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Students' Readiness in Implementing Mobile Learning for English Language Learning Purposes

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Abstract

***Background*:**
The application of mobile learning (m-learning), especially in language learning, has been proved to be a promising approach to implement. However, the application of m-learning needs to pay attention to the readiness of the student to ensure its effectiveness. Thus, it is crucial to assess students' readiness before the implementation. By focusing on rural schools, this quantitative study aims to investigate students' readiness in implementing m-learning in their English language learning.

Methodology:
This study employed a survey design to measure m-learning readiness of senior high school students by investigating three factors, namely mobile self-efficacy, optimism, and self-directed learning. Through an online questionnaire, 140 responses were successfully collected from students in two public high schools (one senior high school and one vocational high school) located in a rural area in Soppeng Regency, South Sulawesi, Indonesia. The data collected were subsequently analyzed using SPSS Statistics version 25.

Findings:
The results revealed that students from rural high schools in Soppeng Regency, South Sulawesi, Indonesia had a high level of self-efficacy and optimism in implementing m-learning in their English language learning. However, their self-directed learning was still at a moderate level. Further analysis shows that the type of school significantly affected students' mobile self-efficacy and optimism, while self-directed learning was not affected.

Conclusion:
Students from rural high schools in Soppeng Regency, South Sulawesi, Indonesia, show readiness in implementing m-learning for English language learning purposes.

Keywords: mobile learning readiness; English language learning; rural school

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1. INTRODUCTION

The application of mobile technologies to support the teaching and learning process known as mobile learning or m-learning (Duman et al., 2014) has attained recognition in the educational sector due to their capability to improve the learning and teaching quality (Dashtestani, 2016; El-Hussein & Cronje, 2010). It is considered as a solution for schools in the rural areas to attain an education that is equivalent to that of in urban areas. It offers several advantages, such as allowing different ways to deliver learning materials, offering multimedia facilities, enhancing students-teachers interaction and communication, facilitating collaborative learning, providing ubiquitous Internet access, and requiring a relatively low budget (Chung et al., 2019; Kukulska-Hulme & Shield, 2008; Walker, 2013). These benefits enable students in rural areas to obtain equal learning opportunities as those in urban areas (Khan et al., 2018), which may otherwise be difficult to be obtained through other learning approaches.

In the context of language learning, the utilization of mobile technologies to engage in language learning is termed Mobile-Assisted Language Learning or MALL (Burston, 2015; Duman et al., 2014; Rahimi & Miri, 2014). Studies proved that the application of mobile technologies positively influences the development of micro language skills such as vocabulary (Abbasi & Hashemi, 2013; Cavus & Ibrahim, 2017; Mahdi, 2017; Wu, 2014), pronunciation (Abduh, 2019; Liakin et al., 2015; Yoshida, 2018), and grammar (Ganapathy et al., 2016; Wang & Smith, 2013); as well as macro language skills such as listening (Cavus & Ibrahim, 2017; Rahimi & Soleymani, 2015), speaking (Ahn & Lee, 2016; Sun et al., 2017), reading (Bursali & Yilmaz, 2019; Gheytasi et al., 2015), and writing (Andujar, 2016; Fattah, 2015).

Despite the considerable benefits of m-learning, a careful and well-planned implementation has to be taken into account. Some factors need to be initially assessed, with one of them being students' readiness. It is one major factor that has a positive relation to the effectiveness of m-learning (Lin et al., 2016). A previous study focused on online learning (o-learning) readiness found that readiness influences learning effectiveness. According to Ozuorcun and Tabak (2012), m-learning and o-learning are almost similar and part of e-learning. Thus, it is undoubtedly reasonable that m-learning readiness may have comparable impacts on learning effectiveness as o-learning readiness has. One problem arising from m-learning is many students are still unprepared to utilize mobile technologies for academic purposes. Such an issue is not due to inadequate knowledge about m-learning, but a willingness to do it (Stockwell, 2008). Therefore, before implementing m-learning, it is crucial to ascertain students' technology readiness, in this case, mobile technology.

