Research Paper

Investigating Gender and Experience Effects on EFL Learners' Perceptions of Mobile-Assisted Language Learning

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Abstract

Mobile assisted language learning (MALL) has been widely used by English as a foreign language (EFL) learners to enhance their language learning experience. Although previous studies investigated various factors impacting learners' perceptions towards MALL and its usefulness, the role of demographic features and the extent to which they influence learners' perceptions toward MALL has been under-researched. Accordingly, this study examined the impact of experience and gender on learners' perceptions of MALL and their perceived MALL usefulness. Data were collected from 190 EFL learners attending English language learning courses in the educational context of Iran. Univariate analysis of variance (two-way ANOVA) was employed to analyze the data. As the results indicated, there was a significant relationship between the experience of the language learners and their perceptions of MALL usefulness. More precisely, the more the learners' were experienced in using smartphones for language learning, the more positive their perceptions of MALL's usefulness would be. The study's results were analyzed in light of the available literature, and suggestions for further research were provided.

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Introduction

MALL is referred to as one of the outstanding learning strategies in the EFL context (Cavus, 2020; Cho et al., 2018; Dastjerdi, 2011; Rodríguez-Arancon, 2013). It enhances the students' quality of learning via addressing their text analyzing performance (e.g., looking up new vocabulary items in dictionaries), provides them with more professional pronunciation practices (Hazaea & Alzubi, 2016), and minimizes their anxiety in learning English as a foreign language (Shamsi et al., 2019). Furthermore, MALL is considered practical, convenient, and easy to use (Soleimani et al., 2014) and grants learners a comfortable learning experience by creating an anytime, anywhere learning environment (Rahman, 2020). Therefore, due to its prominent role in providing learners with broader learning opportunities (Dashtestani, 2016), the adoption of technological advancements (e.g., mobile devices) in EFL education assists language learners in attaining higher proficiency levels (Lee et al., 2020) and more remarkable performance in academic contexts (Alkhunaizan, 2020).

Having established that MALL integration enhances learners' educational practice and performance in the EFL context (as mentioned above), studies have also investigated the factors that may impact their perceptions toward the use of mobile devices (e.g., smartphones) in classes. In this regard, the context in which MALL occurs (Chen, 2016), the provision of facilities (e.g., Internet connection) by the administrators in that particular context (Rahmany & Sohail, 2022), the affordability issues of handling classes with mobile devices (AlDakhil & AlFadda, 2022), and the literacy of the practitioners and learners (Metruk, 2022) are considered as determining factors affecting the formation of learners' positive perceptions toward MALL. Furthermore, studies have also delved into the role of demographic features and the extent to which they develop positive perceptions toward MALL use. In this regard, learners' cultural backgrounds (Hue, 2013) and their age (Viberg & Gronlund, 2013) are marked as decisive elements in predicting the use of mobile devices in the EFL context.

Equally important to learners' perceptions toward MALL is their perceived usefulness of MALL. According to learners' self-reports in this respect, mobile devices are useful since they promote learners' language learning via collaboration (Yang, 2012), enhance the learners' academic achievement (Alkhudair, 2020), and reinforce their speaking and other language-related skills (Zhou, 2021). Furthermore, MALL is cited as a useful approach to language learning since it is easy to access (Azar & Nasiri, 2014) and inspires language learning to occur every day (Alshammari, 2020). With that in mind, learners' perceptions regarding the usefulness of MALL in the EFL context have been investigated concerning the possible impact of other factors. As stated by learners, the technological affordances provided by the environment (Hsu, 2013), the sufficiency of online and Internet-based facilities (Bozorgian, 2018), and classroom teaching

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methodologies concerning the use of MALL (Wu, 2019) are counted as critical elements influencing learners' incentives to consider mobile devices as useful elements in EFL classes.

