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Students' Self-Regulated Learning in Iconic Mobile Learning System in English Cross-Disciplined Program

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The purpose of this study was to assess learners' self-regulated learning (SRL) levels and the effect toward an attitude of m-learning adoption in assisting English learning. By using m-learning, students were expected to have a flexible way to learn and gained self-regulated learning since it would help them to learn based on their pace of learning. The respondents in this study were 66 students from two different senior high schools in Jepara regency who enrolled in the English cross-disciplined program. In this ex-post-facto study, the researcher used a phenomenological approach to describe SRL aspects while students were using self-designed mobile software for speaking skills which also contained a national iconic woman hero. From the investigation of aspects of Learning Plan and Strategy, Intrinsic Motivation, Learning Control, Self-evaluation, and Confidence, this study found that the respondents were categorized as moderate regulators. From those five aspects of self-regulated learning investigated, it indicated that students had higher Self-evaluation than other aspects in that condition. Then the attitude to adopt m-learning is influenced by SRL. It can be potential to foster the effectiveness of English learning and further learning process since self-regulated learning can positively support the long-life learning characters.

Keywords: self-regulated learning, m-learning, English learning, self-evaluation, EFL

INTRODUCTION

Mobile learning (m-learning) is a concept of learning utilized mobile technology. In m-learning environment, knowledge can be transmitted through mobile phones, laptops, tablet PCs, PDAs, etc. M-learning places emphasis on the fact that the teaching and learning process can take place without being constrained by time and location (Kukulska-Hulme & Shield, 2008). In other words, teaching and learning can be carried out at any time and anywhere. Ubiquity, the most significant feature of wireless and mobile technologies, creates possibilities for learners to learn the right thing at the right time in the right place. There is greater learner mobility. Using their mobile phones, students can receive and share notes and materials. They do not need a computer to download notes because the mobile phone with internet access can carry out this function anywhere and anytime. Mobile technologies forge ubiquitous learning spaces and experiences across different scenarios or contexts (Sha, Looi, Chen, Seow, & Wong, 2012). This feature enables educators to facilitate and scaffold student-centered learning activities that encompass both formal and informal settings.

In many kinds of distance learning, such as m-learning and online learning, students play a more demanding role than the teacher. In m-learning settings, students take more responsibility for their learning compared to face-to-face settings so that learning will be centered on students (Bol & Garner, 2011). Student-centered learning logically assumes that students are the masters of their own learning in their chosen way of learning. M-learning environments potentially provide a media which students can manage their own learning. To be effective, implementing M-learning needs a high level of commitment from both teachers and students since it will involve many expenses to access an internet

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connection, the feasibility of mobile devices and other supportive tools. Besides that, it is also essential to ascertain students' readiness for technology to consider in the discussion on information technology acceptance before implementing M-learning. Besides all of those factors, students' self-regulated learning is also an essential factor to consider as the most influenced factor on m-learning system.

Self-regulated learning (SRL) can be used as a guiding theoretical framework to examine learning with advanced computer technologies that presumably include mobile technologies (Azevedo, 2005). Higher students' self-regulated learning level may exist in a successful m-learning implementation (Cho & Heron, 2015). In particular, self-regulated learning is considered as a vital factor to describe the learning experiences of the students in real self-pace learning. In m-learning situation, self-regulated learning significantly influences students' achievements. It also promotes student's satisfaction in m-learning courses to support successful implementation.

REVIEW OF LITERATURE

English Cross-Disciplined Program

In the national curriculum of Indonesia, English became an influential subject. English is treated differently by another subject in developing curriculum. As a non-native English country, Indonesia places English as a foreign language. That paradigm makes English in the situation as a mandatory subject for Indonesian students even though still become one of the subject tested in the national exam of Indonesia. In the previous national curriculum, English was a mandatory subject for all levels of educations. In elementary school, English was perceived as an extracurricular subject to be taught once a week in two learning hours or credits while in junior and senior high school, it was mandatory with 3 to 5 credits respectively.

In the latest national curriculum, English is abolished from elementary school for classroom learning but allowed to be taught as an extracurricular activity after mandatory school hours. Then, in junior high school, English is still mandatory with a decreasing number of credits. English is allocated for 2 credits in classroom learning for a week. It is a little bit different from senior high school. In this level, English is a mandatory subject with optional views. The senior high schools in Indonesia manage three specialization programs. Generally, the programs offered are science, social and language programs (excluding the private and religion-based senior high school which may have more additional specialization programs). In each program, English is divided into two types of curriculums, such as English for mandatory and cross-disciplined curriculums.

