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Undergraduate Students' Self-Regulated Learning in the Use of Mobile Assisted Language Learning (MALL)

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ABSTRACT: Mobile Assisted Language Learning (MALL) has been increasingly recognized for its potential to enhance English language proficiency, particularly when learners are able to effectively self-regulate their learning. This study aims to examine the level of self-regulated learning (SRL) among undergraduate students in their use of MALL, and to investigate whether differences in SRL exist based on gender and socioeconomic status. Employing a quantitative survey design, this study involved 207 undergraduate students at IAIN Kediri who were using MALL as part of their preparation for the English proficiency test. Data were collected through questionnaires and analyzed using descriptive statistics and the Kruskal-Wallis test, as the data did not meet the assumptions of normality and homogeneity required for parametric analysis. Descriptive results showed students had a relatively high level of SRL, with mean scores ranging from 2.66 (SD = 1.006) to 3.62 (SD = 0.577). The Kruskal-Wallis test revealed significant differences in SRL by gender (p = 0.000) and socioeconomic status (p = 0.007), indicating these demographic factors affect how students self-regulate their learning through MALL. The findings suggest future research to examine other influencing variables and consider longitudinal designs to better understand MALL's long-term effects on language learning.

Keywords: mobile-assisted language learning, self-regulated learning, undergraduate student

ABSTRAK: *Mobile Assisted Language Learning (MALL) semakin banyak dimanfaatkan dalam pembelajaran bahasa Inggris karena dinilai mampu meningkatkan keterampilan berbahasa, terutama ketika peserta didik dapat mengatur proses belajarnya secara mandiri. Penelitian ini bertujuan untuk mengukur tingkat self-regulated learning (SRL) pada mahasiswa dalam penggunaan MALL serta mengkaji perbedaan SRL berdasarkan jenis kelamin dan status sosial ekonomi. Penelitian ini menggunakan pendekatan kuantitatif dengan desain survei, melibatkan 207 mahasiswa sarjana di IAIN Kediri yang menggunakan MALL dalam persiapan menghadapi tes kemampuan bahasa Inggris. Data dikumpulkan melalui angket dan dianalisis menggunakan statistik deskriptif dan uji Kruskal-Wallis, karena data tidak memenuhi asumsi normalitas dan homogenitas untuk analisis parametrik. Hasil deskriptif menunjukkan bahwa mahasiswa memiliki tingkat SRL yang relatif tinggi, dengan rata-rata skor berkisar antara 2,66 (SD = 1,006) hingga 3,62 (SD = 0,577). Uji Kruskal-Wallis menunjukkan terdapat perbedaan signifikan dalam SRL berdasarkan jenis kelamin (p = 0,000) dan status sosial ekonomi (p = 0,007), yang mengindikasikan bahwa faktor demografis tersebut memengaruhi cara mahasiswa mengatur pembelajaran melalui MALL. Temuan ini merekomendasikan agar penelitian selanjutnya mempertimbangkan variabel lain yang berpengaruh serta menerapkan desain longitudinal guna memperoleh pemahaman yang lebih komprehensif mengenai dampak jangka panjang MALL terhadap pembelajaran bahasa.*

Kata Kunci: *mahasiswa, mobile assisted language learning, self-regulated learning.*

INTRODUCTION

The rapid development of mobile technologies, widespread internet access, and evolving telecommunications have significantly transformed how people engage in language learning. These advancements have given rise to Mobile-Assisted Language Learning (MALL), a flexible and personalized approach that enables learners to study languages anytime and anywhere. MALL fosters independent, contextually rich learning environments, making it especially valuable in both formal and informal education settings (Kukulska-Hulme, 2009). Researchers have demonstrated that MALL effectively enhances English language proficiency across various skills such as vocabulary, pronunciation, reading, writing, listening, and speaking (Al Fadda & Al Qasim, 2013; Aratusa, 2022; Boroughani et al., 2023; Hardyansyah, 2021; Lestari & Wicaksono, 2022; Tonekaboni, 2019).

The benefits of MALL are evident in its accessibility, affordability, and adaptability. Language learning apps allow students to practice without constraints of time, location, or cost (Chen, 2022). Consequently, MALL has gained traction across all educational levels. In higher education, undergraduate students reportedly have positive attitudes toward MALL (García Botero et al., 2018), often utilizing it independently—even when not formally supported by instructors or institutions (Dashtestani, 2016). This reflects their increasing capacity for self-directed learning. However, despite its advantages, students encounter several challenges in using MALL. These include technical issues such as device limitations and poor internet connectivity, lack of proper guidance, and distractions from non-academic mobile use (Çakmak, 2019; Solihin, 2021). To enhance the effectiveness of MALL, it is necessary to examine the human factors that influence its success—especially students' ability to self-regulate their learning.