Although many factors have been examined for their direct or indirect impact on learners' perceptions of MALL and its usefulness, previous studies have failed to investigate the extent to which learners' experiences regarding the use of mobile devices impact their perceptions in this respect. Furthermore, no research has addressed the learners' willingness to use MALL and their perceptions of MALL usefulness by addressing their gender to date. With that in mind, the current research delves into addressing learners' perceptions of MALL and their perceived usefulness concerning their experience and gender. More precisely, the notions of experience (novice or experienced) and gender (male or female) will be investigated regarding their impact on learners' incentives toward mobile devices and their perceptions of mobile usefulness. Finally, having established that learners' attitudes toward MALL and their perceptions of its usefulness are marked as the two promising factors in successful MALL integration, further investigation of the elements and the extent to which they are influenced by other factors is of utmost significance.

Literature Review

Mobile-Assisted Language Learning (MALL)

MALL, first coined by Chinnery (2006), has been referred to as a critical element in the language learning milieu for more than a decade (Golshan & Tafazoli, 2014; Vafa & Chico, 2014). Mobile-assisted language learning has evolved from computer-assisted language learning (Cakmak, 2019). However, it differs from CALL due to its practicality in various situations (Taleb & Sohrabi, 2012) and ease of use (Aburub & Alnawas, 2019) since it provides the key mobile technologies to facilitate the language learning process. Unlike CALL, MALL provides learners with many unique language learning opportunities. For example, mobile technologies are found to encourage language learners to develop their sense of individuality and life-long learning experiences (Kim & Kwon, 2012). In other words, mobile devices (e.g., smartphones) are considered immense opportunities through which learners can keep their contact with language learning anytime and anywhere. Furthermore, mobile devices (e.g., smartphones) are devised in a way to ensure that the selected tasks are suited to the affordances of the devices that are used by the learners (Stockwell & Hubbard, 2013). In other words, using smartphones in a language learning context forces the administrators to devise tasks based on the existing mobile technologies so that the maximum level of language learning takes place. Finally, Yarahmadzehi and Goodarzi (2020) stated that mobile devices provide learners with more applicable procedures for language assessment. Due to the descriptive statistics collected from the respondents' answers to questionnaire items, learners treated

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and assessed via mobile-based applications were better vocabulary learners at the end of the treatments.

Perceptions toward MALL

The notion of MALL has been widely addressed throughout the literature targeting the learners' perceptions. For example, analyzing the self-reports of a group of EFL learners from Sulaimani, Iraq, it was found that the implementation of mobile phones significantly impacted language learning processes. In other words, mobile devices (e.g., smartphones) are essential for a more comfortable language learning experience (Muhammed, 2014). Similarly, Azar and Nasiri (2014) investigated the role of smartphones as audiobooks on learners' listening comprehension. As the learners stated, using smartphones as audiobooks is a significant determiner for improving their listening comprehension in that they have more and better opportunities for learning and can listen to their favorite topics anytime and anywhere. Highlighting the same idea regarding the assistance that mobile devices (e.g., smartphones) may provide, Garcia Botero et al. (2019) stated that mobile devices enhance the learners' literacy with respect to the use of language since they inspire the learners to make use of language outside the class which is referred to as out-of-class learning. Moreover, in their study on a group of female language learners in Iran, Ataeifar et al. (2019) stated that mobile-assisted language learning is a determining factor in improving learners' speaking skills in an EFL context. Precisely, learners could make use of mobile phone applications to enhance their English speaking skills. Holding the same idea, Chen (2021) stated that the overall perceptions toward mobile learning and using a smartphone application for English learning are positive. As the learners proposed, integrating MALL tools in English as a foreign language (EFL) classes enhances their positive perceptions of the whole lesson. This means, learners' attitudes toward the subjects being taught in classes are highly dependent on the use of smartphones and the applications they provide. Finally, exploring a hundred and seventy-nine EFL learners from Korea, Jeon (2022) indicated that integrating mobile assisted language learning contributes to the learners' basic psychological needs. As the learners' responses to questionnaire items revealed, using smartphone applications promises to provide learners with enough psychological support during the learning process.

