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ONLINE SELF-REGULATED LEARNING STRATEGIES AMID A GLOBAL PANDEMIC: INSIGHTS FROM INDONESIAN UNIVERSITY STUDENTS

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ABSTRACT

Purpose –At the beginning of 2020, the COVID-19 pandemic affected many aspects of life, including education. In response, the Indonesian government mandated all educational institutions, including universities, to implement online learning. Through online learning, many university students experienced considerable changes in the way they regulated their knowledge-seeking process. This research examined the level of EFL university students’ self-regulated learning during their online learning activities for an English academic writing course, as well as the difficulties encountered and strategies developed in the online learning context.

Methodology –This research employed a convergent mixed-method research design by adapting the Online Self-Regulated Learning Questionnaire (Barnard et al., 2009) and an open-ended questionnaire to discover the students’ difficulties and strategies during online learning. The study involved 307 students of the English 3 (Academic Writing) course at President University, Indonesia. Descriptive

statistics were employed to analyse the quantitative data sets, while the qualitative data sets were systematically coded and thematically analysed.

Findings –The statistical analysis indicated that the students had a medium level of self-regulated learning skills. The qualitative analysis revealed that in the context of online self-regulated learning, the issues they faced included technical, material, time management, study space, and motivation issues. At the same time, the students attempted to alleviate these issues by improving collaboration and time management, and adopting technical, academic, and affective strategies.

Significance – By exploring the level of students’ self-regulated learning skills, this study provides insights for universities and lecturers into students’ ability to regulate their learning in an online learning context. Additionally, this study has identified the difficulties students face in the online learning process and their strategies to overcome these issues, which can practically inform educational institutions about the necessary support that should be provided to facilitate students’ self-regulated learning skills in the online learning context.

Keyword: EFL university students, academic writing, online learning, self-regulated learning, Indonesia.

INTRODUCTION

In response to the Coronavirus or COVID-19 pandemic, many educational institutions around the globe have been asked to implement online learning activities to minimize the spread of the virus. UNESCO notes that the pandemic has disrupted the learning activities of more than 290.5 million students around the world as a result of school closures (Yulistiana, 2020). The Indonesian government also imposed preventive measures by halting face-to-face learning activities. Through the Ministry of Education, the government mandated all educational institutions at all levels to implement online learning activities beginning mid-March 2020 (Iqbal, 2020). Consequently, educational stakeholders (school/college bureaucrats and teachers) and users (parents and students, including university students) have experienced a significant change in their learning activities, transitioning from full face-to-face mode to full online mode.

Amid these unprecedented changes, the implementation of online learning activities may offer some advantages to college students, including flexibility and safety in learning. Despite these benefits, some challenges may also be faced by both instructors and college students as online learning activities require students to have the ability to participate in the learning process more independently and actively (Serdyukov & Hill, 2013; Wang et al., 2013; Zhao & Chen, 2016). This is because students do not have the opportunity to interact face-to-face with their instructor and peers. In an online learning course, students must take responsibility for deciding the time, place, and effectiveness of their studies, and in accessing the learning materials (McMahon & Oliver, 2001). In other words, the ability to manage and regulate learning activities is considered essential when students take online courses since any help from tutors and facilitators in online learning would be less intensive compared to that provided in face-to-face sessions.

Despite the importance of regulating their learning activities, students may face challenges in implementing this elemental aspect of their academic journey. According to Zhao and Chen (2016), many students are unable to recognize the importance of managing and regulating their learning processes effectively. In this case, students are required to set their learning goals actively, monitor their own learning progress, as well as assess their learning outcomes (Zhao & Chen, 2016). This may become unsettling, particularly when students are required to complete a long-term project in an online learning setting that requires them to be more independent in their own learning processes. In an online learning context, therefore, students are expected to be able to manage and regulate their own learning processes. These abilities are strongly related to self-regulated learning (SRL).

Zimmerman (1989), one of the most prominent researchers in SRL, defines SRL skills as the extent to which students are “metacognitively, motivationally, and behaviorally active participants in their own learning process, ‘who can initiate and manage their knowledge-acquisition process’ rather than relying on teachers, parents, or other agents of instruction” (p. 329). Unlike passive learners, self-regulated learners are aware of the strategic connection between their regulatory processes and the learning outcomes in which they implement such regulatory processes to achieve their academic purposes (Zimmerman, 1989, 1990). As students who learn online require the capacity to manage and regulate their learning processes, they need to possess SRL skills.