Self-regulated learning (SRL) refers to the active process through which learners manage their cognition, motivation, and behavior to achieve academic goals (Zimmerman, 2008). SRL is essential for navigating digital learning environments, including MALL, where learners must take greater responsibility for their own progress (Viberg & Andersson, 2019; Yu, 2023). Self-regulated learners set goals, monitor their progress, adapt strategies, and reflect on outcomes. These behaviors align closely with the flexible and autonomous nature of MALL. Furthermore, the relationship between SRL and MALL is reciprocal. Not only does SRL enhance MALL use, but MALL can also cultivate SRL through its personalized and student-centered features (Viberg & Kukulska-Hulme, 2022). The portability and customization offered by mobile learning technologies promote learner autonomy and encourage reflective practices (Palalas & Wark, 2020).

Although research has explored the general impact of MALL on language learning, limited attention has been paid to how undergraduate students engage in self-regulated learning within MALL contexts (Viberg et al., 2020). Understanding this dynamic is critical, especially in higher education settings where MALL adoption is growing but not institutionally guided. Additionally, individual learner differences—such as gender and socioeconomic status (SES)—may significantly influence both SRL and MALL usage. Studies suggest that female

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students often display higher levels of SRL (Bidjerano, 2005; Liu et al., 2021) and are more likely to use mobile technologies for language learning (Şad et al., 2022). Meanwhile, students from higher SES backgrounds are more likely to exhibit self-regulated behaviors and positive attitudes toward technology use (Daniel et al., 2016; Lee & Lee, 2021; Qamaria et al., 2025).

Previous research (Lei et al., 2022; Viberg & Andersson, 2019; Zhang et al., 2021) has acknowledged the importance of SRL in MALL environments. However, there remains a gap in understanding how gender and SES intersect with SRL in MALL use—particularly among undergraduates.

Considering these gaps, the present study seeks to address the following research questions: 1) What is the level of undergraduate students' self-regulated learning in the use of Mobile-Assisted Language Learning (MALL)? 2) Are there significant differences in students' SRL in MALL based on gender? 3) Are there significant differences in students' SRL in MALL based on socioeconomic status?

RESEARCH METHOD

This study used a quantitative methodology and was conducted at IAIN Kediri. A cross-sectional survey design was employed to investigate how undergraduate students self-regulate their learning when using Mobile-Assisted Language Learning (MALL). The participants were final-year students who had completed the UPT Bahasa English proficiency exam as part of their graduation requirements. A total of 207 students participated in the study, exceeding the minimum sample size of 202 determined by Slovin's formula. The random selection process was conducted by distributing the online questionnaire link to a randomly selected subset of computers used by students during the English proficiency test. This ensured that each student had an equal chance of being selected to participate in the study.

This study used a questionnaire to collect data on students' self-regulated learning (SRL) and socioeconomic status (SES). The questionnaire was distributed online via Google Form after students completed their English proficiency test at UPT Bahasa IAIN Kediri. The instrument consisted of two sections. The SRL section adopted all items from Barnard et al. (2009) without item reduction, but the wording was modified to reflect the context of MALL. For example, general references to "online courses" were adapted to specifically mention the use of MALL. The SES section was based on Bocar (2017), with no reduction in the number of items; however, the content was modified to better fit the Indonesian context, such as by adapting income ranges and educational background categories. These modifications were necessary to ensure the relevance, clarity, and cultural appropriateness of the instrument while maintaining its original constructs and integrity.

