the usage of words and supplies other knowledge of words like roots and affixes."

During the mobile learning process, they carry out self-assessment more frequently, although the detailed operation varies. Ali's answer is about listening: "after listening, I usually look at the original material to check whether I did it correctly, if not, I will make corrections." Both Cathy and Dora mentioned self-assessment in connection to vocabulary learning with apps. Cathy "uses the testing vocabulary size function in Shanbei Vocabulary to test how many words she knows," and Dora "memorizes new words through a vocabulary app, and does dictation to check her grasp." Betty likes to use the assessment function of vocabulary apps like Bubeidanci and Keke English, which takes the form of interesting games, which she says could arouse learners' interest. She also uses iWrite quite often to assess her writing and makes revisions according to the suggestions provided by this software. Since Eva is preparing for IELTS, she enjoys using Xiaozhan IELTS to do mock tests. She also shared her experience of self-assessment using Yidian English, "when you're learning English through watching short videos, questions will pop up in the middle to assess your understanding and give a score which will contribute to your final assessment."

As for the reasons and advantages of self-assessment, all five participants recognize the important role of self-assessment in learning English. Ali mentioned the College English Test (CET) Band 4 and Band 6, saying that "it's helpful for preparing for English tests because it can make up for my shortcomings in English learning and improve my learning efficiency." And Cathy agreed with this, saying, "self-assessment is a good way to help us be aware of our learning condition. We can get to know our learning outcomes through self-assessment, know what we have learnt today, what still needs to be improved, and then adapt our learning plan according to the self-assessment results." In Betty's opinion, "it is helpful for enhancing English skills, especially listening and speaking." And for Eva, "self-assessment can improve my ability to correct errors, not only my own but those of others as well." Dora even referred to the ability to query and said, "through self-assessment, I am getting used to querying."

A careful analysis of the interview transcripts of the less frequent users yielded the following results. First, the length of mobile learning differed from the frequent users; most infrequent users seldom or only occasionally learned English via mobile devices, and this behavior did not last long – except for Kevin, who used mobile devices to learn very often since the time he was still in senior high school preparing for the college entrance examination. The apps or websites used by this group mainly concern vocabulary learning and dictionaries (such as Shanbei, Youdao, Jinshanciba, and Baicizhan) as well as listening skills and speaking skills (for instance TED and Fif for spoken English). The apps and websites they use are not as diverse as those used by the frequent users. In addition, they seldom or never carried out self-assessment during mobile learning, except Glory, "I sometimes use Pigai to assess writing and learn from the suggestions given by Pigai. For instance, I learned useful new words from its referential articles, which would be used in my later writing." And Hero mentions, "I do self-assessment using Jinshanciba, do CET-4 mock tests and check answers to identify my weak points. And I also tend to have my spoken English scored by the app while practicing speaking and try over and over again to get a high score." Additionally, Kevin used to do self-assessment on Xiaoyuansouti, which is an app that specializes in providing

answers to senior school students when they encounter similar test questions and offering mock college entrance examinations. But he had given up doing so since entering college. The reason he gives is that "in university I have no forceful pressure to learn English, however, the pressure from my major is high and the schedule for professional courses is already full, so there is not enough time to be spent on English learning."

In addition, other reasons for not or seldom doing self-assessment are a lack of strong will and difficulties with learning English, as Frank explains, "as for learning English, I have neither a strong will nor a good learning plan. And I find it difficult to learn English, and when I am learning English, I always feel under great pressure." Or a lack of interest in English, as mentioned by Jack, "I lack interest in English and feel bored learning English." Jack also points out a phenomenon that should not be ignored in the study of autonomous learning: "I feel lonely learning English because I have no partner to learn with." This emphasizes again the importance of collaborative learning. One more reason is not being able to find a satisfactory learning app, as stated by Hero, "I check my vocabulary size every week via Baicizhan but do not find it very helpful because the vocabulary size test might not be correct, and it depends on luck. Words review wastes a lot of time, and the explanations are a little bit simple."

