# THE RELATION BETWEEN STUDENTS' READINESS FOR SELF-DIRECTED LEARNING AND THEIR EMPLOYMENT OF MOBILE-ASSISTED LANGUAGE LEARNING

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**Abstract:** Mobile-Assisted Language Learning (MALL) continues to grow its importance in facilitating and making self-study more efficient for language learners. The application of MALL, however, depends very much on the learners' attitudes towards technology employment and their levels of readiness for self-studying. To help provide statistical evidence on how learners' motivation relates to their readiness for studying by themselves, this study examined how college-age language learners are using mobile affordances and whether these practices relate to the extent to which they are ready to self-direct their learning process. Participants were 467 students from year 1 to year 4 in a Bachelor of English programme and the data were collected through a validated 6-point Likert Scale questionnaire. Results from the t-test showed that the students are highly ready for self-directed learning (SDL). They are generally found to regulate their own learning process under instructors' guidance. From Pearson analysis, there were positive correlations between the readiness for SDL and students' constructs of motivation and their frequency of employing MALL respectively. It is suggested that MALL should be integrated more deeply into the curriculum to make the best use of technological developments in English language learning and provide students with more efficient and active self-learning opportunities.

*Keywords:* Readiness for learning, self-directed learning, mobile-assisted language learning

## 1. Introduction

Technology has paved its way towards significant and integrated development in every aspect of life. Especially, the current multifunctional mobile technology allows users to access the Internet to do a variety of tasks such as locating and searching for information, emailing, reading e-books, entertaining, etc. via mobile phones, in addition to the traditional purpose of oral communication. Accordingly, learning is now possible anywhere and anytime, even outside of the classroom, thanks to the mobility offered by technology in education. By broadening the scope, nature, and opportunities available for outside-the-classroom learning, the spectacular expansion in digital and communication technologies has altered the language of education (Nunan & Richards, 2015). In line with this development, the use of mobiles in language learning, or what is currently known as mobile-assisted language learning, has become very popular (Kiernan & Aizawa, 2004). Due to its authentic and contextual language learning experiences, MALL has drawn a lot of attention from researchers in various aspects from language skills to language knowledge (Cheng & Chen, 2022; Chinnery, 2006; Kukulska-Hulme, 2006; Shadiev et al., 2017). However, besides the promising results from the research on the use of mobile technologies for language, there still remain challenges as the application of MALL highly relies on the general consensus from language teachers and learners, and there is an insufficient pedagogical framework of MALL (Sam & Shalini, 2021). Therefore, current research on MALL

needs to explore further the teachers' and learners' perspectives on the use of MALL, in that it would be meaningful to find out "emic" views on the issue from the users in educational context (Yang, 2013).

In addition to the learning approach of MALL which employs the use of mobile technologies to allow and support students' autonomous English learning (Azli et al., 2018), self-directed learning also emphasizes learners' autonomy and motivation in directing the learning themselves. SDL capacity has been recognized really significant for university students and regarded as a survival skill in response to the rapid change of contemporary society and is recognized as one of the primary educational goals in many nations, including Hong Kong, Japan, Korea, Singapore, Taiwan, and Thailand (Mok et al., 2007; OECD, 2000). Besides, SDL has been encouraged and listed as one of the generic attributes of graduates at the majority of universities in the UK and Australia (Chemers et al., 2001; Macaskill & Denovan, 2013). While performing their autonomous learning on themselves, students' learning can be assisted by many factors, among which are mobile devices and materials widely available to them. The mobility of such affordances allows students to access and make the best use of learning resources as well as to maximize their learning opportunities. However, the relationship between how students view MALL and how prepared they are for SDL in English language education is still intangible. In many contexts, MALL is even perceived to cause a number of drawbacks (Sam & Shalini, 2021), which might inhibit the implementation, especially in learners' SDL. Therefore, it is essential that a study on the correlation between students' employment of MALL and levels of readiness for SDL be conducted to figure out what students' viewpoints on language learning being assisted with mobile affordances and how they are related to students' readiness for autonomous EFL learning. In particular, it aims at figuring out the answer to the research question: "How does students' readiness for self-study relate to their employment of mobile-assisted language learning?" On realizing students' perceptions of MALL and relating them to the levels of readiness for SDL, the study is expected to find out whether they have any effects on each other so that potential measures could be taken to optimize students' self-study activities. The findings of the study are hoped to make theoretical and practical contributions to the development of effective autonomous learning among EFL students in the era of mobile technology-driven education.

## 2. Literature review

### 2.1 Mobile-assisted language learning

Technology integration in language learning has led to the emergence of Computer-Assisted Language Learning (CALL) and its associated allies which have been coined later on – Internet-Assisted Language Learning (IALL), Web-Enhanced Language Learning (WELL), Technology-Enhanced Language Learning (TELL), and Mobile-Assisted Language Learning (MALL), etc. These widespread acronyms have been in popular use in recent language teaching and learning. Among them, the most familiar is CALL as it has been in use since the 1960s and 1970s. CALL was previously defined as "the search for and study of applications of the computer in language learning and teaching" (Levy, 1997, p. 1), which takes place "in any context with, through and around computer technologies" (Egbert, 2005, p.4). Meanwhile, MALL is a relatively new and well-liked phrase that dates back at most ten or twenty years and TELL might be

considered as an umbrella phrase to indicate language learning assisted by the use of technology in general (Yaman & Ekmekçi, 2016).

Students nowadays are considered frequent users of mobile devices and are characterized as technology-savvy or "digital natives" (Prensky, 2001). Therefore, as the PC (personal computer) era has shifted to the age of mobilization, mobile learning, or m-learning, has emerged and made a major shift in classroom instructions. Mobile learning refers to the use of portable devices for learning, such as tablets and smartphones (Huang et al., 2016). Broadly defined, mobile learning is one of the newest advancements in the use of educational technology and stresses the affordances, experiences, and opportunities made possible by the creation of portable devices for learning at any time and any location (McQuiggan et al., 2015). In other words, mobile-based learning is considered "learning across multiple contexts, through social and content interactions, using personal electronic devices" (Crompton, 2013, p. 4). Accordingly, mobile-assisted language learning generally refers to the use of mobile devices such as smartphones, laptops, portable MP3, and personal digital assistants (PDA) to conduct language activities that are unrestricted by time, space, or location (Traxler & Kukulska-Hulme, 2006), to assist language acquisition, making it possible to learn English. As the benefits of MALL have been recognized in many aspects of language learning, both MALL and the post-method approaches are hoped to enhance language learning and teaching effectiveness by offering actual opportunities for language learning and acquisition outside of the traditional classroom setting.

