



The role of self-regulated learning on foreign vocabulary learning: a multi-case study

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Abstract

In recent years, a considerable body of empirical research has acknowledged the role of self-regulated learning (henceforth SRL) in the domain of English as a foreign language (EFL). However, the study investigating the role and mechanism of SRL in vocabulary learning is still in scarcity particularly in Indonesian contexts. To address this noticeable gap, this multi-case study aims to explore the role of SRL on vocabulary learning strategies use and mechanism from the experience of undergraduate EFL learners. After signing the informed of consent form sheets, two undergraduate students from two different countries (Indonesia and Egypt) voluntarily participate in this study. By employing a series of semi-structured interviews and conducting narrative thematic analysis (Braun & Clarke, 2006), the findings showcase that both participants employ a myriad of vocabulary learning strategies such as rehearsal, elaboration, and social strategy. Additionally, the empirical evidence indicates that they have higher level of motivation and persistence to maintain vocabulary-learning activity. The findings suggest the important practical implications for teachers, learners, and institution. This article also discusses limitations and recommendations.

Keywords: EFL learners; multi-case study; self-regulated learning (SRL); vocabulary learning

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Introduction

Self-regulated learners are considered as individuals that are cognitively and metacognitively active in the learning process and capable of transforming their preceding abilities in different domain (Zimmerman, 2013). They can also maintain their cognitive engagement, persisting on challenging learning tasks, and dealing with learning hindrances to achieve the better academic performances (Pintrich & De Groot, 1990). They can create their own learning environment by controlling their learning habits, monitoring their academic performances, regulating their cognition, and increasing self-motivation to achieve the intended learning outcomes (Pintrich & De Groot, 1990; Tseng et al., 2006). Shortly speaking, self-regulated learners are fully aware of their own academic strengths and weaknesses, and persistently employed various learning strategies.

This issue has attracted many scholars to investigate the connection between self-regulated learning (SRL) and academic achievement situated in all educational levels; such as in primary education level (Dignath et al., 2008), in secondary education level (Bai & Wang, 2021; Guo et al., 2019; Harding et al., 2019), and even in higher education (henceforth HE) level (Peng, 2012). In the domain of English language pedagogy, several academic literatures highlighted the crucial role of learners' innate self-regulation in vocabulary learning, particularly for second or foreign language (L2/FL) acquisition (Bošnjak Terzić & Pavičić Takač, 2020; Nation, 2001; Schmitt, 2008, 2014; Tseng et al., 2006) including in memorizing, remembering, and vocabulary acquisition. In fact, some previous literary works (Meara, 1980; Şahin Kızıl & Savran, 2018; Zheng, 2012) emphasized that learners without self-regulation capability tended to possess demotivation feelings (Kikuchi, 2009) and learning anxiety (Tseng & Schmitt, 2008) so that it can badly impact on depressing their academic achievement.

In recent years, many researchers (e.g., Akbarian & Farrokhi, 2021; Alavi & Akbarian, 2012; Coxhead, 2018; Krepel et al., 2021; Raudszus et al., 2021) were attracted to examine the crucial roles of vocabulary learning for the development of L2/FL proficiency. In the same vein, the role of SRL on vocabulary learning has gained a great popularity from several prominent scholars around the world such as in China (Ping & Siraj, 2012), Croatia (Bošnjak Terzić & Pavičić Takač, 2020), Japan (Mizumoto, 2013), and Turkey (Şahin Kızıl & Savran, 2018; Şentürk, 2016). Those works of literature reach an agreement acknowledging the pivotal role of SRL in various L2/FL learning contexts, particularly in vocabulary learning, in the sense that language learners' active participation or involvement will practically guarantee their learning success.

Similarly, there is a large amount of quantitative research examining the role of SRL on learners' L2/FL vocabulary learning. In Japan, Mizumoto's (2013) study, for instance, involving 303 undergraduate students reported that students' capability in regulating themselves during vocabulary learning process influenced the degree of students' self-efficacy which then resulted in the development of lexical knowledge. Meanwhile, a correlative study (Şentürk, 2016) administered to 179 Turkish university students, claimed a positive correlation between the level of students' self-regulation and the size of vocabulary vault. In addition, the result from an academic research (Zhang et al., 2017) supported Şentürk's (2016) findings by presenting the positive influence of SRL to learners' motivation and vocabulary knowledge from 107 secondary students in China. Although questionnaire can help the researcher to reach a wide range of population, it may not be able to demystify the detailed process of learning strategy used by L2/FL learners (Woodrow, 2005). Thus, critical factors involved in the process of self-regulated vocabulary learning remain underexplored.