In addition, there are still other difficulties that hinder self-assessment in mobile English learning. For example, some worry about the distraction from other entertainment apps, as Glory mentions, "there are distractions from other entertainment apps. So, it is easy to be distracted if one is not self-disciplined." Another disadvantage of mobile-assisted learning is that "it depends on networks… that may be subject to disturbances of many kind" (Viberg & Grönlund, 2012). Moreover, Glory also points out that "self-assessment lacks face-to-face interaction." Interestingly, Ali said he dared not assess himself, because "my English proficiency is so weak that I dare not assess myself, because I dare not face the truth." Moreover, Hero mentions the layout defects of the app Jinshanciba (a long-existing website for vocabulary and dictionary in China, which recently launched a phone app and added additional functions such as mock tests), saying that "when doing mock tests in Jinshanciba, it's not very convenient that I have to scroll down many pages to consult the answers because they are located separately from the tests."

As for whether they would like to use self-assessment strategies in the future, all of them showed their willingness and referred to its important role in improving English proficiency, its convenience, and its usefulness in passing exams.

From the last set of interviews, we conclude that although learners might realize the positive impact of self-assessment on their mobile-assisted autonomous English learning, it is difficult for many to implement self-assessment in their learning process, which is probably due to a lack of interest or functional motivation such as passing a certain exam, various internet-related distractions, the solitude caused by learning alone, and the lack of self-assessment-oriented applications, in addition to other reasons beyond the scope of this interview. As an idea that has emerged from the tradition of autonomous learning, self-assessment, although it has also been applied to formal assessment under classroom conditions, can be a worthwhile learning activity in the new era of mobile-assisted autonomous learning. Based on the literature review, discussions with teachers and students, and the author's own direct learning experiences of self-assessment in mobile-assisted autonomous English learning, several suggestions to enhance mobile-assisted English learning through self-assessment are given below.

(1) Increase knowledge of self-assessment and its benefits. Only when students clearly understand what self-assessment is and the learning benefits it offers, will they be more likely to adopt self-assessment rigorously in their own learning. Self-assessment can help learners regulate their learning process by requiring them to check whether a piece of knowledge has been mastered, or whether a learning method is effective, and to consider alternative measures if negative answers are obtained. Besides, self-regulation is closely linked to learning achievement and motivation. The higher the capacity for self-regulation, the higher the learning achievement and motivation will be.

(2) Plan your study properly. Identify a short-term goal, like passing a certain exam, ascertain the requirements of passing the exam, break them down into small manageable tasks, try to finish each task, carry out self-assessment frequently to check your grasp of knowledge, and finally make an effort to bridge the gap between what you already know and what you need to know. Actually, these days a large number of apps possesses functions to help learners throughout the entire process, especially vocabulary and test-oriented apps. All learners have to do is to choose a favorable app, set up goals and a concrete learning plan with the help of this app, and learn in strict accordance with this plan.

(3) Improve collaboration among students. Find a learning partner who can offer encouragement and support whenever you need it, in order to prevent loneliness. Autonomous learning can sometimes be lonely and discouraging; however, collaborative learning encourages all those involved to support and motivate each other to achieve the learning goal (Valarmathi, 2011). Moreover, students can learn a lot by explaining ideas to each other, organizing activities with their peers, giving and receiving feedback and evaluating their own learning (Boud, 2001).

(4) Involve teachers as supporters in the process of autonomous learning. "The practice of self-assessment does not imply that this engagement is an isolated or individualistic activity. It commonly involves peers, makes use of teachers and other practitioners and draws upon appropriate literature" (Boud, 1999). In the process of self-directed autonomous learning and assessment, although students are mainly responsible for the learning, it does not necessarily mean that students can understand and digest everything without difficulties. Therefore, students should not hesitate to ask teachers for help if necessary. Feedback and help from teachers can enhance the impact of self-assessment. Students, especially low-achieving students, tend to benefit more from a teacher's support and guidance.