In brief, MALL in this study refers to the use of mobile devices such as smartphones, tablets, and other portable digital tools to facilitate and enhance the language learning process. Through the use of such tools, MALL is believed to allow learners to access learning materials anytime and anywhere, offering flexibility and mobility that traditional classroom settings may not provide.

### 2.2 The impacts of MALL and learners' evaluation of MALL

MALL has been generally well-received by users (Soleimani et al, 2014), which demonstrates MALL's enormous potential. Using MALL is considered to make learning English quicker and simpler (Yedla, 2013) and MALL offers a lot of promises for improving learners' engagement and accomplishments, according to research on its effects on L2 learning (Burston, 2014; Elola & Oskoz, 2017). MALL also promotes a sense of identity, community, and the capacity to learn without any spacious restrictions (Kim & Kwon, 2012) because using mobile devices for education provides teachers and students with significant educational benefits such as recording and playing audio, cheap prices, portability, learner-friendliness, accessibility, and interactivity (Kukulska-Hulme & Shield, 2008; Stockwell, 2010; Wishart, 2008). Besides, Vu (2016) stated that MALL enables learners to choose activities that are best suited to their individual needs and become more involved with the learning materials. In addition to its favorable effects on the pedagogical approach in English language teaching, MALL has an enormous impact on learners' psychological characteristics in terms of their readiness for language acquisition. In a further study by Shamsi et al. (2019), MALL's effects were demonstrated by its capacity to alleviate linguistic fear and anxiety among students. Especially, a number of research supported the idea that the inclusion of MALL in the process of English-language acquisition made learners' autonomy or control noticeable (Behforouz & Frumuselu,

2020; Bhestari & Luthfiyyah, 2021; CLASS, 2020; Lutfi, 2020). Ali et al. (2020), additionally, found that the use of MALL can improve learners' self-confidence in using the language, which has a major impact on English-language learning. MALL has also contributed to the rise of learners' motivation in English language learning (Ali et al., 2020; Yucedal, 2023), which plays an essential role in improving their language proficiency and boosting their learning results remarkably (Yucedal, 2023). Implementation of mobile apps in learning activities has helped boost learners' listening skills (Alabsi, 2020; Alzieni, 2020, Li, 2023), reading skills (Hazaea & Alzubi, 2018; Kondo et al, 2012; See et al., 2019), speaking skills (Akkara et al., 2020; Ataeifar et al., 2019; Teeter, 2017) and writing skills (Alam & Mizan, 2019; Chang et al., 2017). Therefore, the integration of MALL has been recognized to make foreign language lessons more stimulating and favorable (Ciampa, 2014; Deris & Shukor, 2019; Kwangsawad, 2019; Mahdi, 2018; Tayan, 2017; Zheng et al., 2017) and facilitate language learning to be more efficient, especially for students of digital generations nowadays. It is also suggested that sound MALL pedagogies be developed in association with sociocultural aspects of language learning in relevant contexts and curriculum design and resource development be improved to adapt to future trends in MALL (Li et al., 2022).

In contrast, a study conducted by Adara (2020) realized that MALL has made negative impacts on learners' autonomy and motivation. The respondents stated that they preferred being guided by their instructors instead of being independent students. Therefore, it is essential that motivation and autonomy be instilled and promoted in language learners from an early age. The implementation of MALL, besides, has also posed several other challenges. For example, MALL is considered to cause some psychological issues such as learners' dependence on applications and other functions and or personal intimacy in the human-machine relationship (Moreno & Traxler, 2016). There were concerns that mobile devices could increase students' disengagement and reduce deep critical thinking, even if they are well perceived to contribute to collaborative learning (Heflin et al., 2017). Or else, they may have a fear of using mobile tools because of bad effects of mobile radiation and the long use of such devices, which could lead to in blood pressure (Braune et al., 1998), brain tumors or other brain or oral diseases (Sam & Shalini, 2021). The second limitation is caused by the lack of pedagogical support and guidance in the learning, testing or feedback-giving processes. The absence of a clear pedagogical framework might lead to a lack of a learning atmosphere, learning interest and reluctance in the learners. Therefore, a considerable number of the learners who enroll in courses through distance-learning mode do not finish them (Rovai, 2002). In addition, the application of MALL might also be hindered by the small screen size of mobile devices (Thornton & Houser, 2005) and technical problems of mobile devices (Chartrand, 2016), which might arise and discourage learners and teachers from using them. The cost of mobile devices was previously considered an obstacle for students (Stockwell, 2008) but technological advancement has turned it into the advantage of such devices. Vishwakarma (2015) stated that lower-cost mobile devices bring students the benefit of affordability.

Thus, while MALL has created both advantages which have been acknowledged by learners and teachers and considered to "have secured its place in teaching and learning foreign languages" (Metruk, 2019, p. 5), it can be argued that MALL has also provoked challenges which might prevent them from implementing this approach. Through findings of previous studies, it is

evident that students have viewed MALL as both advantageous and disadvantageous for their English language learning. With such different attitudes towards this learning approach, students may have dissimilar ways of MALL implementation at various degrees, which may create different impacts on the readiness and the ability to direct foreign language learning themselves.

### 2.3 Self-directed learning

Self-directed learning (SDL) differs greatly from learning that is regulated and generated externally. Knowles (1975, p. 18) defined it as:

> A process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes.

By this definition, students should be encouraged to develop the capacity to recognize what they need to learn and investigate the tools available to accomplish the learning objectives or enhance learning outcomes in their SDL process. This is one of the fundamental attributes and competencies for learners to engage in their self-generated activities through which they can learn (Hiemstra, 1994). As Cheng, Kuo, Lin, and Lee-Hsieh (2010) note, "self-directed learners should have the ability to collaborate with peers, and see peers as learning resources" (p. 1153), they could also look to their peers for support. In SDL, students do not need teachers' intervention like in teacher-directed learning because it is assumed that students' learning is driven by their internal incentives (Yang, 2016). As a result, SDL can help foster learners' autonomy because they can choose the programs suitable for them with their favorite peers and work in their own way to overcome the challenges and obtain expected objectives. This approach enables students to develop not only competence but also accountability, responsibility, and assertiveness for their learning and future careers. If students entered educational programs without having acquired SDL skills, they would feel anxious and frustrated and often experienced failures (Knowles, 1983). Evidently, through a systematic literature review by Ramadhanty et al. (2023) on the effectiveness of SDL, it has suggested that SDL "offers significant learning potential for students" (p.348).