The questionnaire that has been modified was tested in two ways to determine the validity. Testing internal validity, which includes face and content validity, is the initial stage was done by the expert. The second test is item validity. The result of try out was processed using Bivariate Pearson in IBM SPSS (Statistical Product for Service) 25.0 program. Based on the results of item validity 24 items

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of self-regulated learning questionnaire are declared valid because r value > r table. By examining the tryout results, the reliability of the questionnaire used in this study was established. The IBM SPSS 25.0 program was utilized to process the result by applying Cronbach's Alpha (α) calculation. It is evident from the reliability test results that the self-regulated learning questionnaire has a Cronbach's Alpha value of 0.931 and exceeds 0.6. Therefore, in accordance with the test criteria, the research instrument in this study is deemed reliable

In this study, descriptive statistical analysis was employed to measure the central tendency and variability, and categorize the data. The calculated central tendency and variability are the maximum score, minimum score, range, mean (middle value), standard deviation of each variable (Azwar, 2013), the scores needed in descriptive analysis are hypothetical scores and empirical scores. Hypothetical score calculations can be obtained using the following equation:

Table 1. Formula of Hypothetical Statistics

Statistic	Equation
Hypothetical Mean	$\frac{\text{Minimum score} + \text{maximum score}}{2}$
Hypothetical Standard deviation	$\frac{\text{Range}}{6}$

Hypothetical score calculations were carried out manually, while empirical score calculations in this study used the IBM SPSS (Statistical Product for Service) 25.0 for Windows program. The data from each indicator/variable will be categorized into three categories based on the formula in table below (Azwar, 2013).

Table 2. Categorization Table

Category	Interval Formula
High	$X \geq \mu+1\sigma$
Medium	$\mu-1\sigma \leq X < \mu+1\sigma$
Low	$X < \mu-1\sigma$

μ = Mean, σ = Standard Deviation

In this study, the data failed to meet the assumptions for parametric testing based on the results of normality and homogeneity tests conducted using IBM SPSS 25.0. The Kolmogorov-Smirnov test showed significance values of 0.00 for both gender and socioeconomic status groups, indicating non-normal distribution. The Levene's test also yielded significance values 0.00, below 0.05, suggesting unequal variances. Given these violations, the Kruskal-Wallis test, a non-parametric alternative, was employed to examine differences in students' self-regulated language learning in mobile-assisted environments based on socioeconomic status and gender.

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RESULT AND DISCUSSION

Results

Descriptive statistics were employed to examine the information obtained from the questionnaire in order address the research problem, which identified undergraduate students' self-regulated learning in the use of mobile-assisted language learning (MALL). Using a four-point Likert scale that went from Strongly Disagree "1" to Strongly "4", the participants chose their responses. The following table provides a description of the calculation:

Table 3. Hypothetical of Students' Self-regulated Learning

Statistics	Hypothetical
Minimum Score	24
Maximum Score	96
Range	72
Mean (μ)	60
SD (σ)	12

Categorizing the level of students' self-regulated learning in the usage of MALL was done based on the descriptive statistics above. The frequency distribution obtained from the category calculation is as follows:

Table 4. Frequency Distribution of Students' Self-regulated Learning in the Use of MALL

Category	Interval Score	Frequency	Percentage
High	X≥72	147	71%
Medium	48≤X<72	56	27%
Low	X<48	4	2%
Total		**207**	**100%**

Based on the data presented in frequency table 14, 71% of undergraduate students use MALL with high levels of self-regulated learning; 27% of students, or 56 undergraduate students, use MALL with a medium level of self-regulated learning; and 27% of all students, or 4 students, use MALL with a low level of self-regulated learning. The following chart shows the level of students' self-regulated learning in the use of MALL.

The description that follows shows the students' self-regulated learning in the application of mobile-assisted language learning toward each indicator comprehensively. According to Barnard et al. (2009), there are five items in goal planning, four in environment structuring, four in task strategies, three in time management, four in help-seeking, and the final four items were categorized under self-evaluation.

Table 5. Hypothetical Statistics on Each Indicator

Indicator	Number of items (item)	Statistics	Hypothetical
Goal Setting	5 (1, 2, 3, 4, and 5)	Mean (μ)	12.5
		SD (σ)	2.5

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Environment Structuring	4 (6, 7, 8, and 9)	Mean (μ)	10
		SD (σ)	2
Task Strategies	4 (10, 11, 12, and 13)	Mean (μ)	10
		SD (σ)	2
Time Management	3 (14, 15, and 16)	Mean (μ)	6
		SD (σ)	1
Help-Seeking	4 (17, 18, 19, and 20)	Mean (μ)	10
		SD (σ)	2
Self-Evaluation	15 (21, 22, 23, and 24)	Mean (μ)	10
		SD (σ)	2

Based on the results of the data, the categorization of the level of students' self-regulated learning in the use of MALL on each indicator was carried out. The frequency distribution obtained from the category calculation is as follows:

Table 6. Frequency Distribution of Self-regulated Level in the Use of MALL on Each Indicator

Aspect	Category	Interval Score	Frequency	Percentage	Total
Goal Setting	High	X≥15	149	72%	100%
	Medium	10≤X<15	55	27%	
	Low	X<10	3	1%	
Environment Structuring	High	X≥12	183	88%	100%
	Medium	8≤X<12	22	11%	
	Low	X<8	2	1%	
Task Strategies	High	X≥12	128	62%	100%
	Medium	8≤X<12	72	35%	
	Low	X<8	7	3%	
Time Management	High	X≥7	190	92%	100%
	Medium	5≤X<7	56	8%	
	Low	X<5	0	0%	
Help-Seeking	High	X≥12	155	75%	100%
	Medium	8≤X<12	47	23%	
	Low	X<8	5	2%	
Self-Evaluation	High	X≥12	160	77%	100%
	Medium	8≤X<12	42	20%	
	Low	X<8	5	2%	

The overall result of data reveals that the level of undergraduate students' self-regulated learning in the use of MALL on cognitive aspect is mostly in the high category in each indicator. It can be shown in the figure below:

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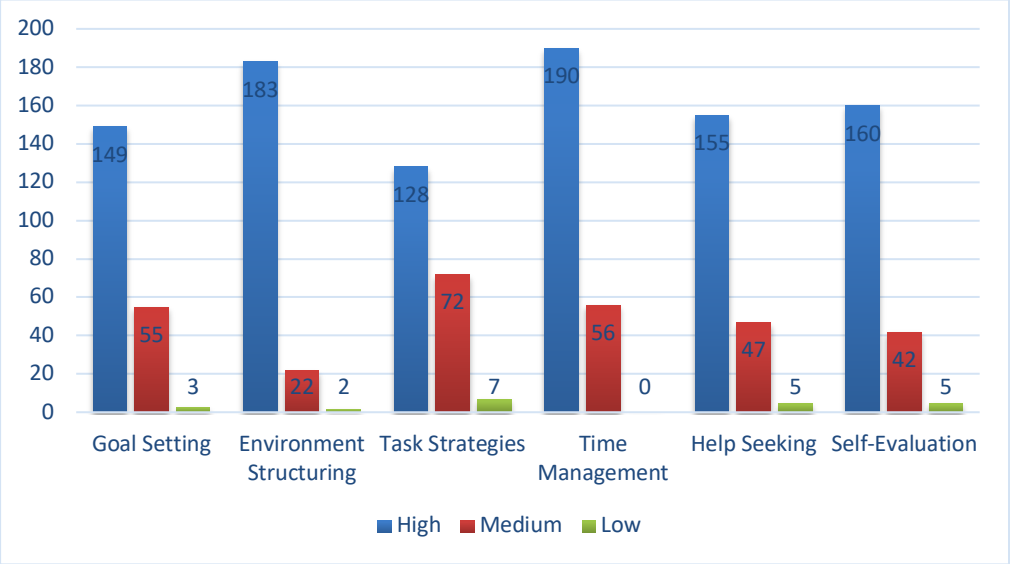

Figure 1. The level of Students' Self-Regulated Learning in the Use of MALL on Each Indicator

The data gathered from the responses were transferred into the IBM SPSS (Statistical Product for Service) 25.0 program in order to do a quantitative analysis of each question. The number of participants in the responses is shown along with a summary of the descriptive analysis that includes means and standard deviations.

Table 7. Descriptive Statistics of Items

No.	Items	Number	Mean	Standard Deviation
1	GS1	207	3.17	0.598
2	GS2	207	3.16	0.660
3	GS3	207	3.06	0.669
4	GS4	207	3.24	0.607
5	GS5	207	3.15	0.714
6	ES1	207	3.52	0.598
7	ES2	207	3.62	0.577
8	ES3	207	3.34	0.698
9	ES4	207	3.38	0.671
10	TS1	207	3.18	0.752
11	TS2	207	2.66	1.006
12	TS3	207	3.17	0.689
13	TS4	207	3.16	0.705
14	TM1	207	3.10	0.711
15	TM2	207	3.05	0.762
16	TM3	207	3.26	0.668
17	HS1	207	3.20	0.664
18	HS2	207	3.07	0.744
19	HS3	207	3.02	0.806
20	HS4	207	3.40	0.659

