



Investigating Smartphone Empowerment for Self-Regulated Learning in English Language Acquisition: A Descriptive Study

Eka Fajar Rahmani

Universitas Tanjungpura, Indonesia

Correspondence:

ekasastria10@fkip.untan.ac.id

Submission History:

Submitted: January 23, 2024

Revised: February 12, 2024

Accepted: February 16, 2024



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Abstract

This study investigates the perceptions of undergraduate English Language Education students on the utilization of smartphones for self-regulated learning and the acquisition of the English language. The study investigates the ways in which smartphones facilitate the learning of English language through self-directed techniques, using Zimmerman's model of self-regulation and the MALL framework as theoretical basis. An exploratory investigation including 110 students was conducted to analyze their experiences, perspectives, and practices in utilizing language learning applications. The findings indicate a range of levels of knowledge and usage, with students generally acknowledging that smartphones are valuable tools for improving language acquisition through self-regulation. Analysis based on Zimmerman's model yields high average scores (3.42-3.51) for forethought, performance, and reflection & evaluation, indicating students engage in self-regulated learning practices. According to the MALL framework analysis, task design and design characteristics, all received high ratings (ranging from 3.42 to 3.68). This indicates that the app features effectively promote self-regulated learning activities. This study emphasizes the crucial role that smartphones play in promoting self-regulated learning practices and enhancing the acquisition of the English language among university students.

Keywords: Self-regulated learning, smartphone, EFL, English language acquisition.

INTRODUCTION

In today's contemporary culture, smartphones have transformed from simple devices to daily essentials. Studies reveal that, on average, users engage with their smartphones approximately 58 times each day, with roughly 30 interactions during working hours. Individuals spend at least three hours daily using smartphones (MacKay, 2019). Smartphones offer many benefits due to their adaptability, such as convenient access to entertainment, news, information, and continuous communication with friends, making

them indispensable tools for many aspects of our lives (Jung, 2014). However, smartphones have both advantages and disadvantages, particularly for students, where they can act as significant distractions from academic pursuits (Muñoz & García, 2016; Uğur & Koç, 2015). Hence, it is crucial to examine the impact of smartphones on students' academic endeavours, specifically their study efforts, which play a vital role in their overall educational journey.

Technology such as smartphones has rapidly permeated education, adapting to cater to learners of all ages. This is especially relevant in the field of Technology-Enhanced Language Learning (TELL) and Mobile-Assisted Language Learning (MALL) (Arvanitis & Krystalli, 2021; Chau & Lee, 2014). Smartphones offer many applications that can improve academic skills, notably English language proficiency, in line with TELL and MALL principles. These applications include dictionaries, vocabulary builders, and resources for strengthening listening, speaking, reading, and grammar (Basar et al., 2021). Additionally, smartphones' internet connectivity and multimedia features help students research and deepen their subject understanding, while MP3 and video players aid listening practice. However, even when striving for autonomy in their learning, students often struggle to resist the temptation of using their smartphones (Boroughani et al., 2023; Gökçearslan et al., 2016; Muñoz & García, 2016). The high frequency of smartphone usage during study hours raises the question of how students can manage these devices effectively to minimize distractions.

Nevertheless, smartphones can impose significant cognitive strain on students. Multiple studies repeatedly demonstrate that smartphones are highly disruptive and can harm children's academic progress (e.g., Campbell, 2006; Fasih et al., 2020; Uğur & Koç, 2015). The leading causes of this distraction are the notifications produced by smartphones, including vibrations, beeps, and visual indications (Berry & Westfall, 2015; Campbell, 2006; Chen & Yan, 2016; Nikolopoulou, 2020). These notifications act as powerful stimuli, urging users to interrupt their current activities and check their devices. The ongoing struggle between the enduring benefits of studying for improved academic performance and the immediate satisfaction derived from smartphones highlights the significance of self-control in students' educational journeys.