Having established that learners' positive perceptions toward MALL are marked as a prominent factor in leading to educational success in the field of EFL, studies have also examined the possible factors concerning their direct or indirect effect on the adoption of MALL. In this regard, Doan (2018), surveying a group of language learners from Vietnam, introduced the notion of self-management. As the self-reports revealed, learners' positive perceptions toward smartphone integration are directly associated with their level of self-management. In other words, those with a higher level of self-management may have a relatively higher positive intention toward using mobile phones in their class. Following that, Morchid (2019) researched a total of 156 Moroccan EFL

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students. As the analysis of learners' perceptions revealed, teacher feedback was considered as an antecedent to successful mobile-based instruction and learning. Precisely, learners' who received positive feedback with respect to their use of mobile devices in class were more willing to integrate such devices into their learning process. In addition, studies have also addressed the notion of technical support as a promising factor that helps the formation of a positive attitude toward M-learning. Surveying a total of 235 Chinese university students, Wu (2019) established that despite learners' positive attitudes toward integrating mobile devices in the EFL context, technical problems (e.g., battery life and small screen) resulting from the integration of such devices are one of the prominent impediments that refrain learners to use them for other affairs. More recently, Hoi (2020) established that learners' positive perceptions toward utilizing MALL are associated with their attitude toward mobile devices (e.g., smartphones) and the notion of performance expectancy. In other words, the more the learners are satisfied with using mobile devices in their class, the higher their tendency to integrate these devices into their learning process. Addressing the learning content provided by mobile devices (e.g., smartphones), Yang (2020) employed that students highly favor smartphone applications since they provide interesting learning content. As the results from the interviews indicated, learners favored using mobile devices since they grant applications that carry interesting learning content.

MALL perceived usefulness

Also noteworthy are the learners' perceptions regarding the usefulness of MALL and the extent to which mobile devices can assist in learners' better performance during the learning process. Accordingly, studies throughout the literature have addressed mobile devices with respect to multiple aspects of their use. Questioning the learners regarding their perceptions of MALL usefulness, Ahn and Lee (2016) deployed a series of open-ended questions to gain insight into their responses. As reported by the learners, mobile devices are useful since they carry the potential of being convenient and interesting to use. Furthermore, in their study on a group of language learners from Taiwan, Chen (2017) stated that mobile-assisted language learning is highly granted by students regarding the notion of usefulness. As declared by learners, mobile devices are useful due to their potential to enhance learners' English competence. Xu et al. (2017) carried the same idea respecting the positive impact of mobile devices (e.g., smartphones) on learners' overall language competence (e.g., their speaking and pronunciation skills). As the results of analyzing the learners' self-reports in the EFL context of China, it was found that the feedback learners received via their smartphones improved their overall speaking ability and pronunciation. In the same vein, Klimova (2018) stated that the reports from language learners reveal that mobile phones and smartphones are useful in developing their vocabulary and enhancing their motivation to learn English as a foreign language. Finally, Darish and Asikin (2020) surveyed a total of 96 English language learners

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concerning their perceptions of MALL's usefulness. As the self-reports indicated, learners had positive attitudes regarding the usefulness of MALL since it is accessible and easy to use outside the classroom.

Furthermore, learners' perceived usefulness in respecting the implementation of mobile devices (e.g., smartphones) is also assessed via utilizing different applications. In this regard, Alhadiah (2020) addressed the role of smartphones and their related applications (such as Quizlet) on learners' vocabulary learning. The study shows that applications provide learners with innovative and efficient approaches to vocabulary learning. Surveying a group of language learners, Khan et al. (2021) have addressed WhatsApp and considered it as an interesting and convenient form of language engagement, even in academic status. Finally, analyzing the results from recruiting a group of Chinese EFL learners, Lu et al. (2022) implied that smartphone applications are significantly helpful in mediating between learners' perceived usefulness and their satisfaction while using mobile applications. In other words, one of the vital elements in providing learners with a feeling of satisfaction regarding mobile devices in the EFL context is the use of applications associated with language learning.