Since learners are able to monitor the metacognitive, motivational, and behavioural aspects of their learning, SRL skills are expected to benefit them in various ways. For instance, Zimmerman et al. (1996) argue that SRL skills enable students to improve their overall learning achievements and their views on self-efficacy as they are more responsible for their learning. In a similar vein, Lim et al. (2020) and Zalli et al. (2019) found that self-regulation becomes a mediating variable that influences students' satisfaction in the online learning context. Consequently, exploring students' level of SRL has significant importance, particularly in online learning environments that urge students to independently manage their learning progression. Although the notion of SRL has been well-researched, most of the studies have focused on face-to-face learning contexts. However, SRL in the online learning context, particularly in online academic writing in Indonesia, is still underexplored. At the same time, SRL skills are considered essential in the context of online learning because students who acquire the ability to regulate various learning strategies are likely to have a greater chance of success, feel satisfied in online or blended learning contexts, and also have greater overall satisfaction in learning (Lim et al., 2020; Zalli et al., 2019). In relation to language skills, various researchers suggest that SRL can enhance some aspects of students' writing performance (Ariyanti et al., 2018; Hacker et al., 2015; Hamman, 2005; Mbato & Cendra, 2019; Mehrabi et al., 2016). For instance, Ariyanti et al. (2018) discovered that self-regulated learners made more effort to learn to write and achieved better results in writing. In terms of affective learning, SRL is also connected to motivation and help-seeking, which are essential for students to complete their undergraduate theses (Mbato & Cendra, 2019). Consequently, SRL is found to be crucial for various aspects of students' learning, including their writing competence.

In the current study context, students who take the English 3 (Academic Writing) course at President University, Indonesia, are expected to produce a long-term project in the form of a research proposal, journal article, or other types of academic essay as directed by their English lecturers. This must be completed via online learning due to the COVID-19 pandemic. As exemplified earlier, studies have revealed that self-regulated learning is a crucial element for the learning process in both online learning and language learning contexts (Ariyanti et al., 2018; Lim et al., 2020; Mbato & Cendra, 2019). Consequently, it is essential to examine the state of the students' SRL skills, as well as the challenges they face and the strategies they use in completing a course requiring a long-term project in the online learning context, such as the English 3 course. Therefore, this study investigated the

level of SRL skills among the students on the English 3 course at President University, Indonesia. Furthermore, this study also focused on exploring the problems faced by the students in regulating their learning processes and their strategies to alleviate these issues.

The following research questions were addressed:

1. What is the students' level of self-regulated learning skills in the English 3 (Academic Writing) course during the global pandemic?
2. What are the problems experienced by students in regulating their online learning in the course?
3. What are the strategies employed by the students to cope with the problems they face in regulating their online learning in the English 3 (Academic Writing) course?

Challenges in the Online Learning Context

Some recent studies that have focused on students' online learning experiences amid the global pandemic have revealed that students face considerable challenges in conducting their online learning activities (Aboagye et al., 2020; Adnan & Anwar, 2020; Bisht et al., 2020; Dhawan, 2020). Aboagye et al. (2020) identify four major problems that tertiary education students face in online learning: 1) accessibility problems (internet connection and device compatibility), 2) social problems (limited interaction between students), 3) lecturer problems (lack of assistance and unclear learning materials/purpose), 4) academic issues (lack of reading/communication skills), and 5) generic issues (lack of writing skills and vocabulary). Other studies also report that internet connectivity, lack of interaction with the faculty and classmates, and time management have become central issues faced by university students in the online learning setting (Adnan & Anwar, 2020; Bisht et al., 2020; Dhawan, 2020). Moreover, Dhawan (2020) emphasizes the importance of motivation and preparedness in performing learning activities. These issues can eventually impact students' ability to self-regulate their learning activities in the e-learning context.