Technology-wise, Parasuraman (2000) describes readiness as individuals' tendency to adopt new technology to achieve their purposes in life. It is a person's psychological condition that indicates a person's level of preparation for accepting new technology. Thus, based on this definition, m-learning readiness refers to a tendency of people to take advantage of mobile technologies for achieving goals in their learning activity. Measuring m-learning readiness cannot be done either through common technology readiness scales or particular e-learning readiness scales because not all of their items are appropriate to measure the m-learning readiness construct. Consequently, Lin et al. (2016) proposed a scale consisting of three factors, namely mobile self-efficacy, optimism, and self-directed learning. Many recent studies (e.g. Ata & Cevik, 2019; Baş & Sarıgöz, 2018; Eroğlu et al., 2017; Tezer & Beyoğlu, 2018) have used this scale to investigate students m-learning readiness.

Self-efficacy is an essential factor to consider when discussing information technology acceptance because it affects one's intention to adopt the technology (Mahat et al., 2012). Higher self-efficacy in the use of technology leads to higher levels of usage intention for that technology (Yeap et al., 2016). Thus far, several technology-related scale development studies (e.g. Hung, 2016; Hung et al., 2010; Zhou et al., 2017) have incorporated self-efficacy as one of the dimensions to measure readiness. It is crucial to assess mobile self-efficacy when investigating readiness considering that m-learning deals with the use of technology, particularly mobile technology. Moreover, Yasin et al. (2020) reported that self-efficacy positively influences students readiness within the blended learning context.

Another factor to consider is optimism. Originally, it is a factor taken from a technology readiness index (TRI) by Parasuraman (2000) and has been recognized as a driver of technology readiness (Bessadok, 2017). According to Lin et al. (2016), optimism is included in measuring m-learning readiness because the perceived benefits of technology are a crucial requirement for an individual to accept the technology. Surveys such as that conducted by Shuib et al. (2018) have shown that there is a significant positive correlation between optimism and readiness.

Self-directed learning is another most essential factor to consider when assessing m-learning readiness since m-learning is known as largely self-directed. Karimi (2016) states that self-directed learning can serve as a facilitator or barrier to students' motivation to m-learning adoption. Similar to self-efficacy, this factor is also included in some readiness scales (e.g. Alem et al., 2016; Hung, 2016; Hung et al., 2010). Moreover, using structural equation modeling, Horzum et al. (2015), found that self-directed learning is the most important variable

in the online learning readiness context. Hao (2016) also reported that self-directed learning is associated with students' readiness.

Even though mobile technologies can support language learning, it still requires the students to be ready. Otherwise, it would neither be feasible nor effective. Hence, insight into m-learning readiness for English language learning is needed to maximize m-learning effectiveness in this context. Previous studies regarding m-learning readiness are predominantly focused on general learning context (Cheon et al., 2012; Christensen & Knezek, 2017; Hussin et al., 2012; Mahat et al., 2012). Only a few researchers seem interested in the English language learning context (García Botero et al., 2018; Shuib et al., 2018; Soleimani et al., 2014), especially among high school students in rural areas. Given the importance of m-learning readiness for learning effectiveness and the limited research efforts in the English language learning context, this study aims to provide further information by investigating m-learning readiness for English language learning purposes of rural school students. A comparison in m-learning readiness of students from two different types of secondary schools (i.e. high school and vocational high school) is also further discussed.

2. METHODOLOGY

This study employed a survey design, aiming to investigate the readiness of rural school students in implementing m-learning for English language learning purposes. It was conducted in two public high schools (one senior high school and one vocational high school) located in a rural area in Soppeng Regency, South Sulawesi, Indonesia. The senior high school is located about 15 km away from the city, while the vocational high school is about 20 km. Despite being situated in a mountainous area, these schools have a wireless network to connect to the internet.