Having established that MALL is highly favored by learners in various EFL contexts, studies have also examined the factors that affect the formation of learners' perceptions of the usefulness of MALL. While studying a group of Malaysian EFL learners, Azli et al. (2018) found that learners' level of technology literacy plays a pivotal role in shaping their perceptions of MALL usefulness. In other words, the higher the number of knowledge learners carries concerning mobile devices, the more positive their beliefs would be regarding MALL's usefulness. Surveying a group of language learners using structural equation modeling (SEM), Sun and Gao (2020) expressed that intrinsic motivation plays a decisive role in determining learners' perceptions of MALL usefulness. This meant that the more the learners are intrinsically motivated, the higher their positive perceptions toward the usefulness of MALL would be. Similarly, Xu (2020) examined a group of Chinese EFL learners to reveal the possible factors influencing their perceived MALL usefulness. As the self-reports indicated, learners would have more positive attitudes toward the usefulness of MALL if provided with a higher variety of mobile-assisted exercises, a more comprehensive procedure for monitoring, and more sophisticated management applications. Followed by that, Khan et al. (2021) established that learners' acquaintance with smartphone applications (e.g., WhatsApp) is one of the prominent factors for their positive perceptions of MALL's usefulness. In other words, MALL applications such as WhatsApp are counted as useful ways of language learning for students thanks to their ease of use and convenience usage.

Many studies, to date, have probed the two elements mentioned above (i.e., perceptions toward MALL and perceived usefulness) by addressing their formation and the possible impact of many factors in this regard. However, despite the extensive research conducted in this respect, studies have missed investigating the role of

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demographic features (e.g., gender and experience) and the extent to which they may impact their perceptions toward MALL and the usefulness of mobile devices in language learning. Accordingly, the current research examines the role of learners' experience level (novice or experienced) and their gender (male or female) on their perceptions of MALL and perceived usefulness. In other words, this study seeks to find out the extent to which experience and gender impact learners` perceptions toward MALL and their perceived use of MALL. With that in mind, the following research questions have been formulated;

- **Research Question 1:** Is there any significant relationship between Iranian EFL learners' experience and their perceptions of MALL usefulness?
- **Research Question 2:** Is there any significant relationship between Iranian EFL learners' gender and their perceptions of MALL usefulness?

Methodology

Participants

A total of 190 Iranian EFL learners (88 males and 102 females) were invited to participate in this study. All the participants had their language learning courses in one of the two major educational contexts (i.e., Public schools and Private institutes) in Iran (where the study was conducted). The learners were aged between 12 and 20, and their language learning experiences regarding mobile devices (e.g., smartphones) differed from less than a year to five years. Prior to responding to the questionnaires, the learners were ensured that their responses to the questionnaire were kept strictly confidential and used only for research purposes.

Instrumentation

Two questionnaires validated by previous studies are employed to respect the hypothesized variables (i.e., perceptions toward MALL and perceived usefulness). With regards to the first questionnaire addressing learners' propensity to integrate mobile devices into the field of language learning, Chen's (2017) survey was adopted. The questionnaire comprises ten items centered on measuring learners` perceptions toward the use of mobile devices with the aim of language learning. Sample items underlying this variable are; "I am interested in learning English using a mobile phone," "MALL should be used in class regularly," and "I am confident when using mobile devices for English learning." The respondents` answers to the questions are measured based on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Furthermore, learners' perceptions of the usefulness of MALL are measured via adapting a questionnaire by Lizamuddin et al. (2019). The questionnaire, comprising ten

items, was initially developed by Davis (1993). The current study uses the modified version of the questionnaire (Lizamuddin et al., 2019) rather than the original one since the items are tailored to fit the Iranian EFL context. Like the former questionnaire, the administered items are devised based on a 5-point Likert scale varying from 1 (strongly disagree) to 5 (strongly agree). The sample items for this part of the questionnaire are; "Using a smartphone improves the quality of my work, "Using a smartphone (MALL) increases my productivity, and "Using a smartphone (MALL) reduces my critical thinking".