SDL when conducted online, according to Liaw et al. (2007), promotes learner autonomy because it provides an unlimited "anywhere and anytime" learning environment that gives students more control over their learning speed and sequences. Additionally, such power gives learners the chance to choose their own resources and themes with more freedom and independence (Snodin, 2013). Findings on students' perceptions of the benefits of language learning platforms and apps can also be indicators to evaluate students' SDL outside of the classroom (Nielson, 2011; Steel, 2012). Thus, while SDL is facilitated by mobile affordances which are widely available and accessible for students, MALL can be more effective and further promoted if students are motivated to direct their own study during the learning process. The mutual relationship between SDL and MALL is apparently supportive and significant. For example, Li et al. (2024) concluded that learners need to be able to find relevant resources – both human and material resources and MALL tools – as learning resources are among the key aspects

of self-directed language learning, emphasizing the authenticity of the resources to ensure meaningful and effective learning experiences.

Besides the benefits of SDL which have been recognized in previous studies, there have also been findings on some barriers for students to get ready to direct their own learning. In particular, some studies realize that students initially express a need for formal instructions for the SDL process at the beginning of their courses (Hewitt-Taylor, 2001; Lunyk-Child et al, 2001; Prociuk, 1990). These facts, according to Knowles (1983), might reflect the reality that adults could be inexperienced and uncomfortable with SDL. Also, Lunyk-Child et al. (2001) observed that students go through a change that starts with negative emotions. However, the participants end with confidence and competence in their ability to engage in this learning approach. Therefore, teachers' duty is emphasized in facilitating students' transition into effective self-direction and during this shift to make sure students develop self-directed learning skills that they may use in both their academic and professional lives (Kell & Van Deursen, 2002). Similarly, in an attempt to find out whether MALL can foster SDL outside the classroom, García Botero et al. (2019) examined informal, out-of-class engagement with a MALL tool, Duolingo, and found that Duolingo can encourage outside-of-class learning through fun activities, but interviews and data collection shows a lack of self-management, self-monitoring, and continuous motivation, which is reflected in the poor utilization of the program, especially during the course weeks. Therefore, the majority of students require instruction and support for the implementation of MALL in their self-directed English study.

It is evident, as discussed above, that not every student is ready for SDL, including learning with the use of mobile resources in their independent language study. Readiness for SDL is defined as the level to which learners prepare themselves for the necessary attitude, skills, and personality qualities for SDL (Wiley, 1983). According to Fisher et al. (2001), this definition presupposes that learners are situated somewhere along the continuum of readiness for SDL, which means the levels of SDL readiness are believed to be both highly customized and representative across the continuum. Learners who are low on SDL readiness and are then given an SDL assignment exhibit high levels of anxiety that are comparable to the responses of learners who are high on SDL readiness and are exposed to environments with more structure and teacher guidance (Fisher et al., 2001; Wiley, 1983). SDL readiness has been found to have crucial influences on the effectiveness of students' online self-directed learning in Web-based and Internet-based learning environments with the affordances of technology (Chu & Tsai, 2009); Lai, 2011; Lee et al., 2014). However, whether students' preparedness for SDL has any relationship with their employment of MALL is still clouded. Therefore, this study sought to determine the association and proposed implications for future implementation of these approaches in the teaching and learning of EFL.

## 3. Research methodology

The robustness of this research design is firstly ensured by a large number of respondents who have diverse learning experiences in different courses and with different teachers and varied requirements on levels of self-directed learning as well as mobile-assisted learning. The participants were students from year 1 to year 4 in a Bachelor of English programme in Ho Chi Minh City, Vietnam. They were invited to participate in an online survey in 3 days and 467

responses were collected at the end of March 2023. The first part of the survey collects basic demographic information of the participants. Next, they were surveyed on how they were making use of MALL in practice. The content validity of this part was ascertained by the review of related literature; consistent themes and items were then checked and confirmed with the teachers in the programme and an expert in MALL. All comments were subsequently reviewed again and the necessary changes were made to the questions. Moreover, credibility was also established by adapting the validated Self-Directed Learning Readiness (SDLR) inventory of Razali, Xuan and Samad (2018) to elicit students' self-directed learning readiness. The Likert-like measurement scale ranges from strongly disagree "1" to strongly agree "6"; the instrument was employed to measure 43 items categorized under three constructs of self-directed learning namely motivation, awareness and language learning strategies. Using Statistical Package of the Social Science (SPSS) Statistics 20, the researchers run a T-test to check the extent to which students are ready for self-directed learning. After that, from Pearson analysis, the correlations between their readiness for SDL, constructs of motivation and frequency of employing MALL were examined.

## 4. Results and Discussion

### 4.1 Students' readiness for self-directed learning

The following tables summarize the results from the T-test showing students' levels of readiness for SDL:

**Table 1.** Mean scores of constructs of motivation

| | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 |
|---|---|---|---|---|---|---|---|---|---|
| Mean | 5.01 | 5.09 | 5.05 | 5.30 | 4.83 | 4.42 | 4.29 | 4.72 | 4.24 |
| N. | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| SD. | 1.042 | 1.005 | 1.135 | .984 | 1.098 | 1.283 | 1.273 | 1.243 | 1.470 |

*Notes: Content of the labels M1 – M9*

*M1 I will try to learn English although it may be difficult.*

*M2 I try to do my best to learn English.*

*M3 Even if there is no attendance requirement in the English course, my attendance will be high.*

*M4 I want to continue learning English for as long as possible.*

*M5 I believe that I will do well in the English class.*

*M6 I want to be the best in the English class.*

*M7 I do English grammar exercises even though it is not homework.*

*M8 I study English due to my interest in English culture, such as English films, sports, music, etc.*

*M9 I study English due to curiosity*.

Results from the T-test show that the students are highly ready for SDR. Noticeably, the mean scores are above 5 with M1, 2, 3, and 4 (in Table 1) and A11 and S9 (in Table 2 and 3). It could be inferred that they would always try to find ways to improve their English despite challenges from the language itself and lack of competence in themselves. While SDL is driven by students' intrinsic motivation (Garrison, 1997; Yang, 2016), the students reported that they would try their best to learn English even though there is no attendance requirement in the English course and they will do it as frequently and long as possible (M2, 3, 4, 9). Being a successful

language learner in class is a satisfying driving force (M5, 6), but more importantly, they learn English for their interest in the language culture (M8) and their curiosity (M9).