Therefore, Self-regulated learning (SRL) is crucial for improving learning effectiveness (Zheng et al., 2016). To attain academic success, students must cultivate self-regulation, which is essential for independent learning skills (Wei et al., 2022; Domínguez & García, 2017). Self-regulation involves a variety of abilities, including establishing effective study habits, managing the study environment, overcoming procrastination, and identifying how cell phones can be used purposefully to achieve their learning goals (Eissa, 2020; Gambo & Shakir, 2021; Khiat & Vogel, 2022; Vaughan, 2022). SRL shows how students actively manage and implement strategies to enhance their learning. They demonstrate initiative, perseverance, and adaptability (Domínguez & García, 2017; Zimmerman & Moylan, 2009; Zimmerman, 2001). To achieve their goals, students work to adjust cognitive, motivational, behavioural, and environmental factors during their learning process. Furthermore, in 1998, Zimmerman introduced a cyclical model outlining self-regulation in three phases, gaining widespread recognition among researchers and practitioners. This model comprises (1) a performance phase focusing on self-control and self-observation, (2) a self-reflection phase involving self-judgment and self-reaction, and (3) a forethought phase addressing task analysis and self-motivation beliefs (Domínguez & García, 2017; Zimmerman & Moylan, 2009).

In the English Language Teaching (ELT) context, SRL strategies have been researched to explore their importance, effects, and effectiveness. A study by [Wijaya \(2022\)](#) and [Hawkins \(2018\)](#) reveals that self-regulation significantly impacts EFL learners' language outcomes globally. Higher self-regulation facilitates effective resource management, increased motivation, persistence, and commitment. Teachers' support and guidance enhance self-regulated learning activities, promoting goal achievement in EFL contexts. Similarly, research by [Nadhif and Rohmatika \(2020\)](#) demonstrates a significant influence of self-regulated learning on students' English language achievement, accounting for 22.2% of their success. This emphasizes the crucial role of self-regulated learning in improving students' English language performance. Additionally, studies by [Russell et al. \(2020\)](#) and [Tosuncuoğlu \(2019\)](#) highlight the correlation between self-regulation and motivation among EFL learners. Self-regulated learning boosts students' motivation by giving them control and autonomy over their learning process, including setting goals, planning, and monitoring progress.

The findings above inspired the current research, which explores self-regulated learning (SRL) in the context of acquiring the English language. This study effectively combines self-regulated learning (SRL) with the Mobile-Assisted Language Learning (MALL) framework. This combination is essential since it takes advantage of the extensive use of mobile phones, giving students constant access to a flexible learning tool. The researcher believes that this integration fills a gap in the current stream of research, as it investigates the degree to which students employ smartphone applications to support their self-regulated learning in the English language. This study aims to investigate the extent to which cell phones, in the digital age, support or hinder individuals' efforts to regulate their English language acquisition independently. The study aims to gain a thorough understanding of how students independently navigate their academic journeys in the setting of modern technology. It seeks to provide insights into the changing digital era's self-directed learning environment. In the dig,

his study employed a descriptive research design, chosen because it is well-suited to systematically describe and summarize students' behaviours, preferences, and attitudes regarding their use of smartphones to support self-regulated learning. This encompassed their frequency and duration of smartphone use, the types of applications or resources they preferred, and their overall perceptions of the effectiveness of smartphone-based learning.

Table 1. Respondent profile

Aspect	Sub	Value	Percentage
Gender	Male	27	24.5%
	Female	83	75.5%
Age	17 - 19	54	50.9%
	20 - 22	51	47.2%
	23 - 25	3	2.7%
Semester	1	24	21.8%
	3	28	25.5%
	5	58	52.7%

The study comprised 110 undergraduate students from the English Language Education Department. The sample included 27 (24.5%) male participants and 83 (75.5%) female participants. Regarding age distribution, most respondents fell within the 17-19

years range (54 participants, 50.9%), followed by those within the 20-22 years range (51 participants, 47.2%). A small minority were in the 23-2 range (3 paoldpants, 2.7%). The breakdown by semester was as follows: Semester 1 (24 students, 21.8%), Semester 3 (28 students, 25.5%), and Semester 5 (58 students, 52.7%).

The data were collected using questionnaires developed to assess self-regulated learning within the combined framework of Zimmerman’s model and Mobile-Assisted Language Learning (MALL). The validity of the questionnaires was established through rigorous testing, with a Pearson correlation coefficient (R-value) of 0.80, exceeding the critical threshold of 0.70, indicating strong construct validity. Additionally, reliability analysis using Cronbach's alpha method yielded a coefficient of 0.85, demonstrating the measures' high internal consistency and reliability. These results confirm the appropriateness and robustness of the questionnaires for capturing the intended constructs within the study context.

