A STUDY OF ATTITUDES TOWARD MOBILE-ASSISTED LANGUAGE LEARNING OF CHINESE COLLEGE STUDENTS IN YUNNAN

Yuxuan Lu
Assumption University, Bangkok, Thailand

This study aims to investigate the Chinese undergraduate students’ attitudes toward using mobile-assisted language learning (MALL) in the English language learning. This study used quantitative method and focus on descriptive research design. 375 participants were selected by convenience sampling form population to do questionnaire survey. The findings presented that students have a moderately high level of attitude toward MALL (M=3.666, SD = 0.545) at the Yuxi Normal university. They are willing to try to learn and master the ability to learn using mobile devices if they are guided and taught. Based on research findings, it shows students need to receive some appropriate pre-training on the proper use of MALL to learn English. In addition, students may seek help from their teachers because they have problems they cannot solve when using MALL. Therefore, teachers also need to be trained to have the theoretical knowledge of how to operate MALL to provide better assistance to students.

Keywords: attitude; English learning; mobile-assisted language learning (MALL); Chinese college students

Introduction

The mobile learning concept was introduced to China in 2000. It can provide many learning resources and access, and its good visual-auditory experience can also attract students to learn the language in this way.

However, in addition to this, MALL also has the potential to distract students from the learning process. This is because the Internet connection provides many learning resources and plenty of entertainment. It also helps to guide students properly. Although, mobile-assisted language learning has been popular in the English language learning for university students, few university classrooms use mobile devices in their general teaching and learning process (Chen & Jia, 2020).

Yuxuan Lu
Graduate School of Human Sciences, Assumption University, Bangkok, Thailand
Research interests: education management, learning, methodology, English teaching

E-mail: 62louise0416@gmail.com
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With the current impact of COVID-19, universities must use online delivery for particular periods. Mobile devices are needed to help students learn English, which is part of the policy of the university.

According to the Ministry of Education of the People's Republic of China (2017), the English courses for university students in China are still revised as compulsory courses in the curriculum regulations for university students. Chinese college students, whether they major in English or not, must take College English Courses in their freshman through junior years. In addition, universities will make passing the CET-4 exam one of the mandatory requirements for college students to graduate and encourage them to take the CET-6 exam. The CET-4 exam refers to college English test level 4, and the CET-6 exam refers to college English test level 6. The CET-6 test is more complicated than the CET-4 test. Both of these tests are part of the University English Standard Level Examination. It shows that college students also continue to learn English during their college years.

Students' attitudes toward using MALL to learn the target language can also affect the efficiency of the learning process. In other words, they can maximize the use of MALL in the language learning. Ozer and Kılıç (2018) indicate that students are willing to download e-books or mobile applications to assist in the language learning.

However, mobile learning requires proper educational guidance to help users properly apply it in their daily learning, thus leading to the derivation of MALL from the concept of mobile learning. In the process of using MALL, the teacher's attitude toward using MALL in teaching can gain from the students' attitude toward MALL. That is, if the students have a positive attitude toward using MALL, it will also affect the teacher's perspective and make the teacher more willing to use MALL as a tool in teaching (Ghou-Nane, 2019).

Research objectives

There is one main research objectives with four sub-objectives as follows:

1. To identify the Chinese college students' attitudes toward mobile-assisted English language learning.
   1.1. To identify the Chinese college students’ perceived usefulness toward mobile-assisted English language learning.
   1.2. To identify the Chinese college students’ affection toward mobile-assisted English language learning.
   1.3. To identify the Chinese college students’ perceived control toward mobile-assisted English language learning.
   1.4. To identify the Chinese college students’ behavior toward mobile-assisted English language learning.

Literature Review

Mobile-assisted Language Learning

MALL has involved computer-assisted language learning (CALL) and mobile learning (Cakmak, 2019; Viberg & Grönlund, 2012); it differs from CALL for its personal use and portability across different contexts.

However, it mirrors mobile-learning as they both focus on contextualized learning, flexibility, and active community participation of the learner. Additionally, MALL uses the
same mobile technologies for language learning, such as personal digital assistants (PADs), mobile phones, tablet PCs, etc. (Kukulska-Hulme, 2012).

The theory of mobile-assisted language learning combines computer-assisted language learning (CALL) and mobile learning (M-Learning).