The data were collected using an online survey generated in Google Form within a link. The link of the survey was distributed through a WhatsApp message and the students were asked to complete it voluntarily. There was no criterion for students to be eligible to participate in the study.

A total of 140 students from two schools (56 male and 84 female) participated in the online survey, with their ages ranging from 16 to 20 years and the median age 18. The majority of the participants were studying in vocational high school (62.9%). All participants reported having a smartphone, with 94.3% using Android, 3.6% using iOS, and the rest using other types of smartphones.

A questionnaire was adapted from Lin et al. (2016) to garner the data about students' readiness to implement m-learning for English language learning purposes. Consisting of 19

items that are divided into three factors, the scale is comprised of seven items of mobile self-efficacy (Item 1 to Item 7), seven items of optimism (Item 8 to Item 14), and five items of self-directed learning (Item 15 to Item 19). These items were adjusted into the English language learning context for this study. The questionnaire used a 4-point scale (from 1 = "Strongly disagree" to 4 = "Strongly agree") to indicate students' agreement with these different aspects. The reliability was also tested using Cronbach's alpha. Each factor used in this study demonstrated strong consistency (mobile self-efficacy $\alpha = .850$, optimism $\alpha = .831$, and self-directed learning $\alpha = .867$). To avoid misunderstanding, the questionnaire was translated into Indonesian to enhance students' comprehension of it.

All data analyses were conducted using SPSS Statistics version 25 within several stages. First, the students' responses were summarized in terms of mean and standard deviation using descriptive statistics. After that, multivariate analysis of variance (MANOVA) was used to compare between senior high school students and vocational high school students in terms of the three factors affecting their m-learning readiness. The classification of students' readiness level was implemented by considering the overall mean score of each factor. In this study, the readiness level is classified into three levels, i.e. low (1.00 – 1.99), moderate (2.00 – 2.99), and high (3.00 – 4.00).

3. FINDINGS

3.1 Students' Mobile self-efficacy

Seven items on the questionnaire (Item 1 to Item 7) aim to measure students' mobile self-efficacy. As displayed in Table 1, three items obtained a mean score of 3.00 or above, considered quite high. The item with the highest mean was Item 3 (M = 3.16, SD = .453). Generally, the participants agreed that they could effectively use a smartphone for communication. The item with the second highest mean was Item 4 (M = 3.14, SD = .489), indicating that the participants also agreed that they could use the internet feature of the smartphone to gather information for English learning purposes. After calculating the mean of means of each item, the accumulation mean values was 3.01. It may be inferred that the participants' mobile self-efficacy was at a high level.

Table 1. Results of students' mobile self-efficacy

No.	Statements	Mean	Std. Dev
1.	I feel confident in performing the basic function of the smartphone for learning English.	2.95	.513
2.	I feel confident in my knowledge and skills of smartphones for learning English.	2.95	.438
3.	I feel confident in using a smartphone to effectively communicate with others.	3.16	.453

4.	I feel confident in using the internet (Googe, Yahoo) on a smartphone to find or gather information for learning English.	3.14	.498
5.	I feel confident in studying to operate a smartphone for learning English.	3.00	.416
6.	I feel confident in knowing all the special keys and functions contained in a smartphone.	2.91	.424
7.	I feel confident in knowing how a smartphone works for learning English.	2.95	.404
Overall mean		3.01	

3.2 Students' Optimism

The next part of the questionnaire (Item 8 to Item 14) investigated the students' optimism. As presented in Table 2, four out of seven items obtained a mean value above 3.00, falling under the category of considerably high. Item 8 scored the highest mean (M = 3.12, SD = .515), followed by Item 10 (M = 3.09, SD = .388) and Item 9 (M = 3.03, SD = .522). This implies that the participants responded positively to the benefits offered by m-learning via smartphone, such as allowing them to study anytime, making their study more efficient, and enabling them to adjust things to fit their needs. After calculation, the computed cumulative mean value obtained was 3.01, suggesting that the students in this study were highly optimistic about implementing m-learning for English language learning purposes.