Table 2. Level of agreement

Index	Category
0 – 1.25	Low
1.26 – 2.50	Moderate
2.51 – 3.75	High
3.75 – 5.00	Very high

Furthermore, the data was analyzed using descriptive statistics, including frequency, percentages, mean score, and standard deviation, using Microsoft Excel. The data was subsequently shown in tables and charts format. When analyzing the data, the researcher used a scale of five intervals, each representing a level of agreement. The intervals were calculated based on the mean scores reported in Table 2.

FINDING AND DISCUSSION

This descriptive study explores the relationship between smartphone usage and self-regulated learning in the context of English language acquisition. Titled 'Investigating Smartphone Empowerment for Self-Regulated Learning in English Language Acquisition,' this research investigates how students utilize smartphone applications to enhance their language learning experiences.

Table 3. Smartphone usage patterns and language learning app usage among students

Aspect	Sub	Value	Percentage
Frequency of using smartphones	7-10 hours	44	40%
	11-14 hours	39	35.5%
	15-18 hours	18	16.4%
	19-22 hours	9	8.2%
Application possession	Yes	94	85.5%
	No	16	14.5%
Primary places where language learning apps are used	Home	90	81.8%
	University	61	55.5%
	Library	9	8.2%
	Coffee shops or public places	23	20.9%

This data result illuminates students' intensive relationship with smartphones and explores their use within a language-learning context. Notably, students report significantly high daily smartphone usage, with the majority using the devices for 7-14 hours. Furthermore, most possess language learning applications, emphasizing their widespread availability and accessibility. Home is the primary location for language app usage, followed by the university setting. These findings underscore smartphones' profound role in students' lives and how their constant presence has potential implications for language learning. It suggests opportunities exist to leverage existing digital habits and preferences by integrating applications within both formal and informal learning environments.

Table 4. Applications utilized by students for language learning

No.	Application	Category	Total
1	Duolingo	Language learning Apps	41
2	Quiz vocabulary English	Language learning Apps	2
3	DeepL	Language learning Apps	2
4	English conversation	Language learning Apps	2
5	Tandem	Language learning Apps	2
6	British Council	Language learning Apps	3
7	Cake	Language learning Apps	2
8	BBC Learning English	Language learning Apps	4
9	Readable	Language learning Apps	1
10	Vocabulary Builder	Language learning Apps	3
11	Memrise	Language learning Apps	1
12	Babbel	Language learning Apps	1
13	ELSA Speak	Language learning Apps	2
14	Papago	Language learning Apps	1
15	Lingodeer	Language learning Apps	2
16	Hello Talk	Language learning Apps	1
17	Grammarly	Grammar and Language Enhancement	9
18	Spelling master	Grammar and Language Enhancement	1
19	Bing	Grammar and Language Enhancement	1
20	Hello translate	Grammar and Language Enhancement	1
21	Speedy English Grammar	Grammar and Language Enhancement	2
22	U-Dictionary	Dictionary and Translation	4
23	Kamusku	Dictionary and Translation	2
24	Merriam Webster Dictionary	Dictionary and Translation	4
25	Google Translate	Dictionary and Translation	3
26	WordPress	Dictionary and Translation	1
27	YouTube	Media and Content Platform	7
28	Medium	Media and Content Platform	1
29	TED	Media and Content Platform	1
30	Spotify	Media and Content Platform	1
31	TikTok	Social media	5
32	Instagram	Social media	3
33	Twitter	Social media	2

Furthermore, Table 4 illustrates the multifaceted digital landscape students navigate for language learning purposes. A significant emphasis is placed on dedicated language learning apps, with Duolingo being the clear frontrunner. Students also strongly rely on grammar and language enhancement tools like Grammarly, focusing on linguistic accuracy. Using translation tools and dictionaries emphasizes the importance of vocabulary development and support. Interestingly, including media platforms (like YouTube and TED) and social media channels suggests that students seek language practice and exposure through less formal, entertainment-oriented channels. This is a diverse and adaptive approach to language learning within the digital environment.