**Table 2.** Mean scores of constructs of awareness

| | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 4.60 | 4.51 | 4.13 | 4.61 | 4.40 | 4.79 | 4.97 | 4.64 | 4.94 | 4.09 | 5.03 | 4.37 |
| N. | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| SD. | 1.194 | 1.205 | 1.453 | 1.156 | 1.260 | 1.090 | 1.028 | 1.160 | 1.073 | 1.441 | 1.013 | 1.503 |

*Notes: Content of the labels A1 – A12*

*A1 I identify my own English Language learning needs.*

*A2 I am able to select the best method for my own English language learning.*

*A3 I consider English teachers as facilitators of learning rather than the providers of information only.*

*A4 I keep myself up to date on different learning resources available to improve my English Language proficiency.*

*A5 I am able to learn English despite not being instructed by a language instructor.*

*A6 I am responsible for my own English Language learning.*

*A7 I am responsible for identifying my areas of weaknesses and strengths in my English language proficiency.*

*A8 I am able to plan and set my English language learning goals.*

*A9 I relate my experience to new information when I learn English.*

*A10 I can still learn English well by myself without attending classes.*

*A11 In English learning, learners must be active and teachers can only assist their English learning.*

*A12 I like to learn English in pair/group discussion.*

The results also showed that they are competent enough for SDL. They are aware of their responsibility in learning (A6) and reveal the ability to identify their own learning needs (A1, 7) and then choose the best plans (A8) and methods to learn English (A2, 4). For the participants in this study, teachers are employed as facilitators (A3, 5, 11) rather than the key factors to determine success. Instead of being more dependent on teachers, they are highly aware that they are more confident with learning by themselves (A5, 9, 10, 11) or together with their friends (A12).

**Table 3.** Mean scores of constructs of learning strategies

| | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 4.58 | 4.92 | 4.68 | 4.45 | 4.78 | 4.13 | 4.47 | 4.42 | 5.20 | 4.48 |
| N. | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| SD. | 1.111 | 1.036 | 1.170 | 1.244 | 1.182 | 1.330 | 1.229 | 1.372 | 1.036 | 1.293 |
| | S11 | S12 | S13 | S14 | S15 | S16 | S17 | S18 | S19 | S20 |
| Mean | 4.72 | 4.83 | 4.81 | 4.63 | 4.93 | 4.71 | 4.09 | 4.35 | 4.49 | 4.86 |
| N. | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| SD. | 1.160 | 1.035 | 1.063 | 1.099 | 1.081 | 1.068 | 1.439 | 1.274 | 1.276 | 1.086 |

*Notes: Content of the labels S1 – S20*

*S1 When I am learning a new grammar rule, I think about its relationship and the rules I have already learned.*

*S2 When I study English, I write down the most important points for myself.*

*S3 I try to find the meaning of a word or phrase by breaking it up into parts that I can understand.*

*S4 I read English written materials to improve my English (e.g., English magazines, books, newspapers)*

*S5 I listen to English materials to improve my English. (e.g., English songs, news, radio broadcasts)*

*S4 I always ask my teacher for clarification when an idea is not clear.*

*S7 I intentionally apply English that I have learned for communication. (e.g., speaking, writing)*

*S8 When I see a word I don't understand; I ask others for its meaning.*

*S9 When I see a word I don't understand; I look it up in the dictionary.*

*S10 During class, I make use of any opportunity to take part in activities such as pair/group discussion, role-play, etc.*

*S11 When learning English, I try to identify language structures and terms I do not understand well.*

*S12 I understand the importance of making my teacher's teaching objective as my own learning goal.*

*S13 When I feel that a learning method is not appropriate, I use other learning methods.*

*S14 I evaluate my learning methods to find out the problems and solutions.*

*S15 If I feel left behind in class, I will practice more outside the classroom to catch up with others.*

*S16 I formulate my own English study plan besides what the teacher teaches in the classroom.*

*S17 I keep a record of my performance, such as keeping a diary, writing reviews, etc.*

*S18 I check and renew my understanding of the English language I have previously learned in class.*

*S19 I choose English contents which suit me for practice that are neither too difficult nor too easy.*

*S20 I set up English Language learning objectives based on my actual needs.*

The strategies they are using also strongly support self-learning styles; their learning behaviors are clearly goal-directed and they participate actively in the learning process. The appropriate strategies for language learning are reflected in defining tasks, setting goals, developing plans, implementing, monitoring and reflecting on their own learning (Anderson, 2002, Harris, 2003). Task-defining and goal-setting capacity can be derived from the mean scores of the questions S12, 16, 20, which are 4.83, 4.71, and 4.86 respectively. After that, the students seem to have the ability to choose learning materials (S4, 5, 19), how to separate language items into small parts (S3), and how to generalize, and interrelate the forms and meanings for a better understanding of the language (S1, 11). They themselves can manipulate suitable strategies to monitor the learning process as being reflected in the results of questions S2, 7, 10, 13, 14, 15, 17, 18. In addition, they know where to look for support and where to find their expected answers (S6, 8, 9).

### 4.2 Correlations between the readiness for SDL and the frequency of MALL employment

While T-test results demonstrate a high level of readiness for adopting MALL, the Pearson correlation test between the reported frequency of the use of MALL and readiness level is not as high as expected. Significant two-tailed is tested at both 0.01 level and 0.05 level. Almost all of the correlated pairs show positive relations, but these significant levels range from 0.1 to only above 0.3. As shown in Tables 4.4, 4.5 and 4.6, the lowest scores emerged when pairing the MALL frequency with S17 (0.112), and S18 (0.142). Meanwhile, the highest scores arose when the frequency was paired with A7 (0.308), A9 and S12 (0.303), and S9 (0.325). Interestingly, as the mean score to show the frequency of MALL use compared to other methods such as a desktop computer or printed book is quite high (4.78, S.D. = 1.272), the derived levels of correlation significant two-tailed may not strongly support the hypothesis that SDL is the only key force for MALL employment or that MALL use is the sole tool of SDL in the context of this study. Readiness for SDL is a crucial preliminary, but SDL needs to be reflected clearly in all planning, acting, and self-monitoring processes (Brockett & Hiemstra, 2018; Khiat, 2017; Long, 1989). During the processes, especially in formal higher education contexts, different contextual factors such as program and course expected outcomes, teachers' assignments and tasks, etc. will also shape students' learning behaviors. If the tasks are assigned without encouragement and/or allowance for interaction through MALL, mobile devices and/or apps would not be the priority and learning behavior would not be fully self-directed.