In foreign language (EFL) education and learning, MALL is a potential teaching tool to help learners with their language learning. Most researchers believe that MALL has excellent potential for use in learners' second language acquisition.

Oz (2015) emphasized that if used appropriately, mobile learning technology as a supplementary tool in and outside the classroom can enhance successful language learning. With an internet connection, mobile devices can provide rich learning materials for students’ English language learning (Hassan et al., 2016).

Using mobile devices to learn English has the benefits of being portable, flexible, and convenient. This is also a unique feature of mobile-assisted language learning. MALL was mentioned by Stockwell and Hubbard (2013) in their study of second language learning.

The use of MALL in target language learning contexts is becoming increasingly accepted by learners, who can use a wide range of mobile devices or applications as aids to their second language learning or teaching.

**Attitude**

Allport (1933) states that individual attitudes determine an individual's actual or potential perceptions of the outside world and reflect the process of changing personal psychological perception. Hovland & Rosenberg (1960) argue that there are three main components of attitude cognition, affect, and readiness for action. When researchers study students’ attitudes, they try to explain their behavior.

Pickens (2005) claims that attitudes help us determine how people see and behave in relation to a situation or objective. Moreover, there are three description models of attitudes: an affect (a feeling), a cognition (a thought or belief), and behavior (an action) (Pickens, 2005).

According to the attitude theory, it was stated by Hovland & Rosenberg (1960) that there are three main component models of attitude cognition, affect, and readiness for action. It was then developed by several researchers (Selwyn, 1997; Tsai et al., 2001; Tsai et al., 2010, Yang, 2012).

In this study, the attitude was identified as students’ behavior led by the perceptions, feelings, and beliefs of control in MALL. Attitude includes four components of perceived usefulness, affection, control, and behavior (Liu, 2017). Mobile-assisted language learning (MALL) was claimed by Kukulska-Hulme (2012), which means mobile devices and mobile technology resources are used to assist students’ English learning process.

**Conceptual Framework**

The following figure demonstrates the conceptual framework applied in this study; the main concepts of attitudes toward MALL were based on Liu’s (2017). As described in the conceptual framework above, attitudes consist of four main components: perceived usefulness, affection, control, and behavior. Any information or background knowledge a learner has about MALL, and either positive or negative perceptions of MALL, is a perceived utility component.
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Based on basic knowledge of MALL and fundamental influences, students develop emotional responses to MALL, such as feelings of liking or dislike for using MALL, and these feelings are part of attachment. The student's confidence in the ability to control and skillfully use the MALL is part of perceived control. Perceived control and self-efficacy are similar and consistent with each other.

Based on the above factors, student behavior regarding the use of MALL will be strongly influenced. Based on background knowledge, emotion mapping, and beliefs, learners will form specific behaviors, which are a MALL process from perceived use, emotion, and belief control to the actual use of behavior output (Bandura, 2010; Liu, 2017).

Methodology

Population

The population of this study was 14,376 undergraduate students from a public university located in Yunnan province, a city in southwest China. It included all full-time undergraduate students in all majors.

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>Percent (%)</th>
<th>Cumulative Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman</td>
<td>181</td>
<td>48.27</td>
<td>48.27</td>
</tr>
<tr>
<td>Sophomore</td>
<td>88</td>
<td>23.47</td>
<td>71.73</td>
</tr>
<tr>
<td>Junior</td>
<td>45</td>
<td>12</td>
<td>83.73</td>
</tr>
<tr>
<td>Senior</td>
<td>61</td>
<td>16.27</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>375</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The Tab. 1 gives information on the level of participants. From the above table, out of the 350 participants, 48.27% were freshmen, 23.47% were sophomores, 12% were juniors, and 16.27% were seniors. Based on the College English Teaching Guide (2020) requirement, freshmen and sophomores have College English courses, so they have more chance of applying mobile in English learning than other students.

Besides, passing the CET-4 exam is one of the graduation requirements for Chinese college students. Many freshmen and sophomores choose to take the exam now, increasing the opportunities for freshmen and sophomores to learn English.

As senior students approach graduation, they consider the direction of their future choices, whether to seek employment or to continue their studies for further education. Perhaps they will be more active in their English studies than juniors.