Table 5. Self – Regulated learning and MALL forethought aspect

No.	Item aspect	Frequency					Mean	Std. Dev
		SA	A	N	D	SD		
1	Setting clear goals for language learning	13	37	39	16	5	3.34	2.97
2	Planning Study Sessions	14	41	28	18	9	3.3	2.98
3	Considering Readiness and Motivation	16	39	41	10	4	3.48	3.1
4	Assessing Prior Knowledge	19	45	33	8	5	3.59	3.21

Table 5 reveals student responses regarding the Forethought aspect of Self-Regulated Learning and MALL, specifically within mobile app usage for English language acquisition. Items focus on proactive behaviours during the planning stages of language learning. Responses indicate moderately high levels of agreement for all items (mean scores ranging from 3.3 to 3.59), suggesting that students engage in these practices using mobile apps. Assessing prior knowledge before engaging with learning apps shows the highest agreement. These findings imply that students strategically utilize mobile apps to set clear language learning goals, plan study sessions, and consider their readiness and motivation. This highlights the potential for mobile apps to foster effective self-regulated learning habits in English language acquisition.

Table 6. Self – Regulated learning and MALL performance aspect

No.	Item aspect	Frequency					Mean	Std. Dev
		SA	A	N	D	SD		
1	Utilization of Mobile Apps for English Skills Practice	46	39	20	3	2	4.13	3.71
2	Real-Time Progress Monitoring	12	31	33	22	12	3.08	2.79
3	Active Engagement with Mobile Apps	29	36	29	12	4	3.67	3.32
4	Adjustment of Learning Strategies	11	31	38	22	8	3.14	2.80

Table 6 provides an overview of respondents' perceptions regarding self-regulated learning and Mobile-Assisted Language Learning (MALL) in the Performance aspect. The data suggests a general trend toward greater frequency, particularly for items 1, 3, and 4. However, standard deviations reveal differences in responses, notably for items 1 and 2. Analysis of Item 1 reveals that many respondents frequently or consistently use mobile apps to practice various English skills, indicating a strong tendency toward positive engagement. Conversely, Item 2 demonstrates varying responses regarding real-time progress monitoring, with considerable diversity in approaches among students. Moving to Item 3, many students consistently or frequently engage with mobile apps to complete language

learning tasks, reflecting a positive trend in active participation through technology. Similarly, Item 4 indicates a significant proportion of students actively adjusting their learning strategies based on performance and progress with smartphone apps. While the mean scores suggest overall positive trends, the standard deviations highlight diverse student practices, underscoring the complexity of individual approaches to self-regulated learning and MALL in language acquisition.

Table 7. Self – Regulated learning and MALL reflection and evaluation aspect

No.	Item aspect	Frequency					Mean	Std. Dev
		SA	A	N	D	SD		
1	Reviewing Language Experiences with Mobile Apps	17	34	28	25	6	3.28	2.96
2	Assessing the Effectiveness of Smartphone Apps	24	32	36	12	6	3.51	3.17
3	Identifying Improvement Areas	20	41	28	16	5	3.5	3.15
4	Reflecting on Achievements and Challenges	10	41	27	25	7	3.2	2.87

Table 7 presents student responses related to the Performance aspect of Self-Regulated Learning and MALL, emphasizing actions taken while actively using mobile apps for language learning. Responses suggest varying levels of engagement within this aspect. Assessing the effectiveness of smartphone apps shows the most robust agreement (mean score of 3.51). Students also seem to prioritize identifying areas for improvement using apps (mean score of 3.5). Conversely, the data indicates that reflecting on achievements and challenges with mobile apps exhibits slightly lower importance for students (mean score of 3.2). Overall, the results imply active self-monitoring during app usage. However, reflection practices could be strengthened to maximize self-regulated learning benefits within English language acquisition.

Table 8. Self – Regulated learning and MALL task design

No.	Item aspect	Frequency					Mean	Std. Dev
		SA	A	N	D	SD		
1	Task Design Aspect	15	33	38	13	11	3.25	2.94
2	Task Design Distribution	14	41	37	8	10	3.37	3.03
3	Significant Level of Agreement	30	38	25	7	10	3.65	3.33
4	Similar Pattern of Agreement	22	32	32	15	9	3.39	3.08

Table 8 examines self-regulated learning and mobile-assisted language learning (MALL) in the task design aspect and reveals student agreement patterns regarding task design aspects within language learning environments. While students generally perceive task design and distribution as necessary (means of 3.25 and 3.37, respectively), a stronger emphasis is placed on the significance of specific task characteristics. Responses indicate high levels of agreement (mean of 3.65) that tasks should align with individual learning goals and provide a variety of approaches. Students exhibit a similar, though slightly less pronounced agreement (mean of 3.39) regarding the importance of tasks featuring different distribution methods and formats. These findings suggest that students value customization

and adaptability within task design, strengthening learner engagement and fostering self-directed learning behaviours.