**Table 4.** The correlations between the frequency use (FU) of MALL and motivation

| | | FU | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FU | Pearson Correlation | 1 | .232** | .254** | .207** | .246** | .271** | .252** | .162** | .201** | .187** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | | | | | | | | | | |

**Table 5.** The correlations between the frequency use of MALL and awareness

| | | FU | A1 | A2 | A3 | A4 | A5 | A6 | A7 | A8 | A9 | A10 | A11 | A12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FU | Pearson Correlation | 1 | .199** | .203** | .179** | .236** | .237** | .236** | .308** | .257** | .303** | .286** | .296** | .229** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | | | | | | |

**Table 6**. The correlations between the frequency use of MALL and strategies

| | | FU | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FU | Pearson Correlation | 1 | .199** | .281** | .158** | .170** | .246** | .140** | .168** | .181** | .325** | .210** |
| | Sig. (2-tailed) | | .000 | .000 | .001 | .000 | .000 | .002 | .000 | .000 | .000 | .000 |
| | N | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| | | UF | S11 | S12 | S13 | S14 | S15 | S16 | S17 | S18 | S19 | S20 |
| UF | Pearson Correlation | 1 | .194** | .303** | .225** | .184** | .232** | .232** | .112* | .142** | .188** | .274** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 | .015 | .002 | .000 | .000 |
| | N | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | | | | | |

As noted earlier, the highest significant level was in the pair of FU (reported frequency of using MALL) and S9 (using MALL for learning vocabulary). Interestingly, this result seems to match with Pearson correlation between MALL using frequency and different purposes of learning vocabulary, grammar, function, and 4 macro skills of listening, speaking, reading, and writing. It can be inferred from Table 4.7 that most of the MALL-using time was spent on learning vocabulary, grammar, and then language functions. It is possible that due to the nature of language, the macro skills require much more complex human interaction and complicated task design and thus need extremely high support from AI apps and devices. The rare, high-tech and payment features of these affordances would be the main barriers for students to have access to. Meanwhile, the availability of free apps, with their compatibility with common devices such as smartphones and tablets, the flexibility for learning smaller linguistic units such as words and phrases, and simple pedagogical task design, would be more convenient for students to take advantage of when conducting their SDL activities.

**Table 7.** The correlations between the frequency use of MALL and purposes of learning

| | | FU | V | G | F | P | L | S | R | W |
|---|---|---|---|---|---|---|---|---|---|---|
| FU | Pearson Correlation | 1 | .346** | .342** | .337** | .296** | .265** | .325** | .282** | .285** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| | N | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 | 467 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | | |

The results of this study align with the broader literature on the integration of mobile technology in education, particularly in the realm of language learning through Mobile-Assisted Language Learning (MALL). The research aimed to explore how students' readiness for self-directed learning (SDL) relates to their use of MALL in English language education. The findings indicate that students exhibit a high degree of motivation and awareness towards SDL, which are essential components for engaging in autonomous learning. This corresponds with previous studies highlighting the importance of motivation and learner autonomy in successful language acquisition (Garrison, 1997; Yang, 2016). However, the moderate correlation between SDL readiness and MALL usage frequency suggests that while mobile technology can facilitate certain aspects of SDL - particularly vocabulary learning - it is not fully integrated across more complex language skills like speaking and writing.

## 5. Conclusion

At the college level, due to the expected learning behaviors embedded in the philosophy of the program, students are generally found to regulate their own learning process under instructors' guidance. Results of this study, more importantly, give statistical evidence supporting a more wholly implementation of self-study mode in practice. In believing that students are not only psychologically ready for SDL but also well-prepared with competence and learning strategies to ensure an effective learning process, teachers would be more confident to employ more active learning techniques and give students more opportunities to develop their self-learning styles and see the benefits of taking the initiative and responsibility in each stage of their learning process.

Nevertheless, managing and evaluating the effectiveness of self-study are not easy jobs for most teachers. MALL might optimize the self-study process for students in a more convenient

and effective way, but encouraging MALL does not mean that there would be fewer obstacles to self-study activities than self-training with other tools. The flexibility and variability of MALL resources and the uniqueness of each SDL style may be troublesome to any teacher who wants to accurately assess the progress or outcome of self-learning practice. Besides, while students are capable of using mobile devices for SDL, the application of MALL in more complex learning contexts remains limited. This reflects a gap in both SDL and MALL research, where greater emphasis on instructional design and teacher facilitation could enhance the effectiveness of MALL, particularly in developing higher-order language skills. From a practical perspective, the study suggests that educational institutions should focus on developing frameworks that integrate MALL with broader SDL strategies, particularly in higher education contexts where learners are expected to take greater control of their learning. Teachers should also be trained to support SDL through MALL by providing structured guidance that helps students navigate more complex language tasks. Additionally, mobile tools should be designed to cater for a wider language range, offering more comprehensive resources that promote autonomous learning in all areas of language acquisition.

Currently, it is likely that a large number of students still highly prioritize traditional learning materials in their learning due to the fact that the big gap between the classroom materials and MALL resources has not been filled. It is suggested the closer the gaps are, the more positive correlation between SDL readiness and MALL application in practice would be formed, and the more supportive conditions for teachers in facilitating the development of SDL would be established. For instance, the gap between traditional classroom materials and MALL resources should be filled by implementing several to ensure better alignment and integration. For example, tools and apps can be used to offer students more interactive and flexible ways to reinforce their language knowledge and skills. There should also be teacher training and professional development activities for training teachers on how to effectively integrate MALL into their teaching as well as continuous support to help them overcome challenges in integrating MALL and ensure that it complements traditional classroom instruction. By implementing these strategies, the gap between traditional and mobile learning can be bridged, which can help create a more cohesive and flexible learning environment for students. After that, MALL employment would go further beyond the common self-study habits in vocabulary, grammar, or pronunciation learning. Further study may investigate deeply into the SDL activities via MALL to help shorten these gaps.

In conclusion, while MALL offers valuable opportunities for fostering SDL, its full potential in language learning will only be realized with a more integrated pedagogical approach that supports students in applying mobile technologies across all facets of language study. This study provides a foundation for further research into how SDL and MALL can be better aligned to optimize student learning outcomes in the digital age.

**Research ethics**

The study obtained informed consent from respondents in the first part of the survey. It was announced that respondents' information and responses would be kept confidential and be used for the purpose of the research only.