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21	SE1	207	3.11	0.726
22	SE2	207	3.25	0.648
23	SE3	207	3.33	0.660
24	SE4	207	2.92	0.797

From the tables, the descriptive statistics result revealed that means in goal setting indicator ranges from 3.06 (SD=0.669) to 3.24 (SD=0.607). In environment structuring indicator, the range of mean score is 3.34 (SD=0.698) to 3.62 (SD=0.577). The mean score in task strategies indicator ranges from 2.66 (SD=1.006) to 3.18 (SD=0.752). The items in time management get the mean score with ranges from 3.05 (SD=0.762) to 3.26 (SD=0.668). In help seeking indicator, the range of mean score is 3.02 (SD=0.806) to 3.40 (SD=0.659). The last, the indicator of self-evaluation get the mean score with range from 2.92 (SD=0.797) to 3.33 (SD=0.660). The item which gets the highest mean score is item number 2 of environment structuring with 3.62 (SD=0.577). The item which shows the lowest mean score is in task strategies number 2 with the score 2.66 (SD=1.006).

Inferential statistics were used to examined the significant differences on undergraduate students' self-regulated learning in the use of mobile-assisted language learning (MALL) based on gender and socioeconomic status. Since the data failed the prerequisite tests, the Kruskal Wallis test was used. For gender, the students were divided into two groups, one for each gender: male and female. For socioeconomic status, the groups are high, medium, and low groups. The Kruskal Wallis test results are shown in the tables below.

Table 8. Kruskal-Wallis Test Results on Gender

	Self-Regulated Learning in the Use of MALL
Kruskal-Wallis H	33.208
Df	1
Asymp. Sig.	0.000

Table 9. Kruskal-Wallis Test Results on Socioeconomic Status

	Self-Regulated Learning in the Use of MALL
Kruskal-Wallis H	9.929
Df	2
Asymp. Sig.	0.007

As depicted in the table, the significance (sig) values were 0.000 and 0.007, which is below the 0.05 threshold. This result indicates a statistically significant differences in undergraduate students' self-regulated learning in relation to the usage of MALL, particularly with reference to gender and socioeconomic status.

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Discussion

Undergraduate Students' Self-Regulated Learning in the Use of MALL

Descriptive statistics of undergraduate students' self-regulated learning in the use of mobile-assisted language learning (MALL) produced the answer of research problem. The results demonstrated that the undergraduate students mostly have a high level of self-regulated learning in the use of MALL on each indicator. These results corroborate the findings of a great deal of the previous work in Lei et al. 2022); Zhang et al. 2021) in which students perform enhanced self-regulated learning with the utilization of MALL. The outcome shows that the majority of students can effectively prepare for their English proficiency exam and have the chance to achieve the best outcomes, which is not surprising given the importance of self-regulated learning for both English and higher education learning success (Bail et al., 2008; Tseng et al., 2019).

The high degree of student self-regulation in MALL use shown in this study can be explained by the substantial association between student self-regulated learning and MALL use (Tseng et al., 2019). The link between MALL usage and self-regulated learning is based on reciprocal support. Research by Palalas & Wark (2020) found that self-regulated learning enhances learners' self-regulated learning and that self-regulated learning positively affects the effectiveness of mobile learning. This illustrates the connected and mutually reinforcing relationship between mobile learning and self-regulated learning.

To comprehend the discussion into the account of the undergraduate students' self-regulated level in the use of MALL, the following parts will describe the level of undergraduate students' self-regulated learning in the use of MALL on each indicator.

Goal Setting

Goal setting involves making decisions about the specific outcomes one aims to achieve in the realms of learning or performance (Zimmerman, 2000). Students who are considered as self-regulated leaner in the use of mobile-assisted language learning (MALL) establish standards for their learning (GS1). Specific learning goals within a certain timeframe was set up (GS2). Setting these learning goals helps them to organize their study time when using a smartphone or tablet to learn English (GS3). Students also maintain high standards in their learning and do not comprise the quality of it even when it is done by online or in this case through a smartphone or tablet (GS4, GS5).

Based on the finding section, 72% students are in the high level of goal setting indicator, 27% students are in the medium and only 1% of students have low level. Each item in this indicator also gets high mean score with 3.06 (SD=0.669) to 3.24 (SD=0.607). This study indicates that in the use of MALL, students engage positively with goal setting strategies which is in line with the previous study conducted by Lei et al. 2022; Zhang et al. 2021) .