Data collection and analysis procedure

The current research follows a quantitative approach for the collection of data and the analysis procedure. In this regard, the total number of 190 questionnaires were distributed among EFL learners in hard copies or email attachments. The data collection process lasted six months, from August 2020 to January 2021. Of all the questionnaires completed by the participants, 180 were returned. The number of the questionnaires was then reduced to 150 because of discarding the questionnaires that were incomplete or carelessly completed. The collected data were then fed into SPSS (26th version) to measure the reliability and validity of the answers provided by the respondents. Having established that the data underlying each of the variables carried acceptable psychometric properties (e.g., normality of distribution), a Univariate analysis of variance (two-way ANOVA) was conducted to find out the possible differences between the learners` perceptions toward MALL and their perceived usefulness considering their level of experience (novice or experience) and gender (male or female).

Results

Descriptive statistics

In order to provide information regarding the descriptive statistics of the responses (e.g., reliability and validity of the items), Alpha ranges and skewness and kurtosis ranges were measured. As illustrated in Table 1, the statistical values for skewness and Kurtosis regarding the learners' perceptions toward MALL and their perceived usefulness varied from -0.12 to -1.3, nd 0.04 to -1.7, respectively. This meant that the questionnaire items underlying the two above-mentioned variables (i.e., perceptions toward MALL and perceived usefulness) enjoyed relatively high normality of distribution. Moreover, Cronbach Alpha values for perceptions toward MALL (0.91) and perceived usefulness of MALL (0.85) indicated that learners' responses to items underlying the two above-mentioned variables enjoyed a relatively high internal consistency (Table 1).

Table 1

Descriptive statistics of learners' responses to perceptions toward MALL and MALL usefulness questionnaire items

	Skewness	Kurtosis	Alpha
Perceptions toward M-learning	-0.12	-1.3	0.91
MALL usefulness	0.04	-1.7	0.85

The impact of Experience and gender on learners` perceptions toward MALL and its perceived usefulness.

As the results from the Univariate analysis of variance (two-way ANOVA) reveal (Table 2), a significant difference exists among EFL learners' perceptions of MALL concerning their experience in using mobile devices. More precisely, experienced EFL learners (M=3.41) outperformed their novice classmates (M=2.11) with respect to their propensity to use mobile devices. Moreover, another significant difference was captured in learners` perceptions of MALL's usefulness with respect to their experience. This meant learners who were more experienced (M=1.72) with using smartphones for language learning carried more positive perceptions about the usefulness of mobile devices in language learning compared to the novice ones (M=1.30). Despite the significant role of experience on learners' perceptions of the two above-mentioned factors (i.e., MALL usefulness), no significant difference was captured between the learners' perceptions of the two above-mentioned factors concerning their gender (male or female) (Table 2).

Table 2

Tests of between-subjects effects

	Perceptions toward M-learning	Perceived usefulness
Experience	0.000**	0.000**
Gender	0.113	0.118

** $p < .001$.

Furthermore, despite the insignificance of the results regarding the role of gender, it was found that females (M=2.88) were slightly higher than their male counterparts (M=2.64) in terms of their perceptions of M-learning. Furthermore, females (M=1.56) outperformed males (M=1.46) concerning their intentions toward the usefulness of MALL. In other words, despite the insignificance of the results, females carried more positive perceptions toward MALL and its usefulness than males. The results for this part of the study are presented in Table 3.