## References


Adara, R.A. (2020). Negative effects of MALL on the improvement of learner's autonomy and motivation. *Prosiding ICoISSE, 1*(1), 613-622.

Akkara, S., Mallampalli, M.S., & Anumula, V.S.S. (2020). Improving second language speaking and pronunciation through smartphones. *International Journal of Interactive Mobile Technologies*, *14*(11), 280-287. https://doi.org/10.3991/ijim.v14i11.13891.

Alabsi, T. (2020). Effects of adding subtitles to video via apps on developing EFL students' listening comprehension. *Theory and Practice in Language Studies*, *10*(10), 1191-1199. https://doi.org/10 .17507/tpls.1010.02.

Alam, M.Z., & Mizan, F.B. (2019). Facebook as a formal instructional environment in facilitating L2 writing: Impacts and challenges. *International Journal of Language Education*, *3*(2), 41.

Ali, M.M., Asad, Z., & Moghal, S. (2020). Utilizing mobile assisted language learning (MALL) for teaching English to non-formal learners in Pakistan. *Journal of Arts & Social Sciences, 7*(2), 70-81.

Alzieni, H. (2021, 2020). The impact of mobile-assisted language learning (MALL) in developing the listening skill: A case of students at Dubai men's college, The United Arab Emirates. *Arab World English Journal*, *2*(2), 84-95.

Anderson, N.J. (2002). The role of metacognition in second language teaching and learning. *ERIC Clearinghouse on Languages and Linguistics*. Retrieved from ERIC database (ED463659).

Ataeifar, F., Sadighi, F., Bagheri, M.S., & Behjat, F. (2019). Iranian female students' perceptions of the impact of mobile-assisted instruction on their English speaking skill. *Cogent Education*, *6*(1), 1662594.

Azli, W.U.A.W., Shah, P.M., & Mohamad, M. (2018). Perception on the usage of mobile assisted language learning (MALL) in English as a second language (ESL) learning among vocational college students. *Creative Education*, *9*(01), 84.

Behforouz, B., & Frumuselu, A.D. (2020). The impact of text messaging as an instructional tool to enhance learner autonomy and perception. *International Journal of Learning, Teaching and Educational Research, 19*(11), 184-202.

Bhestari, B.M., & Luthfiyyah, R. (2021). EFL students' perceptions towards the use of MALL to promote students' learning autonomy. *Academic Journal Perspective: Education, Language, and Literature, 9*(2), 77-87.

Braune S., Wrocklage C., Raczek, J., Gailus, T., & Lüching, C.H. (1998). Resting blood pressure increase during exposure to radiofrequency electromagnetic field. *Lancet, 351*, 1857-1858.

Brockett, R.G., & Hiemstra, R. (2018). *Self-direction in adult learning: Perspectives on theory, research and practice.* Routledge.

Burston, J. (2014). The reality of MALL: Still on the fringes. *CALICO Journal, 31*, 103–125.

Chang, B., Chang, B., Lu, F., & Lu, F. (2018). Social media facilitated English prewriting activity design and evaluation. *The Asia-Pacific Education Researcher, 27*(1), 33-42.

Chemers, M.M., Hu, L., & Garcia, B.F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology, 93*, 55-64.

Cheng, C.H., & Chen, C.H. (2022). Investigating the impacts of using a mobile interactive English learning system on the learning achievements and learning perceptions of students with different backgrounds. *Computer Assisted Language Learning, 35*, 88-113.

Cheng, S.F., Kuo, C.L., Lin, K.C., & Lee-Hsieh, J. (2010). Development and preliminary testing of a self-rating instrument to measure self-directed learning ability of nursing students. *International Journal of Nursing Studies*, *47*(9), 1152Y1158.

Chinnery, G.M. (2006). Going to the MALL: Mobile assisted language learning. *Lang. Learn. Technol. 10*, 9-16.

Chu, R.J.C., & Tsai, C.C. (2009). Self-directed learning readiness, Internet self-efficacy and preferences towards constructivist Internet-based learning environments among higher-aged adults. *Journal of Computer Assisted Learning, 25*(5), 489–501.

Ciampa, K. (2014). Learning in a mobile age: An investigation of student motivation. *Journal of Computer Assisted Learning, 30*(1), 82-96.

CLASS, A.T.O.O. (2020). How mall helps majored students promote their learner autonomy through out-of class activities at Văn Lang University. *International Journal of Psychosocial Rehabilitation, 24*(08).

Colpaert, J. (2004). From courseware to course wear? *Computer Assisted Language Learning, 17*(3-4), 261-266.

Crompton, H. (2013). A historical overview of mobile learning: Towards learner-centered education, *in Handbook of Mobile Learning* (eds). Z.L. Berge & L.Y. Muilenburg, 3-14.

Deris, F., & Shukor, N. (2019). *Vocabulary learning through mobile apps: A phenomenological inquiry of student acceptance and desired apps features*.

Egbert, J. (2005). *CALL essentials: Principles and practice in CALL classrooms.* Alexandria, Virginia: Teachers of English to Speakers of Other Languages.

Elola, I., & Oskoz, A. (2017). Writing with 21st century social tools in the L2 classroom: New literacies, genres, and writing practices. *Journal of Second Language Writing*, *36*, 52-60.

Fisher, M., King, J., & Tague, G. (2001). Development of a self-directed learning readiness scale for nursing education. *Nurse Education Today, 21*(7), 516–525.

García Botero, G., Questier, F., & Zhu, C. (2019). Self-directed language learning in a mobile-assisted, out-of-class context: Do students walk the talk?. *Computer Assisted Language Learning*, *32*(1-2), 71-97.

Garrison, D.R. (1997). Self-directed learning: Toward a comprehensive model. *Adult Education Quarterly (American Association for Adult and Continuing Education), 48*(1), 18-33.

Harris, V. (2003). Adapting classroom-based strategy instruction to a distance learning context. *TESL-Electronic Journal*, *7*(2), 1-19.

Hazaea, A.N., & Alzubi, A.A. (2018). Impact of mobile assisted language learning on learner autonomy in EFL reading context. *Journal of Language and Education*, *4*(2), 48-58. https://doi.org/10.17323 /2411-7390-2018-4-2-48-58.

Heflin, H., Shewmaker, J., & Nguyen, J. (2017). Impact of mobile technology on student attitudes, engagement, and learning. *Computers & Education, 107*, 91-99.

Hewitt Taylor, J. (2001). Self-directed learning: views of teachers and students. *Journal of advanced nursing, 36*(4), 496-504.