In this presents study, students have a clear objective of using MALL in learning English. The use of MALL will help them to pass their English proficiency test as the requirement for graduation. According to Tseng et al. 2019) it is

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reasonable to infer that individuals with a mastery goal orientation are more inclined to utilize technology for the purpose of facilitating their learning. In addition, students who possess a definite vision for learning a foreign language tend to self-regulate more effectively (Yu, 2023). It can therefore be assumed that the the clear objective in learning English lead students to adopt technology such as MALL in their learning and also contribute in their high self-regulated learning on goal setting indicator.

Environment Structuring

Environment structuring refers to students' self-driven actions in choosing or organizing the physical environment to facilitate a more conducive learning experience (Zimmerman & Pons, 1986). During the utilization of mobile-assisted language learning (MALL), some environment structuring strategies were agreed by students. Those who regulate theirselves in this indicator choose a location where they can study to avoid distractions (ES1), find a comfortable place to study (ES2), know where they can study efficiently (ES3), and choose a time with few distractions (ES3).

In the environment structuring indicator, it was revealed that 88% students are in the high level, 11% students are in the medium and only 1% of students have low level. Each item in this indicator also gets high mean score with 3.34 (SD=0.698) to 3.62 (SD=0.752). One interesting finding is item number 2 of environment structuring indicator gets the highest mean score among the items in the questionnaire with 3.62 (SD=0.577). These findings reveal that when utilizing MALL, undergraduate students believe they effectively employ environment structuring strategies. This finding was also reported by Zhang et al. 2021) that Most students express a preference for using MALL in quiet environments that support a focused learning atmosphere.

Students can access learning resources and select their own learning activities from any location with the use of (Hashim et al., 2017; Kukulska-Hulme, 2018). As a result, students are free to select a setting that best suits their preferred method of learning. This benefit is directly related to undergraduate students' high degree of self-regulated learning, especially when it comes to using environment structuring techniques. As a result, the flexibility of MALL aligns well with students' self-regulation in creating optimal learning conditions.

Task Strategies

Task strategies refers to individuals’ effort to actively employ task-specific techniques and approaches to manage their cognitive processes, regulate their behavior, and enhance their performance. Regarding to task strategies, undergraduate students regulate their selves in the use of mobile-assisted language learning (MALL) by attempting to take more detailed notes of what they learn (TS1), reading aloud the study material on smartphone or tablet to avoid external distractions (TS2), trying to use strategies that have worked for them in the past (TS3), and working on additional exercises (TS4).

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The present study shows that 88% undergraduate students have a high level of self-regulated learning in the application of MALL, specifically focusing on the task strategies indicator, 35%, exhibit a medium level and 3% are classified as having a low level. The mean score of items in task strategies indicator ranges from 2.66 (SD=1.006) to 3.18 (SD=0.752). What is surprising is that the second item of task strategies gets the lowest mean score in this study. These findings suggest that some students tend to prefer preventing external distractions while using the MALL by environment structuring rather than overcoming these distractions with specific strategies such as reading aloud the material.

Although students' self-regulated learning level on task strategies is still relatively high, this indicator shows the highest number of students at the medium and low levels compared to other indicators. In accordance with the present results, previous study conducted by Redjeki & Hapsari (2022) demonstrated that task strategies in self-regulation appears to be the least employed strategy by students in online English learning. It seems possible that these results because the students have not received proper training or guidance on effective task strategies in the MALL environment. Students had only one meeting for test preparation and only focused on strategies for answering test questions and a brief introduction to the use of MALL apps.

Time Management

Planning, organizing, and allocating time for different learning activities is a crucial aspect of time management in self-regulated learning with mobile-assisted language learning (MALL). When utilizing a smartphone or tablet to study English, students who thought of themselves as self-regulated set aside more time since they are aware that it takes a lot of time (TM1). They attempt to set a consistent time each day or each week, and I adhere to that routine (TM2). When studying English on a smartphone or tablet, they also make efficient use of their study time (TM3).

The result section revealed that 92% students exhibit a high level of self-regulated learning on time management indicator in using MALL. Additionally, 8% students demonstrate a medium level and surprisingly, on the time management indicator, no students showed low levels of self-regulated learning in the use of MALL. Each item in time management also gets relatively high mean score with ranges from 3.05 (SD=0.762) to 3.26 (SD=0.668). In the same vein, Zhang et al. 2021) claimed students in using MALL also plan time management strategies. In addition, Viberg & Andersson 2019) argued that high levels of self-regulated learning in time management are demonstrated by students who believed they were self-regulated.