As aforementioned, a number of studies acknowledged SRL-related activities can hugely impact on learners' academic achievement. What remains underexplored is examining the crucial role of SRL in learners' English vocabulary learning portrayed from learners' views using qualitative approach, particularly contextualized in Indonesian HE settings. In response to this void, the study therefore aims to gain in-depth understanding and detailed portrayal of learners' mechanism on self-regulated vocabulary learning process from personal experience of one Indonesian and one Egyptian undergraduate EFL learners. The results of this study will present clear portrayal of self-regulated vocabulary learning mechanism from those two different countries. In addition, this study adds valuable empirical data that provided insights into vocabulary

instruction in the domain of English language teaching. The research question guiding in this study is, "How do Indonesian and Egyptian EFL learners regulate themselves in vocabulary learning?"

Method

Design

Drawing upon the constructivism research paradigm (Creswell & Creswell, 2018), this study aimed to explore the roles of SRL on EFL learners' vocabulary learning. To this end, as the methodological framework, we adopted multi-case study (Dörnyei, 2007; Yin, 2018) to gain in-depth understanding and detailed portrayal of learners' mechanism on self-regulated vocabulary learning processes from personal lived-experience of an Indonesian and an Egyptian undergraduate EFL learners. This research design seems to be appropriate for this study since it can provide detailed and meaningful contrasts in terms of documenting the pivotal role of SRL on the participants' English vocabulary learning within the most naturalistic setting possible (Creswell & Creswell, 2018; Lincoln & Guba, 1990; Yin, 2018). Also, this methodological framework offers multifaceted explorations of such issues as the participants come from different countries (Indonesia and Egypt). This means that the data resulted from data-gathering processes will be varied since they are from different ethnic diversity having different first language (L1) background and learning culture.

Participants

In the participants recruiting stages, we purposively selected the participants' candidates suited to the particular criteria in accordance with our research objective. First, they must be EFL undergraduate students. Second, they should possess excellent English competencies and solid understanding of English language knowledge by performing exceptionally on English related subjects, which was proven by their academic transcript. We then contacted the participants' candidates via emails. They were all the members of "English Spoken Community" from several different countries around the world (e.g., Columbia, Egypt, Germany, Iraq, Indonesia, Korea, Thailand, Turkey, and Vietnam). This community has now grown to more than 100 members worldwide.

To do so, the participants were recruited following the ethical protocols recommended by Hammersley and Traianou (2012). In this regard, the we sent letter of consent, which consisted of several information such as the aim of the study, confidentiality assurance, potential risks and harm of the research toward several participant candidates. We also granted the right for the research participants to forfeit from the research at any given time. As a result, after receiving the positive reply, two research participants were voluntarily agreed to partake in this study by sharing their insights in the research. The first participant, Seto (pseudonym), is male aged 20, an undergraduate student in Indonesia. The second participant, Mustafa (pseudonym), is male aged 21, an undergraduate student in Egypt. The demographic information from both participants is illustrated in the Table 1.

Table 1

Participants' demographic profiling

No.	Pseudonym	Age	Gender	Education	Nationality	Years of English learning
1.	Seto	20	Male	Undergraduate student	Indonesia	8
2.	Mustafa	21	Male	Undergraduate student	Egypt	12

Data collection

To shed light on the research question about the mechanism of an Indonesian and an Egyptian EFL learners self-regulated vocabulary learning procedures, we employed a series of semi-structured interviews (Barkhuizen et al., 2014; Jovchelovitch & Bauer, 2000). We conducted those interviews separately several times via Zoom Video Conference. In addition, to avoid interview boredom and fatigue that might hinder the data gathering process, each of the interview sessions was conducted in approximately 30-60 minutes (Barkhuizen et al., 2014; Richards, 2003). Further, during the interview session, we deliver several questions following the four interview guidelines adopted from Tseng et al.'s, (2006) study which include (1) special technique to learn vocabulary, (2) challenges and learning hindrance that occur during vocabulary learning process, (3) special technique to tackle learning hindrances (e.g., demotivation, stress, procrastination, and boredom), and (4) learners' persistence to achieve vocabulary learning goal. Finally, each of the interview session was then recorded after obtaining the agreement from both participants to avoid any

conflict and breach of participants' rights due to the lack of permission for audio and visual recording (Hammersley & Traianou, 2012).