In English as a mandatory curriculum (and another mandatory subject), students learn in a permanent class as member of the program. However, in the cross-disciplined program, they are mixed with students from different programs since the curriculum addressed students with English interest (not program-oriented). The basic program where the students come from may influence the adoption of learning style and attitude during learning English. For example, students within language program will tend to more adaptable since they are exposed more with a foreign language, anthropology and other lesson associated with English than students within science and social program. That fact has also influenced the students' capability, motivation, and intention to learn English. Moreover, some researchers have explored the advantages of using mobile technologies in language learning such as personal, situated, authentic, spontaneous, informal, and continuous access. Related to m-learning situation, those advantages provide mobile technologies to support language learning in many areas such as vocabulary learning, speaking (Hwang, 2014; Tarighat & Khodabakhsh, 2016), listening (Azar & Nasiri, 2014; Eken & Dilidüzgün, 2014), reading and other contextual language learning experiences (Stickler & Shi, 2016).

Trends in Mobile Learning in Indonesia

M-learning is defined as a new learning method assisted by using mobile devices (Chachil, Engkamat, Sarkawi, & Shuib, 2015). M-learning is further development of e-learning and online learning,

specifically by the use of mobile devices. Learning by mobile devices will give learners much flexibility since it allows learners to obtain learning materials anytime anywhere, using mobile devices (Ozdamli & Cavus, 2011). Based on data from International Data Corporation, mobile market in Indonesia showed a massive growth to over 3.4 percent selling in 2017. Further, the smartphone selling by international mobile vendors in the first quarter 2017 grows up from 332.6 million to 344.3 million units (www.idc.com/promo/smartphone-market-share/vendor). This data gives opportunities as well as challenges in many aspects of social life such as education. There is a widespread movement of mobile devices among Indonesian students. The high mobile phone availability among students in Indonesia is actually a big pretention to shift to m-learning environment.

Characteristics of mobile learning made significant impacts on teaching and learning environment (Klassen, Eibrink-Lunzenauer, & Gloggler, 2013). Some characteristics of m-learning are spontaneous, informal, personalized, and ubiquitous (Calimag, Miguel, Conde, & Aquino, 2014). There are two main aspects indicated the ubiquity of m-learning; they are portability and connectivity (Miangah & Nezarat, 2012). Portability enables learners to move mobile devices and bring learning materials. Concerning the connectivity, developing a mobile system must have the capability of being connected and communicated with learning websites using a wireless network of the devices to access materials. Furthermore, mobile technology platforms will allow learners to collaborate with their classmates, search for information, and share their learning experiences (Chen, Sivo, Sugar, & Mao, 2013). Within the educational environment, to design a complex environment that merges management, pedagogical, technological elements, social, and cultural issues is a big challenge to implement efficient m-learning projects. The adoption of m-learning in classrooms is proved to be useful in helping learners to share knowledge and create social interaction among classroom members (Suanpang, 2012).

The Influence of Iconic Visual Elements on Mobile Learning

A visual element can mediate communication's success and improve positive perceptions of the user with the system. People will gain lower sociability when looking at a text-only presentation than looking at the interactive picture. Even though only a static picture appeared, studies have reported that higher social presence and other signs of interactive communication is reached while communicating than a text-based medium (Kang & Watt, 2013). Moreover, an iconic character embedded will allow the user to enjoy socially productive communication while ignoring to whom they communicate.

Adding visual information such as hero characters will improve the effectiveness of attracting students' responses then support as independent usage. Users are, in general, more attracted to highly interactive visual information and perceived them as higher in credibility and attractiveness. The image of an avatar representing a software agent was one of the most attractive components in a mobile device interface (Proaps & Bliss, 2014). The usual picture, such as a local hero, on interpersonal communication, produces a face-to-face situation that implies a sense of ''being in others' presence'' to promote a better result of the communication.

Self-regulated Learning Views in Mobile Learning System

Self-regulated learning (SRL) is defined as learners' systematic effort to manage their learning process to attain personal goals. Self-Regulated learners proactively will set learning goals and engage in the process of achieving the goals when facing a new task. The process of achieving the goals such as planning tasks, monitoring progress, and reflecting goal accomplishment will drive learners into a meaningful learning. The self-regulated learning (SRL) process can be explained in terms of students' motivation and their use of cognitive strategies (Zimmerman, 2008).