Gender of the participants

The Tab.2,3 lists the gender information of the participants; shows that 13.33% of the participants are male, and 86.67% are female. This indicates that the number of females at the public university dramatically exceeds that of males.
Table 2 - Type of English Tests Participants Attended
(Source: results of the survey)

<table>
<thead>
<tr>
<th>Categories</th>
<th>N</th>
<th>Percent (%)</th>
<th>Cumulative Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET-4</td>
<td>359</td>
<td>95.73</td>
<td>100</td>
</tr>
<tr>
<td>CET-6</td>
<td>47</td>
<td>12.53</td>
<td>100</td>
</tr>
<tr>
<td>IELTS</td>
<td>9</td>
<td>2.4</td>
<td>100</td>
</tr>
<tr>
<td>TOEFL</td>
<td>5</td>
<td>1.33</td>
<td>100</td>
</tr>
</tbody>
</table>

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<td>5</td>
<td>1.33</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Percent (%)</th>
<th>Cumulative Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>50</td>
<td>13.33</td>
<td>13.33</td>
</tr>
<tr>
<td>Female</td>
<td>325</td>
<td>86.67</td>
<td>100</td>
</tr>
<tr>
<td>Total</td>
<td>375</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

The table above is about the various tests that the participants took. This table shows that 95.73% of the participants took the CET-4 test, and 12.53% of the participants took the CET-6 test. For IELTS and TOEFL it is 2.4% and 1.33%.

The questionnaire data shows that the majority of students took the CET-4 test to meet graduation requirements. As previously mentioned, students at the target public university must pass the CET-4 test to meet university graduation requirements.

As shown in the Tab. 2, most students pass the CET-4 test. Some students took the CET-6 test. Only a small percentage of students who go abroad choose to take the IELTS and TOEFL tests.

Questionnaires

The English Mobile Learning Attitudes Scale for Adult learners (Liu, 2017) was used to collect data. Liu's (2017) questionnaire is the English version; this study adopts the questionnaire and keeps the original English version.

The questionnaire was composed of two parts, including the demographic profile of the participants about gender, grade, and what kind of English test the students passed; a total of 3 questions in this part. It also has 21 items to measure students' attitudes toward mobile-assisted language learning. Overall, 24 items were included.

The category of the survey question part is shown in Tab.3.
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Table 3 - Category of the Survey Questions
(Source: results of the survey)

<table>
<thead>
<tr>
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<th>N</th>
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<td>5</td>
<td>1.33</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Construct</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographic profile</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Attitudes scale</td>
<td>Perceived usefulness</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Affective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Perceived control</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Behavior</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

Category of the Survey Questions

The questionnaire has two parts: the first part reflects students’ demographic profile (gender, grade, passed test). The second part shows the results of Likert scale questionnaire of attitudes.

The first part was a demographic profile of participants, including gender, grade, and what kind of English test the participants passed. The information collected from this part helped analyze the following questionnaire data in the discussion.

The second part was adopted from Liu’s (2017) English Mobile Learning Attitudes Scale for Adult learners. Liu (2017) developed the questionnaire through the participants from Taiwan college in China, which was for students with similar Chinese educational backgrounds as the students in this study. Consequently, this questionnaire was suitable for the target students.

The questionnaire is in English, and the students can understand the meaning of the questionnaire.

Data analysis

The answer to the research question was based on the second part of the questionnaire adopted from the English Mobile Learning Attitudes Scale for Adult learners (Liu, 2017). The questionnaire has four sections based on each of the four components of attitude, and the four sub-questions were analyzed based on the data from each section.

Carrying out the data analysis using a descriptive statistic, means value (M), and standard deviation (SD) analysis- using descriptive statistics to see students’ demographic profiles. Analysis of means values (M) showed the actual condition of students’ attitudes toward mobile-assisted language learning.

Using standard deviation (SD) analysis to measure different effects of students’ mobile-assisted language learning experience.
In addition, the Likert scale was analyzed to determine the mean scores (M) and standard deviation (SD) for each relationship scale statement. The attitude of scaling interpretation Liu (2017) is listed in Tab. 4.

**Result and discussion**

In the second part of the questionnaire, the English Mobile Learning Attitudes Scale, which includes 21 items, was divided into four areas. The objective is ‘To identify the college students’ attitudes toward mobile-assisted English language learning’ and is based on the overall data (M = 3.666, SD = 0.545) of 21 items from data analysis.