Data analysis

After conducting the series of interviews, we analyzed the verbal data using thematic analysis (Braun & Clarke, 2006) with the detailed procedure as follows. Firstly, we listened to the recorded verbal data multiple times and transcribed it. In order to familiarize ourselves with the data, we read and checked the transcription repeatedly. Secondly, we systematically identified the emerged meaningful phenomena in the entire data and assigned each of those phenomena a code. Third, we then collected the emerging repeated pattern in the code into themes and sorted the different codes into potential themes. The next step of analysis is re-checking the themes coherency then revising and refining the themes by rearranging the codes to ensure the accurate representation of the themes. By analyzing the essence of the themes and determining the aspects conveyed by each theme, we further defined and gave name to each theme such as vocabulary learning strategies use, learning obstacle, coping strategy, and learning persistence. The final step was presenting the data analysis result by displaying sufficient evidences of the themes within the data.

Trustworthiness

To ensure the trustworthiness of this research and enhance the credibility of the presented data, we employed member-checking (Lincoln & Guba, 1985) and peer debriefing (Janesick, 2015; Lincoln & Guba, 1985) technique during the data analysis processes. According to Lincoln and Guba (1985), member checking and peer debriefing play crucial roles in establishing and enhancing the credibility of the interpreted data. In doing so, during the member checking, we returned the result of interview transcripts to the participants via e-mail messages after checking from some mistaken words or phrases, and the placement of period or comma in the draft. We also gave them the opportunity to review the findings and our data interpretations by correcting the wrong interpretation and giving additional information if necessary. As the results, they confirmed our data interpretations though there was a little bit misinterpreted data, particularly on the exploration of vocabulary learning strategies they employed. While in the peer debriefing session, we seek advice from one qualified peer researcher specialized in ELT to review and assess the results of our study and its interpretation. This would provide us a chance to cleanse our mind from any sentiments and emotions that may be clogging our

judgment and strategic thinking ability (Lincoln & Guba, 1985). The results showed that he suggested us to revise our works in terms of interpreting Mustafa's self-narration on the aspect of his vocabulary learning activities using meta-cognitive strategy. We then revised this part to make it clearer.

Findings

This study was designed to gain in-depth understanding and detailed portrayal of learners' mechanism on self-regulated vocabulary learning process from the two cases. The first case is the personal experience of Indonesian undergraduate EFL learner, Seto (pseudonym), and the second case is the personal experience of Egyptian undergraduate learner, Mustafa (pseudonym). The summary of the first case, Seto, will be illustrated in the section below (Table 2).

The first case: the Indonesian undergraduate EFL learner

In the first case, we tried to delve into vocabulary learning experience of Indonesian EFL undergraduate student, Seto. Through analyzing the transcribed verbal data, we summarized and presented the results of the first case in Table 2.

Table 2

The summary of the first case findings

No.	Findings	Description
1.	Several vocabulary learning strategies	<ul style="list-style-type: none"> • Rehearsal strategies (Underlining text and Note-taking) • Elaboration strategy (Sentence composition)
2.	Learning obstacles	<ul style="list-style-type: none"> • Pronunciation problems • Boredom
3.	Strategies to tackle those learning obstacles	<ul style="list-style-type: none"> • Integrating interactive and attractive ICT media
4.	Learner persistence to achieve vocabulary learning goals	<ul style="list-style-type: none"> • Higher level of persistence • Higher level of value beliefs on EFL • Higher level motivation • Higher level of self-efficacy