The indicators described self-regulated learning are intrinsic goal orientation, high confidence in learning, high control of learning beliefs, and high task value. These four qualities should be addressed

to understand the significant role of self-regulation in learning. First, intrinsic goal orientation refers to students' disposition toward mastering the content or task. Students who have intrinsic goal orientation will personally engage in setting meaningful goals instead of other external goals that may occur (e.g., getting a good grade to show off to others). They voluntarily monitor, reflect, and adjust the learning process and also attribute their failure to mismanagement of the process or misuse of learning strategies (Cho, Kim, & Choi, 2017)

While confidence in learning leads to learners' deeper engagement in the learning process. High-confident students not only use in-depth learning strategies such as rehearsal, elaboration, and organization but also actively participate in more social interaction related to the learning process. Closely related to learning, confidence is a student's control of learning beliefs. When students believe that they have full control over their learning, they are more likely to initiate personal goal setting and monitor and adjust their learning process. When these initiate adjustments lead to success, students' confidence will be promoted, and they are motivated to continue the process of making efforts to achieve their goals initially. The combination of learning confidence and control will take its part to create a long-life learner further (Cho & Jonassen, 2009). Self-regulated level of learners is also highly influenced by the quality of task value. Task value means the perceived value of doing a task. Students with high task value will systematically set their goals and evaluate their learning process, as well as accomplish the goals.

In addition to the four descriptors above, effort regulation is critically involved in self-regulated learning aspect. Effort regulation refers to students' capacity to persist and put effort into academically challenging situations (Broadbent & Poon, 2015). When facing a challenging task of learning, highly self-regulated learners strategically manage their effort and complete tasks even they are not intrinsically motivated. By looking at these descriptors, it is not surprising that the self-regulated learning level is closely related to students' attitudes. Students' positive attitude is essential for proactive and consistent involvement in self-regulated learning processes.

METHODS

This ex-post facto research aims to find out the SRL level of student after using m-learning approach for the first time then predict the attitude to adopt m-learning situation in the future. This study assessed five indicators of self-regulated learning using a 5-point Likert scale questionnaire adapted and modified from Zimmerman (Sha, Looi, Chen, Seow, & Wong, 2012). These components are learning plan and strategy, intrinsic motivation, learning control, self-evaluation, and confidence. Students were given five options to respond to a total of 30 statements to assess the utility of indicators used. The options are SA (strongly agree), A (agree), N (neutral), DS (disagree), and SDS (Strongly disagree). The reliability index of each construct or factor was obtained were Cronbach Alphas: α= 0.85 for learning plan and strategy, 0.72 for intrinsic motivation, 0.91 for learning control, 0.88 for self-evaluation, and 0.71 for confidence in learning. To determine the classification level for each indicator, we divided it into three levels, i.e., 1 – 2.33 as low, 2.34 – 3.67 as moderate and 3.68 – 5.00 as high levels. Then the attitudes toward m-learning adoption into classrooms were measured with a modified nine items questionnaire derived from the information and communication technology (ICT) integration in the classroom (Sang, Valcke, Braak, & Tondeur, 2010). Item reliability was estimated as α=0.94. This study hypothesized that students with high SRL would demonstrate more positive attitudes toward m-learning than students with low SRL. To test the hypothesis, we conducted one-way ANOVA's to test. The significance level was set at $\alpha < 0.05$ and students' levels of SRL were a factor with three levels.

Participants

Participants were 66 of second-grade senior high school students enrolled in English cross-disciplined program from two different schools in Jepara regency, Central Java Province. English Specialization

program was a program that facilitates students with interest in English to learn more beyond the mandatory class. Among the 66 participants, 37 students were female, and 29 students were male, with an average age of 17 (SD = 6.34) is involved in this study. The study was conducted in the odd semester of the 2017-2018 academic year (September-November 2017).

The Course

The course selected was English with speaking skill in two topics; (1) offer and suggestion and (2) asking and giving opinion. The student practiced online using an android app designed named Kartini Loves Speaking. The Android app was designed using MIT App Inventor with features that allowed student practice pronunciation embedded a Google voice in a role-play situation. The course had four weekly learning activities in the form of materials, listening practice and role play. Students learned one activity per week and completed the assignments by themselves online. The sum of the weekly grades made up the final grade.