(5) The reflection afterwards is far more important than the assessment itself. Reflection after assessment means to think about which pieces of knowledge have been mastered and which have not yet. It particularly focuses on the errors and helps learners to make improvements through error analysis and criteria analysis. Reflection supplements self-assessment in the learning process. Self-assessment emphasizes how well learners perform according to certain criteria or standards, it celebrates success; reflection, on the other hand, focuses on the weaknesses and the lack of understanding (Sumsion & Fleet, 1996). "The main impact of self-assessment on

learning is through active involvement and reflection on what constitutes appropriate work (or good practice)"(Boud, 1999).

5. Conclusion

In this era of fast-developing technology, mobile-assisted language learning (MALL) has become increasingly popular among young learners, especially among college students, most of whom are the owners of at least one mobile device and have strong language learning needs, either to pass exams or find a promising job. It may be partially because this ubiquitous learning model can break the constraints of time and space and can be adapted to each individual's learning needs, and also because it caters to the interest of college students, the digital generation, who are willing to accept and embrace new things. The results of this study show that nearly 90% of the surveyed participants use mobile devices to learn English, and more than 70% have employed this learning method for more than one year. The most frequently used device is a smart phone, and the participants' favorite English learning apps or websites concern vocabulary and dictionary, followed by those focused on speaking, listening, writing and reading.

With respect to self-assessment, even though it is believed to be more effective as a strategy within the teaching and learning process rather than as an assessment alternative, its utilization in college students' mobile-assisted English learning is only at a medium level, whether viewed as the mean value of each item or the total score over all the 15 items. Only when split into different score scales can we see that just over half (54.45%) of the surveyed students use self-assessment strategies with a medium to high frequency. And the use of self-assessment is mainly limited to the purposes of checking the accuracy of exercises, the grasp of vocabulary, and to improve listening and speaking abilities. Based on the interview, the reasons for the limited use of self-assessment are revealed, including a lack of interest or motivation, the loneliness of learning alone, difficulties in finding the perfect application, etc. Consequently, this paper concludes with several suggestions to help learners enhance their English learning through self-assessment.

This study considered students' self-assessment and mobile-assisted English learning as a totally informal and autonomous learning behavior outside of the classroom. Therefore, it has investigated the utilization of self-assessment in students' mobile-assisted autonomous English learning and provided suggestions purely from the perspective of students' learning, never involving the potential role of teachers' teaching. Future studies might further study this issue by focusing on the teacher's role in students' mobile-assisted language learning and how teachers can help students embed self-assessment in their autonomous study. In the future, we believe that continuous technological development and research engagement will certainly make mobile-assisted English learning more convenient, fruitful and ubiquitous.

References

Abdous, M., Facer, B. R., & Yen, C. J. (2012). Academic effectiveness of podcasting: A comparative study of integrated versus supplemental use of podcasting in second language classes. *Computers and Education, 58*(1), 43–52. Available at: https://doi.org/10.1016/j.compedu.2011.08.021.

Al Fadda, H. A. (2020). Determining how social media affects learning English: An investigation of mobile applications instagram and snap chat in TESOL classroom. *English Journal, 11*(1), 3-11. Available at: https://doi.org/10.24093/awej/vol11no1.1.

Alamer, A., & Al Khateeb, A. (2021). Effects of using the WhatsApp application on language learners motivation: A controlled investigation using structural equation modelling. *Computer Assisted Language Learning*, 1-27. Available at: 10.1080/09588221.2021. 1903042

Benson, R., & Brack, C. (2010). *Online learning and assessment in higher education: A planning guide.* Oxford: Chandos Publishing.

Bergman, M. L., & Kasper, G. (1993). Perception and performance in native and nonnative apology. In G. Kasper & S. Blum-Kulka (Eds.), Interlanguage pragmatics (pp. 82-107). Oxford: Oxford University Press.