Based on the data obtained from the interview, the data disclosed Seto's adequate capability in self-regulated vocabulary learning. In this case, he actively used the combination of several cognitive strategies such as two rehearsal strategies and one elaboration strategy to acquire most of his lexical

knowledge within his intensive reading activities. Specifically, for the rehearsal strategies, he employed underlining strategy, which is highlighting the encountered new word during intensive reading activities, and note taking strategy, which is writing the word and its meaning. Meanwhile, for the elaboration strategy, he composed sentence using the newly acquired lexical knowledge to connect the new words with the prior knowledge. By doing so, Seto can effectively familiarize, consolidate, and commit the new words he acquired to memory. As he shared in this following excerpt:

...I usually got new vocabulary from reading... I took note a new word, search for its meaning, and make it into a sentence... I seldom memorize the new vocabulary that I learn because it is troublesome ...but I loved to apply the new word in my writing... (Seto #1, Zoom interview, 17 August 2022)

In this case, Seto actively used the combination of several cognitive strategies such as the two rehearsal strategies and one elaboration strategy to acquire most of his lexical knowledge within his intensive reading activities. More specifically, the rehearsal strategies he employed are 1) underlining strategy, in which he highlighted the new vocabularies, and 2) note-taking strategy, in which he wrote the words and their meaning. For the elaboration strategy, he composed the sentence using the newly acquired lexical knowledge and connected the new words with his prior knowledge. By doing so, he could effectively familiarize, consolidate, and connect the new words to his long-term memory.

Along with the strategy use, we also explored learner's difficulties during vocabulary learning. In this regard, Seto narrated:

... Sometimes, I face difficulties in pronouncing new words... English is different from my first language (Javanese) and my second language (Bahasa Indonesia) ... there are too many words to learn ... a word with many meanings (homonym) ... especially several vocabularies with the same pronunciation (homophone)... confused me greatly... discouraged me in learning new vocabulary... (Seto #2, Zoom interview, August 17th, 2022)

From the narration above, it was apparent that Seto constantly struggled with several constraints such as difficulties in correctly pronouncing complex new words and confusion when encountering new words with similar lexical forms. Those hindrances are mainly from the massive amount of complex lexical information and sharp contrast among the target language (henceforth TL) (English) and learner's L1 (Javanese) and L2 (Bahasa Indonesia) in terms of their pronunciation and lexico-grammatical rules in particular. Consequently, those hindrances might negatively influence his motivation to learn new

vocabularies. Besides, Seto also struggled with his boredom during vocabulary learning process, as he claimed during the interview: "...occasionally, I felt really bored to learn new word ..."

In order to cope with the aforementioned learning hindrances, Seto altered his strategy by taking advantage of several ICT tools as his learning resources. In Seto's case, the interactive nature of ICT can slightly alleviate his demotivation, diminish his boredom, and enhance his interest to further enrich his lexical knowledge. The way Seto tackled his challenges using ICT was depicted in the interview excerpt below.

... When I feel bored and discouraged, I loved to use enjoyable learning media such as game, movie, film, song, etc. ... it can motivate me to learn English, but a little... (Seto #3, Zoom interview, August 17th, 2022)

In Seto's case, the interactive nature of ICT could slightly alleviate his demotivation, diminish his boredom, and enhanced his interest to further develop his lexical richness.

Next, we tried to inquire Indonesian learner's persistence in vocabulary learning. In this case, Seto confessed:

... Indeed, learning vocabulary is hard... but I do not want to give up... I believe that I can conquer those difficulties ...for my future, I want to master English so, I always persist on learning vocabularies... When I have a vacant time, I try to get new vocab through song's lyric... (Seto #4, Zoom interview, August 17th, 2022)

As mentioned in the aforementioned interview excerpt, Seto found that vocabulary learning was arduous and challenging activities. However, due to his awareness toward the importance of English language for his future career development, he displayed a high-level persistency in vocabulary learning process. It was apparent from the way he exerted extra ordinary effort to enrich his lexical knowledge even in his leisure day. In addition, the verbal data also reported learner's motivation and self-efficacy, which are indicated by his confidence toward his capability to overcome learning hindrances and challenges that occurred during vocabulary learning activity.

The second case: the Egyptian undergraduate EFL learner

Similar to the first case, in the second case, we explored various elements involved on Egyptian learner's SRL in vocabulary learning process. After conducting several semi-structured interview sessions involving Egyptian EFL learner, Mustafa, we summarized our findings and presented them in Table 3.