The findings show that college students have positive attitudes toward mobile-assisted language learning.

Table 4 - Attitudes Scaling Interpretation (Liu, 2017)
(Source: results of the survey)

<table>
<thead>
<tr>
<th>Score</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0-1.5</td>
<td>students have a low level of attitude toward MALL: perceived usefulness, affective, perceived control, and behavior.</td>
</tr>
<tr>
<td>1.51-2.5</td>
<td>students have a moderately low level of attitude toward MALL: perceived usefulness, affective, perceived control, and behavior.</td>
</tr>
<tr>
<td>2.51-3.5</td>
<td>students have a moderate level of attitude toward MALL: perceived usefulness, affective, perceived control, and behavior.</td>
</tr>
<tr>
<td>3.51-4.5</td>
<td>students have a moderately high level of attitude toward MALL: perceived usefulness, affective, perceived control, and behavior.</td>
</tr>
<tr>
<td>4.51-5.0</td>
<td>students have a high level of attitude toward MALL: perceived usefulness, affective, perceived control, and behavior.</td>
</tr>
</tbody>
</table>

**Findings**

**Students’ Attitudes Toward MALL**

Results show the students’ attitudes toward MALL for each component, an intuitive listing of the data for each section. It indicated that four components of attitudes had a moderately high interpretation: perceived usefulness (M = 3.763, SD = 0.723), affection (M = 3.639, SD = 0.576), perceived control (M = 3.536, SD = 0.657), and behavior (M = 3.732, SD = 0.583). This shows that students had moderately high attitudes toward MALL.

This scale was to obtain data on participants’ attitudes toward mobile-assisted language learning.

Research findings show that students have a moderately high level of attitudes toward the use of mobile-assisted English language learning. Nowadays, various advanced technologies, such as mobile applications, mobile aids, computers, and other portable devices, are being used in teaching English. The students are more aware and receptive to technology devices, which makes their attitude toward MALL positive.

In addition, according to the affections section, it was found that students were not confident that they could correct the errors they encountered when using MALL on their own.

This shows that the teacher's support is needed in learning English with MALL.
Students' Attitudes toward MALL (Factor 1: Perceived Usefulness)
Results indicate that the English mobile learning attitudes scale included the perceived usefulness component. In this factor of perceived usefulness, the perspective of using mobile devices for participants’ English language learning was explored.

Through the data overall, nine items have shown that participants have moderately high perceived usefulness (M = 3.763, SD = 0.723). Students believe that mobile-assisted English learning can help them get more ideas for learning English. And the mobile devices can support students' English learning.

The Mobile-assisted language learning can motivate students to learn English and increase their motivation. In addition, students think viewing learning resources through mobile devices provides a more clear view of the content.

And, because mobile devices provide a visual display of learning content and more interesting learning resources, they can enhance students' interest in learning English and allow them to be more imaginative in completing activities or tasks. In other words, mobile-assisted English learning provides students with an alternative way of learning.

Students' Attitudes toward MALL (Factor 2: Affections)
Results showed the affection toward MALL. This component of attitudes (affections) has two negative items, item 10 and item 12 of the English Mobile Learning Attitudes scale, so the scoring of these two items was reversed for calculation. Based on the description of the three items’ data in factor 2 (affections), students have moderately high effectiveness when using MALL (M = 3.639, SD = 0.576).

Students hesitate to use mobile-assisted English language learning because they worry about encountering unsolved difficulties in the learning process or damaging their mobile devices. According to the survey data, students are hesitant to use MALL alone to help them learn English because they are concerned that they will not be able to correct the errors they encounter alone.

Students using MALL in English learning independently or autonomously does not mean learning in isolation. Teachers can help students in the process of learning English using MALL.

If a student faces a problem they cannot solve, they can request help from the teacher by emailing or communicating with them on social media. It may help students to use the MALL better when learning English.

Students' Attitudes toward MALL (Factor 3: Perceived Control)
Yorganci (2017) believes that prior experience with mobile learning and academic specialization played a role in students’ self-efficacy and attitudes toward using mobile learning.

Besides, statistically, significant differences were found in students' self-efficacy for mobile learning based on prior learning experiences. The perceived control refers to students’ self-efficacy, which they believe in the ability to use MALL in English learning.