Huang, C.S., Yang, S.J., Chiang, T.H., & Su, A. (2016). Effects of situated mobile learning approach on learning motivation and performance of EFL students. *Educational Technology & Society, 19*, 263–276.

Kell, C., & Deursen, R.V. (2002). Student learning preferences reflect curricular change. *Medical teacher, 24*(1), 32-40.

Khiat, H. (2017). Academic performance and the practice of self-directed learning: The adult student perspective. *Journal of further and Higher Education*, *41*(1), 44-59.

Kiernan, P.J., & Aizawa, K. (2004). Cell phones in task based learning: Are cell phones useful language learning tools? *ReCALL 16*, 71–84.

Kim, H., & Kwon, Y. (2012). Exploring smartphone applications for effective mobile-assisted language learning. *Multimedia-Assisted Language Learning*, *15*(1), 31-57.

Klimova, B., & Polakova, P. (2020). Students' perceptions of an EFL vocabulary learning mobile application. *Education Sciences, 10*(2), 37.

Knowles, M.S. (1975). *Self-directed learning: A guide for learners and teachers*. Chicago, IL: Follett Publishing Company.

Knowles, M.S. (1983). *The modern practice of adult education: From pedagogy to andragogy*. Prentice Hall, Cambridge.

Kondo, M., Ishikawa, Y., Smith, C., Sakamoto, K., Shimomura, H., & Wada, N. (2012). Mobile assisted language learning in university EFL courses in japan: Developing attitudes and skills for self-regulated learning. *ReCALL* (Cambridge, England), *24*(2), 169-187.

Kukulska-Hulme, A. (2006). Mobile language learning now and in the future, *in Fr°an vision till praktik: Spr°akutbildning och informationsteknik (From Vision to Practice: Language Learning and IT).* ed. P. Svensson (Swedish Net University (Nätuniversitetet)), 295-310.

Kukulska-Hulme, A., & Shields, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL 20*(3), 271-289.

Kwangsawad, T. (2019). University students' perceptions of MALL in EFL classes. *Studies in English Language Teaching, 7*(1), 75-82.

Lai, H.J. (2011). The influence of adult learners' self-directed learning readiness and network literacy on online learning effectiveness: A study of civil servants in Taiwan. *Educational Technology & Society, 14*(2), 98–106. Retrieved from: http://www.ifets.info/download_pdf.php?j_ id=51&a_id=1129.

Lee, K., Tsai, P.S., Chai, C.S., & Koh, J.H.L. (2014). Students' perceptions of self-directed learning and collaborative learning with and without technology. *Journal of Computer Assisted Learning*, *30*(5), 425-437.

Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization*. Oxford University Press.

Li, F., Fan, S., & Wang, Y. (2022). Mobile-assisted language learning in Chinese higher education context: A systematic review from the perspective of the situated learning theory. *Education and Information Technologies*, *27*(7), 9665-9688.

Li, R. (2023). Effects of mobile-assisted language learning on EFL learners' listening skill development. *Educational Technology & Society*, *26*(2), 36-49.

Li, Z., Bonk, C.J., & Zhou, C. (2024). Supporting learner's self-management for self-directed language learning: A study within Duolingo. *Interactive Technology and Smart Education, 3*(21), 381-402.

Liaw, S.S., Huang, H.M., & Chen, G.D. (2007). Surveying instructor and learner attitudes toward E-learning. *Computers & education, 49*(4), 1066-1080.

Long, H.B. (1989). *Self-directed learning: Emerging theory & practice*. Oklahoma research center for continuing professional and higher education, McCarter Hall, University of Oklahoma, Norman, OK 73037.

Lunyk-Child, O.I., Crooks, D., Ellis, P.J., Ofosu, C., O'Mara, L., & Rideout, E. (2001). Self-directed learning: Faculty and student perceptions. *Journal of Nursing Education*, *40*(3), 116-123.

Lutfi, N. (2020). The Integration of MALL to enhance students speaking skill: An autonomous learning model. *Journal of Foreign Language Teaching and Learning*, *5*(1), 1-19.

Macaskill, A., & Denovan, A. (2013). Developing autonomous learning in first-year university students using perspectives from positive psychology. *Studies in Higher Education*, 1–19.

Mahdi, H.S. (2018). Effectiveness of mobile devices on vocabulary learning: A meta-analysis. *Journal of Educational Computing Research, 56*(1), 134-154.

McQuiggan, S., McQuiggan, J., Sabourin, J., & Kosturko, L. (2015). *Mobile learning: A handbook for developers, educators, and learners*. Wiley.

Metruk, R. (2019). The call of the MALL: The use of smartphones in higher education. A literature review. *Revista Dilemas Contemporáneos: Educación, Política y Valores, 6*(3), 1-22.

Mok, M.M.C., Cheng, Y.C., Leung, S.O., Shan, P.W.J., Moore, P., & Kennedy, K. (2007). Self-directed learning as a key approach to effectiveness of education: A comparison among mainland China, Hong Kong, Macau, and Taiwan. *International handbook of school effectiveness and improvement*, 839-858.

Moreno, A.I., & Traxler, J. (2016). MALL-based MOOCs for language teachers: Challenges and opportunities. *Porta Linguarum Monograph, 1*, 73-85.

Nielson, K.B. (2011). *Self-study with language learning software in the workplace: What happens*?

Nunan, D., & Richards, J.C. (2015). *Language learning beyond the classroom*. Routledge.

OECD (2000). Motivating students for lifelong learning. Paris: Centre for Educational Research and Innovation retrospective. *The Modern Language Journal, 85*(i), 39-56.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5) (MCB University Press). doi: 10.1108/10748120110424816.

Prociuk, J.L. (1990). Self-directed learning and nursing orientation programs: are they compatible?. *The Journal of Continuing Education in Nursing, 21*(6), 252-256.

Ramadhanty, F., Dasuki, D., Mandalika, D., & Sumarni, S. (2023). The effectiveness of self-directed learning for English language education: A systematic literature review. *English Language and Literature International Conference (ELLiC) Proceedings*, *6*, 348-356.

Razali, A.B., Xuan, L.Y., & Samad, A.A. (2018). Self-directed learning readiness (SDLR) among foundation students from high and low proficiency levels to learn English language. *Malaysian Journal of Learning and Instruction*, *15*(2), 55-81.

Rovai, A.P. (2002). Building sense of community at a distance. *International Review of Research in Open and Distance Learning*.