Table 3*The summary of the second case findings*

No.	Findings	Description
1.	Several vocabulary learning strategies	<ul style="list-style-type: none"> • Metacognitive strategies (Goal planning) • Rehearsal strategy (Note-taking, Repetition) • Elaboration strategy (sentence composition) • Social strategy (Teacher and peer assistance)
2.	Learning obstacles	<ul style="list-style-type: none"> • Pronunciation problems
3.	Strategies to tackle those learning obstacles	<ul style="list-style-type: none"> • Using music lyrics • Teacher and peer corrective feedback
4.	Learner persistence to achieve vocabulary learning goals	<ul style="list-style-type: none"> • Higher level of persistence • Higher level of value beliefs on EFL importance for the future • Higher level motivation

In the second case, we also tried to explore the pattern of learner's SRL in vocabulary learning. In this case, Mustafa narrated his experience by saying,

... My elementary school was not a bilingual school, but I started to learn English vocabulary since I was in elementary school... I write 20 words every single day... truthfully, I never tried so hard to memorize those words, but I silently repeat those vocabularies inside my head, and then tried to make a sentence using them... I also love to practice my new vocabulary with my friend... it helps me to enjoy the learning process... (Mustafa#1, Zoom interview, August 17th, 2022)

In the excerpt above, the data disclosed that Mustafa used different strategies than Seto in vocabulary learning activities. In Mustafa's case, he employed several strategies such as goal planning, note-taking, repetition, elaboration, and social strategy. In detail, to develop his lexical knowledge, Mustafa had tendency to set twenty lexical units systematically as his daily learning goals. In order to commit those words in his memory, he recorded those words in his note and then rehearsed them by silently uttered those words in his head. In addition, he elaborated those words with preceding lexical knowledge by practicing his sentence composition to further help him retain those vocabularies in his memory. Additionally, the data also reported the utilization of social strategy displayed from his habit to seek social assistance from his teacher and peers for his lexical enrichment activities such as asking for correction and cooperation.

Next, we attempted to unveil vocabulary-learning hindrances that the Egyptian learner faced during vocabulary learning process. Regarding this issue, he claimed that,

... (It is) so hard to find best mate to learn vocabulary, especially when I was still in the elementary school ... Sometimes, ... complex word with difficult pronunciation stumped me ... (Mustafa#2, Zoom interview, August 17th, 2022)

In this regard, Mustafa confessed his predicament in finding appropriate partner to learn vocabulary. Due to his inclination to seek the assistance of his peers in vocabulary learning, this predicament might hinder the growth of his lexical knowledge. Additionally, he also revealed his pronunciation problem when he encountered complex lexical unit. Apparently, it was caused by the difference between his L1 (Arabic) and target language (TL) (English).

Afterward, we tried to unravel the way Mustafa tackled his vocabulary learning challenges. In this case, he confessed.

... I asked my teacher and friends when I faced some words with hard pronunciation... I listen and sing an English song... I can learn new word and correct my pronunciation ... (Mustafa#3, Zoom interview, August 17th, 2022)

As the excerpt indicates, Mustafa confessed several strategies that he used to solve his pronunciation problem. First, he utilized social strategy by consulting his English teachers and peers whenever he found a complex word with difficult pronunciation. By doing so, he can receive corrective feedback to alleviate his pronunciation problem. Second, he took advantage of music to enrich his lexical unit and familiarized himself with English.

Finally, we attempted to probe Egyptian learner's persistence in vocabulary learning. As stated in this narration:

... I always set learning goals for myself everyday... I always try my hardest to meet the daily vocabulary quota that I have set... I also well aware that English is important for my future career, so I always have some fun when learning English... even if I had met the goal, I still try to learn new vocabulary ... (Mustafa#4, Zoom interview, August 17th, 2022)

Congruent with the first case, Mustafa can also be categorized as resilient learner. In this case, his persistence can be seen from his endeavor to always establish and achieve his vocabulary learning goals daily. Moreover, similar with Seto's case, Mustafa's persistence was driven by his awareness toward the importance of English language for his future career development. However, in

Mustafa's case, that awareness can also become the source of motivation and the driving force that make English language become enjoyable subject to learn. The evident from the previous statement can be seen from the way Mustafa still joyfully learn new vocabulary even though he had achieved his learning goal for the day.