Table 9. Self – Regulated learning and MALL design characteristics

No.	Item aspect	Frequency					Mean	Std. Dev
		SA	A	N	D	SD		
1	Alignment of Tasks with Learning Goals	27	43	27	6	7	3.7	3.34
2	Challenging Nature of Tasks and Active Learning	15	40	33	13	9	3.35	3.02
3	Variety of Assessments for Language Learning	25	42	28	9	6	3.65	3.29
4	Task Design Features	29	36	33	5	7	3.68	3.33

Table 9 highlights the importance students place on MALL design characteristics that align with principles of self-regulated learning. Responses exhibit firm agreement (means of 3.65 and 3.68) regarding the value of various language learning assessments and tasks well-designed for their device. Students strongly believe tasks should directly support their language learning goals (mean of 3.7). The perceived significance of active learning tasks and challenges is slightly lower but demonstrates agreement (mean of 3.35). This suggests that students perceive learning environments featuring intentional task design, assessment choices, and goal alignment as most supportive of SRL and likely to facilitate greater engagement within MALL settings.

This study investigates the crucial role of self-regulated learning (SRL) in enhancing students' English language acquisition. SRL involves strategies like setting effective study schedules, managing the learning environment, overcoming procrastination, and recognizing how cell phones can support learning goals (Eissa, 2020; Khiat & Vogel, 2022; Menggo et al., 2022; Gonzalez-DeHass, 2019; Domínguez & García, 2017; Zimmerman, 2001). Within the English as a Foreign Language (EFL) context, SRL promotes strong resource management, motivation, persistence, and commitment – all critical drivers of language learning success.

The possession of language learning applications on smartphones among the participants is high, indicating strong motivation for language learning, a central aspect of the study (Gökçearsan et al., 2016; Oulasvirta et al., 2012; Wei et al., 2022). The primary locations for using these apps, such as at home and the university, provide insights into the settings where students engage with language learning, revealing their preference for familiar and academic environments. The study further revealed 32 smartphone applications used by participants, highlighting popular language learning apps such as Duolingo and various other grammar, vocabulary, and content enhancement tools to support their self-regulated learning. This diversity in application usage illustrates the multifaceted approach participants employ in their language learning efforts, leveraging dedicated language learning tools and general content platforms.

Furthermore, this study has approved the significance of self-regulated learning for students in English language acquisition, as has been revealed by previous studies (Nadhif & Rohmatika, 2020; Russell et al., 2020; Tosuncuoğlu, 2019; Wijaya, 2022). In a distinguished manner, the researcher has pointed out that the possession of applications on smartphones has promoted or empowered the students to do self-regulated learning to be more active in

acquiring the English language, proven by their responses on the questionnaire items of the aspects of forethought, performance, reflection and evaluation, task design and design characteristic, that are averagely responded by always to frequently or agree to agree strongly. The findings of this study indicate an explicit novelty that smartphones go beyond mere tools; they serve as catalysts for the empowerment of students in self-regulated learning, particularly in the context of English language acquisition. The explicit recognition of smartphones as facilitators of active and self-directed language learning represents a noteworthy advancement in understanding the role of technology in education.

CONCLUSION

This study examines undergraduate English Language Education students' perspectives on using cell phones for self-regulated learning and acquiring English. The study examined how smartphones enable self-directed English language learning using Zimmerman's concept of self-regulation and the Mobile-Assisted Language Learning (MALL) framework. Utilizing Zimmerman's approach, the analysis revealed that students demonstrated active participation in self-regulated learning practices, as shown by high average scores (ranging from 3.42 to 3.51) in forethought, performance, reflection and evaluation. Similarly, analysis using the MALL framework demonstrated that task design and design characteristics received good scores (ranging from 3.42 to 3.68). This suggests that the elements of the app effectively encourage self-regulated learning activities. The results emphasize smartphones' vital function in encouraging self-regulated learning strategies and improving English language acquisition among university students. This study enhances our comprehension of the capacity of cell phones to facilitate self-directed language learning experiences by combining theoretical frameworks with facts. In the future, educators and policymakers can use these findings to create better language learning programs that use mobile technology to help learners become more independent, engaged, and proficient in English.

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