FINDINGS

Generally, the result showed that respondents were categorized as a moderate level, with an average mean of 3.25. The overall mean for the five indicators of self-regulated learning studied is generated as shown in Table 1. The highest mean obtained was for students' self-evaluation (M=3.84, SD=0.61) followed by intrinsic motivation (M=3.39, SD=0.48), students' learning confidence (M=3.28, SD=0.54), learning control (M=3.02, SD=0.49) and learning plan and strategy (M=2.88, SD=0.43) in order. This study showed that respondents were highly rated in the self-evaluation of using m-learning system in the teaching and learning process. For the rest components, respondents showed a moderate level in learning plan and strategy, intrinsic motivation, learning control and learning confidence when using m-learning.

For learning plan and strategy aspect, respondents scored a moderate level. Students involved in this study believed that they had a better learning plan and strategy on m-learning rather than the conventional way. In this study, intrinsic motivation was investigated to ascertain its impact on students' intention to involve in the system in the future. Findings showed that students had moderate motivation. Students' learning control is also essential because it will impact their pace when using the system. The respondents in this study had moderate ratings in terms of their learning control in an M-Learning environment. They also indicated that they found a moderate level of Learning Confidence when using M-learning. In terms of self-evaluation, respondents felt that M-learning could make learning become comfortable to be assessed. They were able to measure their achievements and evaluate their learning goals.

Table 1
Overall Mean for the Five SRL Indicators

Indicators	Number of items	Mean	SD	Level
Learning Plan & Strategy	6	2.88	0.43	Moderate
Intrinsic Motivation	7	3.39	0.48	Moderate
Learning Control	6	3.02	0.49	Moderate
Self-evaluation	4	3.84	0.61	High
Confidence	7	3.28	0.54	Moderate

Students' Learning Plan and Strategy

The first component investigated in this study was students' learning plan and strategy. To be a self-regulator, students need to make a learning plan for each phase and also define their most suitable strategy to reach the learning goals. This indicator usually is represented by the setting of learning goals and scheduled learning time. Especially for learning strategy, it can be described by a chosen learning ways, tools, and activities. This is essential to ensure that m-leaning would be successful

because in the m-learning student are supposed to manage their learning pace. To measure students' learning plan and strategy, six items were used in this study (Table 2).

The findings indicated that only one item was classified as high level, named "I'm always curious about what I will learn". This item scored a mean = 3.69 (SD=1.02), which showed that respondents had a big curiosity about what they learn. The three other items "I learn in group because there are many friends to play" (M=3.22, SD=0.93), "I prefer to study at home to study more" (M=3.13, SD=1.09), and "I can learn every time because of having a portable material" (M=3.39, SD=1.01) had classified as moderate. Meanwhile, there were two items with the low mean, those "I have a learning schedule out of school and private course" with a mean = 2.25 (SD=1.30) and "If only facing a test I learn more" with a mean = 1.58 (SD=0.84). These findings showed that the respondents still had a problem with arranging a schedule to study and feel afraid of a test so that they must learn more to prepare. Having a regular time schedule to study will really help to avoid a more frustrating study in a short time when facing a test.

Table 2
Students' Learning Plan and Strategy

Items	Mean	SD	Level
I'm always curious about what I will learn	3.69	1.02	High
I have a learning schedule out of school and private course	2.25	1.30	Low
*I learn in the group because there are many friends to play	3.22	0.93	Moderate
*If only facing a test I learn more	1.58	0.84	Low
I prefer to study at home to study more	3.13	1.09	Moderate
I can learn every time because of having a portable material	3.39	1.01	Moderate

*negative item

Students' Intrinsic Motivation

Students' intrinsic motivation is another crucial indicator of self-regulated learning level. A high intrinsic motivation will encourage the student to build up their interest to learn. There are many descriptors of motivation stated by researchers but mostly, they are in form of self-awareness and taking a risk and challenge. They also are indicated by proper emotional management and learning struggle. In this aspect, we also designed seven items including 2 negative items (Table 3). The item with the highest mean was "I have to learn more to reach my ambition" (M=4.67, SD=0.66, followed by "I have my way to boost my learning spirit" (M=4.09, SD=1.20). Both of them were categorized as high level and meant that respondents were having a great ambition in their future and well-informed how to struggle with.

There was only one item categorized as low level that was "I choose only the easier if finding a difficulty in learning" (M=2.15, SD=0.91). This fact indicated that even though the respondents had a struggling effort, they had a problem in preferring easier materials if finding a difficulty. Furthermore, for other descriptors, respondents showed a moderate level. Those indicated that respondents were also willing to use mobile technology and strong motivation to do the activities more.