Students are willing to use mobile devices to learn English, even if it is their first time trying to use them.

The instructions may help not just before using MALL but during the usage as well, because it will make students more confident in using mobile devices for learning purposes.
Students’ Attitudes toward MALL (Factor 4: Behavior)

From the description of the overall five items of factor 4 (behavior) showed that students have moderately high behavior in MALL (M = 3.732, SD = 0.583). According to this part of the scale, it was found that students use mobile devices for extended learning after class.

They will join group learning discussions through mobile social apps or collect learning resources according to their interest.

Learners do not resist using mobile devices for learning and will actively participate in such opportunities if offered. MALL gives students the flexibility to learn, which means they are free to choose their learning resources. The mobile app market offers many apps to help students practice reading or vocabulary.

It is concluded that students' behavior toward using MALL is closely related to the other three components; students' perceptions, preferences, and self-efficacy toward MALL are reflected in students' behavioral performance in using MALL.

Pedagogical implications

Students use mobile devices as one of the tools to help improve their English learning after school, which means that most of the time, students are self-learning and trying out how to use these tools on their own.

Compared to existing studies (Yang, 2012; Yorganci, 2017; Liu, 2017), this study has new findings on error correction when students are using MALL.

Objective 1, 2 mentions that students can seek help from their teachers when they encounter errors, they cannot self-correct. Therefore, teachers also need to learn more about using mobile devices (e.g., mobile apps, use of web-based learning resources, and selection of audition material). Teachers need to have enough knowledge of MALL to maximize its use to help students learn English. Technology advancements have allowed more interesting learning materials to be used in the learning process to increase students' interest and motivation. The better the teacher understands MALL’s learning resources, the better they can advise and assist students in their studies. The following are some relevant suggestions for English teachers and educational administrators.

Educational administrators need to organize training courses on MALL for teachers who have not been exposed to MALL.

A formal training course to help teachers better understand it to provide help when they encounter students seeking help and to make better use of MALL in the classroom to support teaching and learning.

According to Objective 3, it was found that students felt that having pre-training sessions would increase their confidence in using MALL. In addition to organizing MALL-related training sessions for teachers, it is also necessary to manage training sessions for students using MALL. It is also suggested by Wu and Tsai (2006) that some training courses on using MALL can help college students learn how to use this resource better to support their studies.

Students use MALL to supplement their English language learning because of its vast wealth of learning materials. The mobile device satisfies visual and auditory needs and adds to learning fun. The addition of a teacher helps students plan and use MALL to learn the language properly.
Conclusion and Recommendations

This study discusses students' attitudes towards using MALL on a macro level. It also examines students' basic perceptions of using MALL, their confidence in using MALL, and whether they like using MALL based on four components of attitudes: perceived usefulness, affection, and perceived contradiction.

The study found that students had a high level of attitude towards using MALL to learn English. In addition, it was found that the reasons that affect students' use of MALL are that students encounter mistakes they cannot fix. This would make students less confident in their ability to control the tool perfectly when using MALL.

According to the research, students feel confident that they can learn to use MALL to learn English independently, but having a study manual or a training course will improve their confidence in using MALL. In addition to students needing training courses, teachers also need to receive appropriate training courses so that when students encounter errors they cannot correct or solve on their own, they can seek help from teachers. It is also necessary for teachers to receive appropriate training courses to help students solve their problems.

It shows that using MALL to learn English is not only a popular choice for students, but teachers should also meet students' learning needs. They should have the appropriate theoretical operational knowledge to help students use MALL correctly.

Since the present collection covers all undergraduate students and all majors, for future research, if researchers want more detailed professional data, perhaps the grades and majors can be narrowed to get more targeted data analysis results.

In addition to quantitative research methods, qualitative research methods can be added. It means that interviews or classroom observations can be conducted to obtain more detailed information, like how students use MALL and the feedback after students use MALL.

For future studies, in case the questionnaire of Liu (2017) is also to be adapted. It is recommended that some measures be taken for the negative items of the second part of the affective component by rewriting new positive options or modifying these two options in other better ways to facilitate the analysis of the data.

References:

Ghou-Nane, N. (2019). The attitudes of second-year EFL students at Dr. Moulay Tahar University toward learning English pronunciation through mobile-assisted language. Arab World English Journal (AWEJ) Special Issue on CALL, (5).


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