Table 3

Descriptive statistics for learners` responses to the questionnaire items targeting perceptions toward MALL and MALL usefulness

			M	
			Perceptions toward MALL	Perceived usefulness
Experience		Novice	2.11	1.30
		Experienced	3.41	1.72
Gender		Males	2.64	1.46
		Females	2.88	1.56
M= Mean score				

Discussion

The current research provides insights regarding the learners' perceptions toward the use of mobile devices and their perceived usefulness within the EFL context of Iran. Factors influencing the learners' perceptions in this regard are hypothesized as their level of experience (novice or experienced) and gender (male or female). As the results indicated, those with a higher level of expertise carried more positive perceptions toward integrating mobile devices into language learning. Furthermore, experienced language learners held more positive intentions regarding the usefulness of MALL. The results of this phase of the study confirm and extend the literature in that they provide a broader insight respecting the factors influencing learners' perceptions toward MALL and its usefulness. The results regarding the significance of experience can be justified by addressing the connection between learners' practice and the positivity of their perceptions. In other words, increasing the EFL learners' contact with mobile devices (e.g., smartphones) as boundless language learning tools and the provision of opportunities regarding their use enhances the learners' experience in this respect and, accordingly, increases the positivity of their perceptions toward the integration of mobile devices (Ersanli, 2014).

Furthermore, the current research examined the impact of gender (the second hypothesized factor) and how it may influence learners' intentions toward MALL use and mobile technology usefulness. As employed by the study results, females outstripped their counterparts in that they carry more positive attitudes toward using MALL and its usefulness. The findings can be justified because female learners are highly motivated in

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comparison with males and prefer to make connections with smartphone applications more than their male counterparts (Rajendran et al., 2020) and, as mentioned throughout the literature, learners' intrinsic motivation is expressed as an important determiner of their perceptions toward MALL usefulness (Sun and Gao, 2020).

The present study set out to investigate the factors influencing learners' perceptions toward the use of mobile devices and their intentions of MALL usefulness. As the study's results indicated, the learners' experience acted as a determining factor in building positive perceptions toward MALL integration and its usefulness. In other words, learners with more experience using mobile devices with the aim of language learning tended to have more positive attitudes toward its use. The results, to this point, provide a broader insight with respect to the more successful use of mobile technologies in English as a foreign language milieu. This meant that providing learners with opportunities to gain more experience concerning the use of MALL is strongly suggested if teachers and administrators seek to change the learners' negative perspectives regarding using mobile devices in EFL classes. Unlike experience, no significant difference was found between males and females concerning their perceptions of using mobile devices and MALL's usefulness. Precisely, despite the slight superiority of females over males respecting their perceptions toward MALL and its usefulness, both genders were almost the same regarding their willingness to use mobile devices.

There were some limitations in conducting this study. First, despite various demographic features being addressed throughout the literature, this study only targeted two factors (i.e., experience and gender). This meant there is still room for more research, and future studies can focus on a more significant number of demographic features (e.g., age, proficiency level, etc.). Moreover, the current research was conducted using a total number of 190 Iranian EFL learners. Further studies could be conducted using a larger number of participants to obtain more comprehensive results.

Declarations

Availability of data and materials

Data sharing is not applicable to this article as no datasets were generated or analyzed during the current study.

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Appendices

Appendix A. Perceptions toward MALL Questionnaire

Items
1. I am interested in learning English using a mobile phone
2. MALL has been applied in various learning activities in my English class.
3. I prefer MALL courses to traditional courses.
4. MALL should be use in class regularly.
5. MALL will increase the students` desire to learn English.
6. Recent developments in MALL are leading to the exploration of new methods /models at university level.
7. I feel bored using a mobile device.
8. MALL has been widely applied to EFL learning.
9. I am confident when using mobile devices for English learning.
10. Students are looking forward to engaging in MALL learning

Appendix B. Perceived Usefulness Questionnaire

Items
1. Using smartphone improves the quality of my work.
2. Using Smartphone only gives me facility to socialize through social media.
3. Smartphone enables me complete task more quickly
4. Using smartphone can facilitate me to learn English (MALL).
5. Using smartphone (MALL) increases my productivity.
6. Using Smartphone (MALL) improves my task performance.
7. Using Smartphone (MALL) enhances my effectiveness on the task completion.
8. Using Smartphone (MALL) makes it easier to do my task.
9. Using smartphone (MALL) reduces my critical thinking.
10. Overall, I find Smartphone (MALL) useful in my task.

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