Table 3
Students' Intrinsic Motivation

Items	Mean	SD	Level
I love challenging task to study	2.40	0.97	Moderate
I have to learn more to reach my ambition	4.67	0.66	High
*even though feeling tired, I will learn if my parents ask to	3.21	1.20	Moderate
I will still study, even though my homework is done	2.94	1.03	Moderate
I have my way to boost my learning spirit	4.09	1.02	High
*I choose only the easier if finding a difficulty in learning	2.15	0.91	Low
Even though it was difficult and not interesting, I still follow the class till the end	4.25	1.01	High

*negative items

Students' Learning Control

Students' learning control also became prominent in terms of m-learning. The big role of learners to independently study should also under control. Because of the less of teachers' control in a mobile environment, students should also manage their pace. Learning control is usually represented by good time management. Six significant items were designed in this aspect to rate how respondent use their time to study independently. Overall, six items were rated by the respondents at moderate level. The findings indicated that the highest item rated was "If feeling tired, I take a break for a while and continue to study." This item scored a mean = 3.64 (SD=1.24), which showed that respondents were having good management while they study. Then the lowest item rated was "I do cheating if only I do not understand" (M=2.2, SD=1.03), indicated that sometimes the respondents do cheating if difficult to study.

Even though the rate was moderate level, the mean was close to low. For the schedule respondent showed that had a regular time to study. It was indicated from the three items "I learn regularly even in uncomfortable condition" (M=3.19, SD=0.09), "I finished my homework before the deadline" (M=3.32, SD=0.93) and "I use my spare time for recalling what I studied" (M=2.89, SD=0.78) which were classified as moderate. Meanwhile, there was an item close to low level categorized mean that was "I cannot study for a long duration" (M=2.55, SD=0.99). The finding showed that the respondents still had a problem with a study duration.

Table 4
Students' Learning Control

Items	Mean	SD	Level
I learn regularly even in the uncomfortable condition	3.19	0.90	Moderate
*I cannot study for a long duration	2.55	0.99	Moderate
If feeling tired, I take a break for a while and continue to study	3.64	1.24	Moderate
I finished my homework before the deadline	3.32	0.93	Moderate
*I do cheating if only I do not understand	2.52	1.03	Moderate
I use my spare time for recalling what I studied	2.89	0.78	Moderate

*negative item

Students' Self-evaluation

Students' self-evaluation was another critical indicator of self-regulated learning level. A high self-evaluation means that learners well-inform of what they have reached. They can assess the achievement of learning goals. There are many descriptors of self-evaluation stated by researchers such as a satisfaction level and understanding strengths and weaknesses. In this aspect, we designed four items including a negative item (Table 5). The item with the highest mean was "I believe all I learned are useful for my life" (M=4.67, SD=0.66, followed by "I know my strength and weakness I all subject" (M=4.01, SD=1.02) and "I blame myself when my achievement down" (M=3.86, SD=1.08). They were categorized as high level and meant that respondents were having a great understanding of what they have achieved and responsible for all those achievements. There was only one item categorized as the low level that was "If get a minimum score, I feel satisfied" (M=2.08, SD=1.52). This fact indicated that respondents have a low standard of achievement. They satisfied only with a minimum score not to take a higher score as a benchmark.

Table 5
Students' Self-Evaluation

Items	Mean	SD	Level
I believe all I learned are useful for my life	4.67	0.66	High
*If I get a minimum score, I feel satisfied	2.08	1.52	Low
I know my strength and weakness I all subject	4.01	1.02	High
I blame myself when my achievement down	3.86	1.08	High

*negative items

Students' Learning Confidence

The last indicator investigated in this study was students' learning confidence. After learners make a learning plan and choose the most suitable strategy to reach the learning goals, learners will gain their confidence since they will meet different ways compared to their friends. This indicator usually is represented by beliefs on ability and mastering all the materials. In a learning situation, confidence can be described by competitive and brave learning beliefs. This aspect is essential to ensure that the emotional management of learners is strong enough to face a new chosen learning strategy and its obstacles.

To measure students' learning confidence, seven items were used in this study (Table 6). The findings indicated that only one item was classified as high level, named "I ask smarter students when feeling confused". This item scored a mean = 4.24 (SD=1.09), which showed that respondents were not feeling ashamed to ask other students. The fact meant that they have good emotional control. The two other items related to the mastering subject, "I master all I have studied" (M=3.22, SD=0.93) and "Score is more important than mastering the materials" (M=3.01, SD=1.22) had classified as moderate. Mastering subjects were assumed as important and they can master.