The high level of undergraduate students' self-regulated learning on time management in the use of MALL could be attributed to the advantages of using MALL that offer flexibility and personalized learning (Hashim et al., 2017; Kukulska-Hulme, 2018). MALL gives students the flexibility to access learning materials at their convenience. This encourages students to manage their time better as they can customize their study schedule according to their preferences.

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They can also choose materials and activities that suit their learning style and pace, resulting in more effective utilization of time.

Help Seeking

The help-seeking signal shows when students start making an effort to get more task information from nonsocial or social (teacher, peers, etc.) sources (Zimmerman & Pons, 1986). Undergraduate students perceive to be self-regulated learner in the use of mobile-assisted language learning (MALL) in terms of help seeking strategies by seeking someone knowledgeable in English so that they can consult with when they need assistance (HS1). They share the challenges when using a smartphone or tablet to study English with their friends, so that they are aware of the problems and can brainstorm solutions (HS2). If necessary, they try to meet their friends in person (HS3) and try to search for it on the internet (HS4)

From the result section, it is presented that 88% undergraduate students demonstrate a high level of self-regulated learning in the use of MALL, specifically emphasizing the help seeking indicator. 23% undergraduate students have a medium level and 2% are categorized as having a low level. The items in help seeking indicator have the range of mean score from 3.02 (SD=0.806) to 3.40 (SD=0.659). This finding indicates that undergraduate students believe that they regulate theirselves on help seeking when using MALL. This finding seem to be consistent with other research which found that the MALL helped learners to engage in help-seeking (Lei et al., 2022).

According to Viberg et al. 2020) students who exhibited a stronger belief in the effectiveness of technology were more inclined to seek help when required. This could be the reason for the high level of help seeking among undergraduate students in this present study, given that undergraduate students are reported to have a positive attitude towards the use of MALL (García Botero et al., 2021; Saidouni & Bahloul, 2016).

Self-Evaluation

Self-evaluation indicator express students' self-initiated evaluation of the quality or advancement of their learning (Zimmerman & Pons, 1986). Related to self-evaluation strategies when using mobile-assisted language learning (MALL), students summarize (SE1) and ask themselves about their learning to evaluate their understanding of what they have learned (SE2). Students also check their progress by their try out test results (SE3) and communicate with their friends to find out what they are learning that is different from what their friends are learning when using a smartphone or tablet to study English (SE4).

According to the findings in the results section, 77% of undergraduate students on the self-evaluation indicator demonstrate a high degree of self-regulated learning in the use of MALL. Additionally, 30% undergraduate students display a moderate level and 2% students are categorized as having a low level. The items on self-evaluation indicator get the mean score with range from 2.92 (SD=0.797) to 3.33 (SD=0.660). This finding shows that undergraduates students have a high belief in applying self-regulated learning on self-evaluation in the use

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of MALL. This result supports the study of Lei et al. 2022), indicating that the utilization of MALL assists learners in self-evaluation which contributes to the high level of students in their self-regulated learning.

The high level of self-regulated learning among students using MALL, particularly in self-evaluation, may be explained by a number of factors. First of all, MALL fosters a self-directed learning atmosphere where students assume responsibility for their education (Lei et al., 2022; Zhang et al., 2021). This autonomy encourages a proactive approach to self-evaluation, as students assess their performance and make informed decisions about their learning strategies. The second reason is MALL platforms often incorporate tools and features that facilitate self-evaluation. The availability of these tools empowers students to assess their own progress and understanding. The last is MALL provides rapid and timely feedback on students' performance, fostering an environment conducive to self-evaluation (Viberg & Andersson, 2019). Quick feedback allows students to identify strengths and areas for improvement promptly.

To sum up, undergraduate students perceive self-regulated learning in using MALL well as indicated by the high level of self-regulated learning in each indicator. It should be highlighted that students who exhibit high levels of self-regulated learning have a very good chance of succeeding in their English language studies and using MALL to get ready for the proficiency exam. It alludes to how crucial self-regulated learning is to the effectiveness of online instruction, including the application of MALL (Viberg & Andersson, 2019; Yu, 2023).