Table 2. Results of students' optimism

No.	Statements	Mean	Std. Dev
8.	I like studying English with mobile learning using a smartphone because I am able to study anytime.	3.12	.515
9.	Mobile learning using smartphones makes me more efficient in my English studying.	3.03	.522
10.	I like mobile learning using a smartphone that allows me to tailor things to fit my own needs.	3.09	.388
11.	I like mobile learning using a smartphone.	3.01	.464
12.	Mobile learning using the newest smartphone is much more convenient to use.	2.89	.490
13.	Mobile learning using smartphones gives people more control over their studying time.	2.97	.494
14.	Mobile learning using smartphones gives me more freedom to study English.	2.99	.432
Overall mean		3.01	

3.3 Students' Self-directed Learning

In the final part of the questionnaire (Item 15 to Item 19), participants were asked about their self-directed learning ability. As shown in the bottom half of Table 3, the overall mean obtained is only 2.92. Item 17 was the only items that obtained a mean value of more than 3.00 (M = 3.01, SD = .389). The participants mostly admitted that they decided their goal and had

a high initiative in their learning. These results revealed that the participants' self-directed learning was still at a moderate level.

Table 3. Results of students' self-directed learning

No.	Statements	Mean	Std. Dev
15.	I can direct my own learning progress.	2.94	.461
16.	I carry out my own study plan.	2.89	.505
17.	In my studies, I set goals and have a high degree of initiative.	3.01	.389
18.	I manage time well.	2.90	.499
19.	In my learning, studying, or working, I am self-disciplined.	2.88	.472
Overall mean		2.92	

3.4 The Comparison of Students' Readiness by School Type

MANOVA was used to determine whether there are any statistically significant differences between school type (senior high school and vocational high school) on the dimensions of m-learning readiness (mobile self-efficacy, optimism, and self-directed learning). The descriptive statistics (Table 4) show the mean score and standard deviation of the three different dependent variables, which have been split by the independent variable.

Table 4. The descriptive statistics of m-learning readiness dimensions by school type

Dependent Variable	School Type	Mean	Std. Error
Mobile Self-efficacy	Senior High School	21.885	.306
	Vocational High School	20.568	.235
Optimism	Senior High School	21.596	.321
	Vocational High School	20.807	.247
Self-directed Learning	Senior High School	15.038	.259
	Vocational High School	14.375	.199

As seen in the table, senior high school students scored higher in mobile self-efficacy (M = 21.885, SD = .306) than did vocational high school students (M = 20.568, SD = .235). In optimism, students from senior high school also scored higher (M = 21.596, SD = .321) than those from vocational high school (M = 20.807, SD = .247). Similarly, senior high school students (M = 15.038, SD = .259) outperformed those from vocational high school (M = 14.375, SD = .199) in self-directed learning. Furthermore, the significant differences is showcased in Table 5 below.

Table 5. Results of MANOVA comparing m-learning readiness by school type

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
School Location	**Pillai's Trace**	.078	3.853[b]	3.000	136.000	.011	.078
	Wilks' Lambda	.922	3.853[b]	3.000	136.000	.011	.078
	Hotelling's Trace	.085	3.853[b]	3.000	136.000	.011	.078

Roy's Largest Root	.085	3.853[b]	3.000	136.000	.011	.078

Table 5 presents the results of MANOVA based on the school type (i.e. senior high school and vocational high school). As seen in the table, four types of tests, namely Pillai's trace, Wilks' Lambda, Hotelling's Trace, and Roy's Largest Root, were provided. Analyzed through Wilks' statistic, the results showed that there was a statistically significant difference in students' m-learning readiness based on the school type, $\Lambda = .922$, $F(3,136) = 3.853$, $p = .011$. To identify which dimensions of m-learning readiness were affected by the school type, Table 6 below displays the results of the follow-up ANOVA.