Sam, D.P., & Shalini, R. (2021). Limitations and advantages in implementing MALL in the tertiary ESL classrooms: A review. *International Journal of Recent Technology and Engineering*, *9*(5), 27-32.

See, K.T., Madhubala, B.H., & Koo, A.C. (2019). Motivation of parents towards reading multilingual eBooks to pre-school children. *International Journal of Interactive Mobile Technologies*, *13*(1), 20-36.

Shadiev, R., Hwang, W.Y., & Huang, Y.M. (2017). Review of research on mobile language learning in authentic environments. *Comput. Assist. Lang. Learn.*, *30*, 284-303.

Shamsi, A.F., Altaha, S., & Gilanlioglu, I. (2019). The role of m-learning in decreasing speaking anxiety for EFL learners. *Online Submission*, *2*(1), 276-282.

Snodin, N.S. (2013). The effects of blended learning with a CMS on the development of autonomous learning: A case study of different degrees of autonomy achieved by individual learners. *Computers & Education*, *61*, 209-216.

Soleimani, E., Ismail, K., & Mustaffa, R. (2014). The acceptance of mobile assisted language learning (MALL) Among post graduate ESL students in UKM. *Procedia-Social and Behavioral Sciences*, *118*, 457-462.

Steel, C. (2012). Fitting learning into life: Language students' perspectives on benefits of using mobile apps. In M. Brown, M. Hartnett, & T. Stewart (Eds.), *Ascilite 2012: Future challenges, sustainable futures* (pp. 875–880).

Stockwell, G. (2008). Investigating learner preparedness for and usage patterns of mobile learning. *ReCALL, 20*(03), 253-270.

Stockwell, G. (2010). Using mobile phones for vocabulary activities: Examining the effect of the platform. *Language, Learning and Technology*, *14*(2), 95.

Tayan, B.M. (2017). Students and teachers' perceptions into the viability of mobile technology implementation to support language learning for first year business students in a Middle Eastern university. *International Journal of Education and Literacy Studies, 5*(2), 74-83.

Teeter, J. (2017). Improving motivation to learn English in Japan with a self-study shadowing application. *Languages (Basel), 2*(4), 19.

Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning, 21*, 217- 228.

Traxler, J., & Kukulska-Hulme, A. (2006). *The evaluation of next generation learning technologies: The case of mobile learning.*

Vishwakarma, A. (2015). Benefits and challenges of mobile learning in education. *In Promoting active learning through the integration of mobile and ubiquitous technologies* (pp. 24-36). IGI Global.

Vu, N.N. (2016). Mobile learning in language teaching context of Vietnam: An evaluation of students' readiness. *Tạp chí Khoa học*, *7*(85), 16.

Wiley, K. (1983). Effects of a self-directed learning project and preference for structure on self-directed learning readiness. *Nursing Research, 32*(3), 181-185.

Wishart, J. (2008). Challenges faced by modern foreign language teacher trainees in using handheld pocket PCs (Personal Digital Assistants) to support their teaching and learning. *ReCALL, 20*(3), 348-360.

Yaman, İ., & Ekmekçi, E. (2016). A shift from CALL to MALL?. *Participatory Educational Research*, *4*(2), 25-32.

Yang, J. (2013). Mobile assisted language learning: Review of the recent applications of emerging mobile technologies. *English Language Teaching, 6*(7), 19-25.

Yang, Y.F. (2016). Self-directed learning to develop autonomy in an online ESP community. *Interactive Learning Environments*, *24*(7), 1629-1646.

Yedla, S. (2013). MALL (mobile assisted language learning): A paradise for English language learners. *Journal of English Language & Translation Studies*, *1*(2), 91-99.

Yucedal, H.M. (2023). Integrating mobile assisted language learning (MALL) into EFL classes at a tertiary level. *Revista Amazonía Investiga*, *12*(62), 92-104.

Zheng, Q., Chen, T., & Kong, D. (2017). An empirical study on context awareness integrated mobile assisted instruction and the factors. *Eurasia Journal of Mathematics, Science and Technology Education, 13*(6), 1737-1747.

# MỐI TƯƠNG QUAN GIỮA MỨC ĐỘ SẴN SÀNG TỰ ĐIỀU CHỈNH VIỆC HỌC CỦA SINH VIÊN VÀ VIỆC ÁP DỤNG HÌNH THỨC HỌC NGÔN NGỮ VỚI SỰ HỖ TRỢ CỦA CÁC THIẾT BỊ DI ĐỘNG

**Tóm tắt**: Việc học ngôn ngữ với sự hỗ trợ của các thiết bị di động (MALL) ngày càng cho thấy tầm quan trọng trong việc giúp quá trình tự học của người học ngôn ngữ hiệu quả hơn. Tuy nhiên, mức độ áp dụng MALL phụ thuộc rất nhiều vào thái độ của người học đối với các ứng dụng công nghệ và mức độ sẵn sàng tự học của họ. Để giúp cung cấp minh chứng có giá trị thống kê cho mối liên hệ giữa động lực của người học với sự sẵn sàng tự học của họ, nghiên cứu này đã tìm hiểu cách những người học ngôn ngữ ở độ tuổi đại học đang sử dụng các thiết bị di động như thế nào và liệu việc áp dụng này có liên quan đến mức độ sẵn sàng tự định hướng quá trình học tập của họ hay không. Đối tượng nghiên cứu là 467 sinh viên từ năm 1 đến năm 4 trong chương trình Cử nhân tiếng Anh và dữ liệu được thu thập thông qua bảng câu hỏi với Thang đo Likert 6 điểm đã được xác thực. Kết quả từ bài kiểm tra t-test cho thấy sinh viên có mức độ sẵn sàng cao cho việc tự định hướng học tập (SDL). Nhìn chung, sinh viên tự điều chỉnh quá trình học tập của mình dưới sự hướng dẫn của giáo viên. Phân tích Pearson cho thấy mối tương quan tích cực giữa mức độ sẵn sàng cho SDL và các yếu tố tạo động lực của sinh viên cũng như tần suất sử dụng MALL của họ. Nghiên cứu đề xuất tích hợp MALL sâu hơn vào chương trình giảng dạy để tận dụng tốt nhất sự phát triển của công nghệ trong việc học tiếng Anh và mang đến cho sinh viên cơ hội tự học tích cực và hiệu quả hơn.

*Từ khóa:* Mức độ sẵn sàng, tự điều chỉnh việc học, học ngôn ngữ với sự hỗ trợ của các thiết bị di động