Furthermore, engaging in learning through Mobile-Assisted Language Learning (MALL) represents a promising avenue for students to have out of class learning. The inherent flexibility embedded in MALL platforms empowers students with the opportunity to access language learning materials at their convenience, thereby fostering a dynamic, personalized, and self-directed approach to learning. In essence, MALL emerges as an innovative tool that not only augments classroom learning but also acts as a catalyst for fostering a culture of continuous and self-driven language learning outside the conventional academic setting.

Undergraduate Students' Self-Regulated Learning in the Use of MALL Based on Gender

The result of Kruskall-Wallis test indicates significant differences in self-regulated learning in MALL usage between female and male undergraduate students. Female undergraduate students' mean rank scores were higher than those of their male counterparts, suggesting that, when it came to MALL use, female undergraduate students were more proficient at self-regulated learning than male undergraduate students. This result is in line with the results of a previous study conducted by Viberg & Andersson (2019) and Liu et al. (2021), which showed a strong relationship between learner characteristics and gender and showed that females tended to have higher levels of self-regulation on online learning.

Various factors could account for the disparities observed in gender and student self-regulated learning in the utilization of MALL. According to

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Puspitaningrum et al. (2021), the learning motivation of female students surpassed that of their male counterparts in online learning settings. Furthermore, Şad et al. (2022) reported that female students exhibited a more frequent use of smartphones for formal language learning activities compared to male students. According to this earlier research, female students are more motivated than male students and also show favorable attitudes and beliefs on the usage of MALL, which helps explain why female students more independent learners are than male students.

Undergraduate Students' Self-Regulated Learning in the Use of MALL Based on Socioeconomic Status

Undergraduate students' self-regulated learning when utilizing mobile-assisted language learning (MALL) varies significantly based on their socioeconomic position based on the results of the Kruskal Wallis test. According to the order of mean scores, students classified as belonging to the upper socioeconomic class have the greatest mean score, followed by students in the middle socioeconomic class, and students in the lowest socioeconomic class have the lowest mean score. This trend indicates that students' socioeconomic level and their ability to practice self-regulated learning in the use of MALL are positively correlated, implying that higher socioeconomic levels are associated with more effective self-regulation in the context of MALL usage.

The current study confirms a statistically significant association between students' socioeconomic level and their enthusiasm to learn English, which is consistent with earlier research by Akram & Ghani (2013). This relationship between motivation and socioeconomic status, also provides insights into the connection with self-regulated learning, given that motivation is considered a personal factor as highlighted by Zimmerman (1989). The results also align with Lee & Lee (2021) research, which positive association between learners' socioeconomic status, their perceptions of technology use, motivation, and an indirect correlation with language learning achievement. Adding to this, MALL, as demonstrated by the current study, is positively seen as a technology usage and helps students achieve higher levels of self-regulated learning (Viberg et al., 2020).

A reasonable explanation for the association between students' socioeconomic position and their self-regulated learning is that wealthy families are likely to provide them with better access to educational resources. Particularly in the context of MALL, where access to devices and the internet is pivotal, this advantage can afford them increased opportunities for the cultivation and refinement of self-regulated learning skills. As claimed by Bado & Tahir (2023) and Broer et al., (2019), students from wealthier families often benefit from broader educational opportunities, gaining exposure to superior schools, an abundance of books, and a variety of educational activities, thereby contributing to their overall educational growth and development.

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CONCLUSION

This study concludes that undergraduate students exhibit a high level of self-regulated learning (SRL) in their use of Mobile-Assisted Language Learning (MALL), particularly in dimensions such as goal setting, time management, and self-monitoring. These findings indicate that students are generally capable of planning, managing, and evaluating their language learning activities independently when using mobile technology. Furthermore, the results show significant differences in SRL based on gender and socioeconomic status. Specifically, female students demonstrated higher levels of SRL across several dimensions compared to male students. Students from higher socioeconomic backgrounds also tended to score better in aspects such as access to learning resources and persistence in task completion, which may reflect unequal access and support structures.

To enhance the effectiveness of MALL, students are encouraged to develop specific self-regulation strategies, such as setting realistic learning goals, scheduling regular learning sessions, and using digital tools for progress tracking. Lecturers should consider incorporating SRL training into the curriculum, provide guided practice in using MALL tools, and differentiate instruction based on students' backgrounds and needs. Future research should explore in more detail how each SRL dimension interacts with demographic variables and how these relationships evolve over time. Longitudinal studies are essential to understand the sustained impact of MALL on learners' autonomy and language proficiency. These insights will contribute to more equitable and effective digital learning environments.

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