Black, P., & Wiliam, D. (2010). Inside the black box: Raising standards through classroom assessment. *Phi Delta Kappan, 92*(1), 81-90. Available at: https://doi.org/10.1177/003172171009200119.

Blanche, P. (1988). Self-assessment of foreign language skills: Implications for teachers and researchers. *RELC Journal, 19*(1), 75-93. Available at: https://doi.org/10.1177/003368828801900105.

Boud, D. (1999). Avoiding the traps: Seeking good practice in the use of self assessment and reflection in professional courses. *Social Work Education, 18*(2), 121-132. Available at: https://doi.org/10.1080/02615479911220131.

Boud, D. (1995). *Enhancing learning through self-assessment.* New York: RoutledgeFalmer.

Boud, D. (2001). Making the move to peer learning. *Peer Learning in Higher Education: Learning from and with Each Other, August.*

Boud, D. (2013). Enhancing Learning Through Self-Assessment. *In Enhancing Learning Through Self-assessment.*

Boud, D. (1991). *Implementing student self-assessment* (2nd ed.). Sydney: Higher Education Research and Development Society of Australasia.

Brown, G. T., Andrade, H. L., & Chen, F. (2015). Accuracy in student self-assessment: Directions and cautions for research. *Assessment in Education: Principles, Policy & Practice, 22*(4), 444-457. Available at: https://doi.org/10.1080/0969594x.2014.996523.

Burston, J. (2013). Mobile-assisted language learning: A selected annotated bibliography of implementation studies 1994–2012. *Language Learning & Technology, 17*(3), 157-225.

Dann, R. (2014). Assessment as learning: Blurring the boundaries of assessment and learning for theory, policy and practice. *Assessment in Education: Principles, Policy and Practice, 21*(2), 149–166. Available at: https://doi.org/10.1080/0969594X.2014.898128.

Elaish, M. M., Ghani, N. A., Shuib, L., & Al-Haiqi, A. (2019). Development of a mobile game application to boost students' motivation in learning English vocabulary. *IEEE Access, 7*, 13326 to 13337. Available at: https://doi.org/10.1109/access.2019.2891504

Escribano, P. D., & McMahon, J. P. (2010). Self-assessment based on language learning outcomes: A study with first year engineering students. *Alicante Journal of English Studies/Revista Alicantina de Estudios Ingleses*(23), 133-148. Available at: https://doi.org/10.14198/raei.2010.23.08.

GhouNane, N. (2019). The attitudes of second year EFL students at Dr Moulay Tahar University towards learning English pronunciation through mobile assisted language. *Arab World English Journal (AWEJ), 5*(Special Issue on CALL)(5), 110-123. Available at: https://dx.doi.org/10.24093/awej/call5.9.

Goral, D. P., & Bailey, A. L. (2019). Student self-assessment of oral explanations: Use of language learning progressions. *Language Testing, 36*(3), 391-417. Available at: https://doi.org/10.1177/0265532219826330.

Harris, M. (1997). Self-assessment of language learning in formal settings. *ELT Journal, 51*(1), 12-20. Available at: https://doi.org/10.1093/elt/51.1.12.

Hwang, W.-Y., & Chen, H. S. (2013). Users' familiar situational contexts facilitate the practice of EFL in elementary schools with mobile devices. *Computer Assisted Language Learning, 26*(2), 101-125. Available at: https://doi.org/10.1080/09588221.2011.639783.

Jamrus, M. H. M., & Razali, A. B. (2019). Using self-assessment as a tool for English language learning. *English Language Teaching, 12*(11), 64-73. Available at: https://doi.org/10.5539/elt.v12n11p64.

Jurkovic, V. (2010). Effect of explicit language learning strategy instruction on language-test and self-assessment scores. *English Language Teaching, 3*(1), 16-27. Available at: https://doi.org/10.5539/elt.v3n1p16.