Discussion

The main purpose of this study was to shed light and provide clear portrayal on the mechanism of self-regulated vocabulary learning from the personal experience of Indonesian and Egyptian EFL undergraduate students. In light of the special strategy used to learn vocabulary, Seto has a tendency to employ several vocabulary learning strategies such as rehearsal (e.g., note-taking & underlining) and elaboration strategy (e.g., composing sentence) during extensive reading activities. His preference to augment extensive reading activities with lexical-enhancement activities was aligned with previous academic literatures (Altakhaineh & Ibrahim, 2019; Min, 2008; Rott, 1999; Vu & Peters, 2022) that claimed the effectiveness of extensive reading for vocabulary development. Reading activity, according to the claim of several prominent scholars (Pellicer-Sánchez, 2012; Rott, 2012), is ideal medium that can expose learners with the target language (TL) to enhance the development of EFL learners' vocabulary knowledge. Through the frequent exposure toward the TL during extensive reading, learners can familiarize themselves with the TL and incidentally learn new lexical information from the text (Rott, 1999). For this reason, teachers, lecturers, instructors, and learners should integrate reading with lexical enrichment activities to promote the process of learners' lexical acquisition.

Meanwhile, the result of this study also reported that Egyptian EFL undergraduate learner utilized different set of vocabulary learning strategies such as meta-cognitive strategy (e.g., goal-planning), rehearsal strategy (e.g., note-taking & repetition), elaboration strategy (e.g., composing sentence), and social strategy. Egyptian EFL learner's tendency to utilize meta-cognitive strategy corroborate previous study (Şentürk, 2016) which found that learners with higher level of English proficiency tended to have a higher level of metacognitive capability. On the contrary, students with lower level of English proficiency lack the capability to employ meta-cognitive strategy (Citrayasa et al., 2022).

Concerning with the utilization of social strategy by Egyptian EFL learner, the result of this study echoed the findings of previous academic literatures (Hashemi & Hadavi, 2015; Nugroho et al., 2020) which found EFL learners tendency to seek the assistance of their peers and teachers during vocabulary learning process. In this regard, a prominent scholar (Daniels, 2016) emphasized the roles of social assistances to effectively develop and proficiently internalize language knowledge in learners' long-term memory. Through the frequent interaction with teachers and peers, learners would have many opportunities to acquire and consolidate the new vocabulary by constantly rehearsing and practicing it with their peers (Oxford, 1990). Additionally, through the constant vocabulary training with their peers, learners can maintain their learning motivation and enhance the active process of vocabulary information (Schmitt, 1997). Subsequently, to speed up the growth process of lexical information, it is recommended for EFL learners to engage vocabulary learning through constant interaction and practice with their peers and teachers (Ellis, 1991; Ellis et al., 1994).

Although, the findings of this study clearly revealed that both participants used different set and pattern of various vocabulary learning strategies. However, both participants have the same tendency to employ and combine rehearsal strategy (e.g., note-taking, underlining, or repetition) with elaboration strategy (e.g., sentence composition) which is in line with the results of several academic literatures (Bošnjak Terzić & Pavičić Takač, 2020; Pauwels, 2018). Further, the combination of both rehearsal strategy and elaboration strategy is strongly recommended by several prominent scholars (Gu & Johnson, 1996; Pintrich, 1999; Schmitt, 1997) to effectively assist learners in memorizing, consolidating, and retaining the newly acquired lexical information in one's long-term memory. Thereupon, it is advised for teachers and educators to teach the language learners how to combine both strategies in vocabulary learning activities.

Concerning the vocabulary learning challenge, each of the participants reported several hindrances during vocabulary learning process. First, both participants suffered pronunciation problem which corroborate the findings of several research studies (Huensch, 2019; Mirzaei et al., 2015). Due to the sharp contrast of learners' L1 and TL in terms of phoneme, orthography, and lexicogrammatical rules, learners might gain limited TL inputs that hinder the process of TL development (Schmitt, 2000). Eventually, without sufficient TL inputs, learners' L1 knowledge might influence learners' TL pronunciation and utterance (Selinker, 1972).