Meanwhile, related to competitiveness, there are two items categorized as moderate mean. Those were "I study in different way from other friends in this class" (M=3.51, SD=0.96) and "In this class, I can compete" with a mean = 3.55 (SD=3.51). These findings showed that the respondents believed that even though they will learn in a different way, they still can compete with other students. The level of brave of student was moderate. It can be seen from item "If teacher doing wrong, I remind" (M=2.89, SD=1.14). The last item was "Even though I have studied, a still nervous facing a test" (M=2.55, SD=1.28). The result indicated that respondents still had a positive mindset facing a test. They believed that having a regular time to study will really helpful when facing a test.

Table 6
Students' Learning Confidence

Items	Mean	SD	Level
I master all I have studied	3.21	1.05	Moderate
*Score is more important than mastering the materials	3.01	1.22	Moderate
In this class, I can compete	3.55	0.91	Moderate
I study in different way from other friends in this class	3.51	0.96	Moderate
I ask smarter students when feeling confused	4.24	1.09	High
If teacher doing wrong, I remind	2.89	1.14	Moderate
*Even though I have studied, a still nervous facing a test	2.55	1.28	Moderate

*negative item

To examine the influence of SRL toward students' attitudes toward m-learning adoption, a one-way ANOVA was conducted. The respondents are divided into three levels of SRL (High-Moderate-Low) then compared the average mean to see the variance within each group. The results confirmed the positive relationship between SRL levels and attitudes toward m-learning adoption, $F = 3.756$, $p < 0.05$. This means that highly self-regulated students showed significantly more positive attitudes toward m-learning in the future, whereas low self-regulated students tend to have negative attitudes toward the use of m-learning in the future. This fact confirmed the research hypothesis.

Table 7
One-way ANOVA comparing three SRL level's groups on attitudes

		Sum of Squares	df	Mean Square	F	p
Attitudes	Between Groups	3.038	2	1.519	19.124	.000
	Within Groups	5.083	64	.079		
	Total	8.121	66			

DISCUSSION

Even though the self-regulated was categorized as moderate, it did not fully support the theory stated that the SRL should be high (Azar & Nasiri, 2014). The result may be influenced by several factors during the implementation of M-learning, such as time allocation, subject applied (Bol & Garner, 2011), the type of m-learning system used and the students' perception (Kukulska-Hulme & Shield, 2008). Overall, the results indicated a high acceptance of the implemented m-learning concept. Students showed that they were able to evaluate their achievement and enjoy their pace of learning (Bovermann, Weidlich, & Bastiaens, 2018). The moderate level of intrinsic motivation within the m-learning environment also contributes to the acceptance of the mobile technology used. Most of the students appreciated the mobile learning concept as a useful offering for students. Looking at how the students' self-regulated learning condition, the m-learning was evaluated as a positive option to be available.

Regarding the adoption of m-learning in the future, the result shows the effect of SRL on the attitudes toward m-learning. The students with high-level SRL tend to have a positive attitude to accept the use of m-learning in the future, whereas the students with lower SRL level is predicted to resist the use of m-learning. This prediction can be a potential to investigate further before the implementation of m-learning in any class. The teacher or practitioners can predict the success of the proposed m-learning from the condition of students' SRL level. Different components of SRL may have different impacts on the m-learning system investigated.

CONCLUSION

Even though nowadays most Indonesian students possess mobile phones, they often use their mobile phones mainly to communicate and to connect with entertainment rather than for educational use. M-learning potentially can be used to increase the long-life learning characters by its strength on ubiquity and portability. This study investigated the self-regulated learning level of five indicators which were believed to impact students on m-learning environment. Those were learning plan and strategy, intrinsic motivation, learning control, self-evaluation and students' learning confidence. This study showed that respondents were highly rated in the self-evaluation, then for those the rest indicators, respondents showed a moderate level in learning plan and strategy, intrinsic motivation, learning control and learning confidence when using m-learning. Self-evaluation contributed the highest mean to the students' self-regulated learning level. The SRL level can be a prediction to the success of m-learning adoption. It also can be a derived factor in the success of implementation. The higher students' SRL level, the higher potential to adopt m-learning system. On the other hand the lower students' SRL level, the lower potential to adopt m-learning system. In those ways, m-learning still has a great potential to transform and shift the learning process. Further investigation is needed to find out the suitable way to improve self-regulated learning level to a senior high school student before proposing the m-learning system in the future. The different setting of SRL components and m-learning is also essential to be investigated in the future to give a comprehensive picture as well as other learning systems.

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