Kathy Heilenman, L. (1990). Self-assessment of second language ability: The role of response effects. *Language Testing, 7*(2), 174–201. Available at: https://doi.org/10.1177/026553229000700204.

Kennedy, F., Bruen, J., & Péchenart, J. (2012). Using an e-portfolio to facilitate the self-assessment of both language and intercultural learning in higher education: A case-study approach. *Language Learning in Higher Education, 1*(1), 229-247. Available at: https://doi.org/10.1515/cercles-2011-0015.

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. Available at: https://doi.org/10.1017/S0958344008000335.

Li, Y.-P. (2012). Using podcast technology to construct a new model of college English listening teaching—An empirical study based on mobile language learning theory. *Modern Educational Technology, 5*, 68-72.

Li, C.-L. (2016). Challenges of reversed gender disparity in education. *Collection of Women's Studies, 2*, 33–39.

Lin, C.-C., Lin, V., G.-Z., L., Kou, X., Kulikova, A., & Lin, W. (2020). Mobile-assisted reading development: A review from the activity theory perspective. *Computer Assisted Language Learning, 33*(8), 833–864. Available at: https://doi.org/10.1080/09588221.2019.1594919

Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. *International Journal of Distributed and Parallel Systems, 3*(1), 309-319.

Panadero, E., & Alonso-Tapia, J. (2013). Self-assessment: Theoretical and practical connotations. When it happens, how is it acquired and what to do to develop it in our students. *Electronic Journal of Research in Educational Psychology, 11*(2), 551–576. Available at: https://doi.org/10.14204/ejrep.30.12200.

Peréz, C. M. L. (2012). Autonomy and self-assessment of individual learning styles using the European Language Portfolio (ELP). *Language Learning in Higher Education, 1*(1), 211-228. Available at: https://doi.org/10.1515/cercles-2011-0014.

Putra, I., Saukah, A., Basthomi, Y., & Irawati, E. (2019). The acceptance of the English language learning mobile application hello English across gender and experience differences. *International Journal of Emerging Technologies in Learning Kassel, Germany: International Journal of Emerging Technology in Learning, 15*(15), 219-228. Available at: https://doi.org/10.3991/ijet.v15i15.11077

Rafiq, K. M., Hashim, H., Yunus, M. M., & Norman, H. (2020). Ispeak: Using mobile-based online learning course to learn English for the workplace. *International Journal of Interactive Mobile Technologies, 14*(8), 19-31. Available at: https://doi.org/10.3991/ijim.v14i08.13185.

Sumsion, J., & Fleet, A. (1996). Reflection: Can we assess it? Should we assess it? *Assessment & Evaluation in Higher Education, 21*(2), 121-130. Available at: https://doi.org/10.1080/0260293960210202.

Valarmathi, K. E. (2011). Mobile assisted language learning. *Journal of Technology for ELT, 2*(2), 1-8.

Viberg, O., & Grönlund, Å. (2012). *Mobile assisted language learning: A literature review.* Paper presented at the In M.Specht, M.Sharples & J.Multisilta (Eds), Proceedings of the 11th International Conference on Mobile and Contextual Learning, mLearn 2012, Helsinki, Finland, October 16 -18, 2012. pp 9-16.

Yin, Y.-L. (2013). Research on college English level 4 mobile learning guided by micro-learning theory—An empirical study based on wechat public platform. *Science and Technology Vision, 25*, 56-57.

Zhang, S.-H. (2016). Mobile English learning: An empirical study on an APP, English fun dubbing. *International Journal Of Emerging Technologies In Learning, 11*(12), 4–8. Available at: https://doi.org/10.3991/ijet.v11i12.6314.

Zhang, J., & Wang, Y.-N. (2011). Empirical research on mobile technology promoting English listening and speaking teaching. *Research on Modern Distance Education, 3*, 72-77.