Another hindrance, which is Indonesian learner's lexical disorientation due to the massive amount of similar lexical forms of the TL (English) such as the similarity in the sound, script, and morphology often caused errors in learners' linguistic performance such as slips of the utterance and aphasics error, as claimed by several prominent scholars (Laufer, 1988; Nation, 2000). Although, form-similar words can potentially cause interference and confusion among language learners. However, with the appropriate designed instruction and task from language teachers, it can help learners to enrich their lexical information, as presented in the result of recent academic study (van de Ven et al., 2019).

In the case of Indonesian EFL learner, both pronunciation problem and lexical disorientation induced demotivation during vocabulary learning process. Given the complex nature of vocabulary learning, students' demotivation that occurs during vocabulary learning process might negatively affect the process of vocabulary development, as reported by Zheng's (2012) study. In this regard, it is recommended for foreign language learners to conduct their vocabulary learning in enjoyable setting in order to boost their motivation in vocabulary learning as recommended by several prominent scholars (McEown & Oga-Baldwin, 2019; Tanaka, 2017).

Pertaining to the way Indonesian and Egyptian learners coping with their learning hindrances, the results of the study revealed different strategies used from both cases. In the Indonesian learner's case, the learner habitually utilized ICT as his learning source to regulate and control his motivation, although in this case ICT can only give a small assistance in improving his motivation. However, recent studies (Şahin Kızıl & Savran, 2018; Wang & Chen, 2020) found that ICT can effectively help learners in regulating their motivation on language learning. Furthermore, it is evident from the plethora of studies (Kurt & Bensen, 2017; Şahin Kızıl & Savran, 2018; Wang & Chen, 2020) that the integration of ICT can serve many benefits in vocabulary learning through the frequent exposure toward the TL. Specifically, the interactive nature of ICT can aid learners to reinforce their lexical knowledge retention (Kurt & Bensen, 2017; Zhang et al., 2011) and arouse their interests in vocabulary learning (Ono et al., 2015; Sandberg et al., 2014). For these reasons, it may be necessary for educational institutions, lecturers, and teachers to engage in vocabulary teaching integrated into ICT tools to encourage learners' motivation and assist them in vocabulary learning and retention.

In the same manner, the Egyptian learner used music lyrics to tackle with his pronunciation problem. In this regard, music as one of the informal learning media can provide learners with large quantities of language inputs that can

enrich their lexical information. Through the utilization of music, learners can incidentally improve their micro-level oral language skills by repetitively expose learners to the TL. Indeed, language exposure is one of the key elements that play a crucial role in the success of second and foreign language learning activities (Ellis, 2001). Additionally, repetitive and frequent language exposure can help learners with lexical unit retention in their long-term memory (Ellis, 2002).

Apart from music, the finding of this study has also reported the utilization of social strategy by Egyptian learner to tackle with the pronunciation problems. In this matter, given the complex nature of vocabulary learning, teacher plays an important role in the vocabulary learning process. Specifically, during vocabulary learning activities teacher can supply learners with variety of lexical knowledge by providing learners with the correct exemplars of lexical utterances (Sheen & Ellis, 2011). Additionally, teachers can encourage learners to rehearse and enhance their micro-level language skills such as vocabulary, pronunciation, and grammar. Whenever learners encountered obstacles such as pronunciation errors, vocabulary errors, and grammatical errors, teacher can give learners an assistance in the form of corrective feedback. Several empirical evidences (Rassaei, 2017; Sippel & Jackson, 2015) have found the positive results of teacher corrective feedback for the development of learners' language proficiency. Therefore, it is suggested for language learners to seek the assistance of language educators, instructors, teachers, and lecturers whenever they stumble upon difficulties during vocabulary learning activity.

In the same manner, learners' active engagement and cooperation with their peers by receiving and providing corrective feedback in vocabulary learning process can benefit learners in many ways. Several prominent scholars, for the past decade, reported the effectiveness of peer corrective feedback in enhancing learners' vocabulary knowledge (Sippel & Jackson, 2015), pronunciation (Evers & Chen, 2020), grammar (Reynolds & Teng, 2022), and fluency (Murillo-Zamorano & Montanero, 2018; Sato & Lyster, 2012). To elaborate, learners' active interaction can provide learners with the opportunity to diagnose their own strength and weakness in vocabulary learning. In this way, when they face some predicaments such as pronunciation and memorization problem, their peers can supply them with constructive inputs to assist them in vocabulary learning. Simultaneously, they can encourage each other to practice their vocabulary knowledge in collaborative and cooperative manners that create an effective environment for the development of their lexical knowledge and in turn enhance learners' TL proficiency (Oxford, 1990). In this way, it is suggested for the teacher and educator to encourage learners to

cooperate and collaborate in vocabulary learning activities by providing constructive input such as peer corrective feedback for their peers.