Table 6. Results of follow-up ANOVA comparing m-learning readiness by school type

Source	Dependent Variable	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
School Type	Mobile Self-efficacy	56.644	1	56.644	11.617	.001	.078
	Optimism	30.365	1	30.365	3.797	.053	.027
	Self-directed learning	14.388	1	14.388	4.132	.044	.029

As illustrated in the table, mobile self-efficacy and self-directed learning dimensions obtained the *Sig.* value lower than .05, implying that students from senior high school and vocational high school were significantly different in their level of mobile self-efficacy and self-directed learning. On the contrary, their level of optimism was relatively the same. In short, these results show that senior high school students and vocational school students were significantly different in their m-learning readiness.

4. DISCUSSION

Several reports have shown the positive effect of m-learning to support English language learning, making m-learning a promising approach to implement. Application of m-learning, however, needs to pay attention to the readiness of students to ensure its effectiveness. This study set out with the aim of investigating students' m-learning readiness for English language learning purposes focusing on the context of rural schools, involving three factors, namely mobile self-efficacy, optimism, and self-directed learning.

The current study found that rural school students have a high level of mobile self-efficacy and optimism. Both factors scored the highest overall mean of the scale. This finding is consistent with that of Baş and Sarıgöz (2018) and Eroğlu et al. (2017) who also found self-efficacy as the highest overall mean of the scale. A possible explanation for this might be that the participants of this study were certain in their ability to utilize a smartphone for their English language learning since they have many experiences with the smartphone. Bandura (1997)

states that personal experience in using a particular skill, whether it succeeds or unsuccessfully, affects an individual's self-efficacy. Besides, this finding also accords with a study by Ata and Cevik (2019) who found optimism as the highest overall mean of the scale. This result may be explained by the fact that the participants already knew and felt the benefits of m-learning in their English language learning, leading to positive perceptions of m-learning. Lin et al. (2016) indicated that someone optimistic about technology would focus more on the benefits provided rather than the losses. Another finding was that self-directed learning scored the lowest overall mean among the factors, which is similar to the one conducted by Baş and Sarıgöz (2018) and Ata and Cevik (2019) where they found self-directed learning as the lowest factor. It seems possible that these results are due to the lack of awareness of participants to manage their learning. Even though self-directed learning scored the lowest mean, it is still categorized as a moderate level in this study.

The comparison in the students' m-learning readiness of the two school types signifies that senior high school students showed a more elevated level of m-learning readiness than those of vocational high school students. Nevertheless, the results of MANOVA only indicated significant differences in terms of mobile self-efficacy and self-directed learning. In optimism, the results of the analysis did not show any significant difference. Despite no clear reason identified, the nonexistent difference may have been caused by other factors that were not involved in this study. It should be noted that studies that describe the difference in m-learning readiness by school type might not have come to the spotlight.

It is plausible that several weaknesses could have restricted the interpretation of this study. First, the number of participants involved in this study was very small, leaving it hard to generalize the result implications for a wider student population. Thus, future studies should involve more participants from multiple high schools, including private ones. Second, this study is limited to the psychological readiness of the students, suggesting that future researchers should be focused on the investigation of the other areas of readiness, such as skill readiness and budget readiness (Hussin et al., 2012).

5. CONCLUSION

Students from rural high schools in Soppeng Regency, South Sulawesi, Indonesia, show readiness in implementing m-learning for English language learning purposes as proven by the investigation of the factors affecting students' m-learning readiness. The results of the study reveal that the students have a high level of mobile self-efficacy and optimism, and a moderate level of self-directed learning, indicating that they are ready to apply m-learning as an essential

component in their English language learning process. Furthermore, the type of school was significantly affected students' mobile self-efficacy and self-directed learning, while optimism was not. Considering the importance of readiness on learning effectiveness, English teachers need to pay attention to their students' readiness before trying to implement m-learning in their class. They may use the result of this study as one alternative to their teaching guidance. It is suggested that a similar study with a larger sample be conducted for a more accurate insight into the issue of m-learning readiness in the context of English language learning.

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