Regarding learners' persistence in vocabulary learning, the results of this study revealed that both Indonesian and Egyptian EFL undergraduate learners have higher level of persistency due to their higher level of motivation. In this regard, their motivation to learn English was empowered by their value awareness toward the importance of English for their future career development which was in line with the previous academic literatures (Magogwe & Oliver, 2007; Mizumoto, 2013; Nugroho et al., 2020). However, the source of their motivation was in contrast with the result of the preceding research (Dornyei & Csizér, 2002) which found that learners' motivations in language learning were not affected by their perception of the TL role for their future careers. Regardless, a prominent scholar (Gardner, 2001) argued that learners' perception of task value is one of the elements that can influence language learners' motivation. It can be said that task value belief can influence learners' willingness to exert extra effort in regulating their learning strategies (Pintrich, 1999; Zimmerman, 2000). Consequently, it is suggested for the language educators to increase learners' awareness toward the crucial roles of learning English language.

Besides motivation, the result of this study revealed that Indonesian EFL undergraduate learner has higher level of self-efficacy. In this case, self-efficacy and motivation become the key element that empowered his persistence and in turn influence learner to create the optimal learning environment. In the same vein, preceding studies investigating self-regulated vocabulary learning (Magogwe & Oliver, 2007; Mizumoto, 2013) reported that self-regulated learners have higher level of self-efficacy and motivation than their average peers. Further, several prominent scholars (Pintrich, 1999; Zimmerman, 2000) acknowledged that self-efficacy, motivation, and self-regulated learning are interconnected and strengthened each other. Accordingly, it is suggested for teachers to create teaching and learning activities that can improve learners' self-efficacy and motivation to boost their self-regulated learning capability.

Conclusion

The present multi-case study was aimed to gain in-depth understanding and detailed portrayal of learners' mechanism on self-regulated vocabulary learning process from the experience of Indonesian and Egyptian EFL undergraduate students. The thematic analysis results of this study clearly illustrated that both

EFL undergraduate students have tendency in combining several cognitive vocabulary-learning strategies such as rehearsal and elaboration to learn new lexical information. This study also revealed high-level motivation to enrich vocabulary knowledge from both EFL learners. In addition, the two participants reported different hindrances and special techniques employed to tackle those hindrances. Further, even only the Egyptian EFL learner have a habit to plan his vocabulary learning, but both Indonesian and Egyptian EFL learners showed a high persistence in vocabulary learning activities. Therefore, it seems safe to conclude that both Indonesian and Egyptian EFL undergraduate students are cognitively, metacognitively, affectively, and behaviorally active in vocabulary learning.

Further, we discussed the pedagogical implications of the study of helping teachers and foreign language learners to understand self-regulated vocabulary learning mechanism from two different countries. In addition, the result of this study will add valuable empirical data that provided insights into vocabulary instruction in the domain of English Language teaching. Additionally, the results of this study will hopefully increase teachers' awareness of self-regulated vocabulary learning strategies that can be adopted in the classroom.

Finally, several limitations in the present study should be addressed. First, this study involving two voluntary participants is not suitable for generalization. For this reason, future studies may conduct a large-scale study involving a wide range of participants to achieve generalization. Second, all the participants involved in this study are males. Therefore, there is a need for future researchers to explore the self-regulated vocabulary learning mechanism from female learners. Third, the current multi-case study only employed a series of semi-structured interviews to gather the data. Accordingly, it is highly recommended for future researchers to use multiple data collection techniques (e.g., observations, questionnaire) to collect a more robust data on self-regulated vocabulary learning mechanism. Lastly, the future studies can also shed light the roles of self-regulated vocabulary strategy use in various aspects (e.g., ICT, motivation, self-efficacy) to deepen our understanding on vocabulary learning and hopefully on the vocabulary teaching too.

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