Models and Theories of Self-Regulated Learning

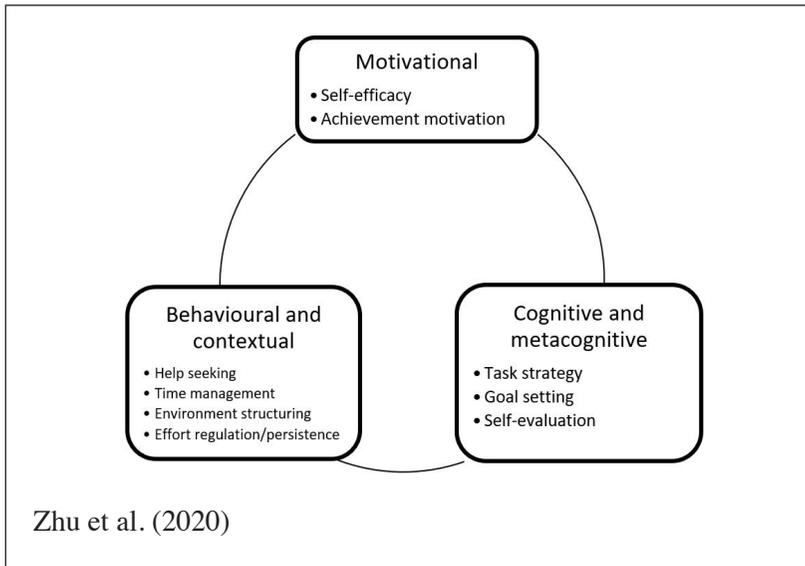
The extensive nature and scope of self-regulated learning studies have led to the emergence and development of various SRL models and theories. Zimmerman (2002) maintains that there are three cyclical phases in the SRL process: (1) forethought, (2) performance, and (3) self-reflection. The forethought phase refers to the students'

self-regulated learning phase prior to their learning activities, which involves task analysis and self-motivation; the performance phase consists of the self-control and self-observation processes conducted by the students during the learning activities; finally, the students' self-reflection phase is performed after each learning activity, engaging the process of self-evaluating their performance through a set of learning standards (Zimmerman, 2002). Each of these phases reflects several components and processes undertaken by students to regulate their learning, including metacognitive, motivational, and behavioural processes.

Another model of the self-regulation process developed by Pintrich (2000) outlines four phases that lead students to self-regulation processes: (1) planning and activation, (2) monitoring, (3) control, (4) reaction and reflection. Pintrich (2000) argues that these phases do not represent hierarchical and linear phases, which means that individuals can perform them in a simultaneous or dynamic manner. In other words, the model of SRL proposed by Pintrich (2000) has a different emphasis from that of Zimmerman (2002) as it reflects dynamicity over the linearity and cyclicity of the SRL process. Nevertheless, Pintrich's (2000) model shares some similarities with Zimmerman's (2002) model as the four phases are overlapped by four different components: (1) cognition, (2) motivation, (3) behaviour, and (4) context. Summarizing these two models, Zhu et al. (2020) established an SRL model that addresses the online learning context, particularly with regard to Massive Open Online Courses (MOOCs). They argue that there are three major regulation strategies that students undertake to regulate their online learning activities, as illustrated in Figure 1.

Figure 1

Self-regulated Learning Strategies Developed



Zhu et al. (2020) suggest that in the motivational regulation strategy, the processes that are engaged by students to self-regulate their online learning activities include self-efficacy and achievement motivation. This regulation strategy involves individuals in determining their capacity to organize and manage learning activities to achieve their learning goals, as well as to establish objectives, reasons, and standards to assess the output of the learning activities (Zhu et al., 2020). The cognitive and metacognitive regulation strategy represents some processes that students perform in online learning, including “changing their approach to learning, taking notes, and setting goals” (Zhu et al., 2020, p. 12). Meanwhile, the behavioural and contextual regulation strategy involves a set of processes that students undertake in the online learning context, including seeking help to deal with academic challenges, organizing study time, structuring the learning environment, and regulating effort when they face academic difficulties (Zhu et al., 2020).

From the SRL models, it can be seen that students perform a set of linear, dynamic, and cyclical processes as a means of regulating learning to achieve their learning objectives. At the same time, students who learn online may have particular challenges that can become a serious impediment to their learning process. Consequently,

it is imperative to examine the challenges that students face and their coping strategies when they are confronted with academic adversities in the context of online learning.

Online Self-Regulated Learning

SRL is closely related to students' performance in online learning. Students who possess SRL skills are more engaged in the learning process as they are able to determine the study objectives and suitable learning methods, and monitor the achievement of their learning goals (Kizilcec et al., 2017; Zalli et al., 2020). In a blended learning context, Lynch and Dembo (2004) found that students' academic performance was highly influenced by oral competence and self-efficacy, and slightly affected by other SRL components. In addition, Barnard et al. (2008) suggested that in online learning, SRL skills would become mediating variables between course perception and academic performance. Barnard et al. (2008) further investigated the relationship between epistemological beliefs and online SRL skills and confirmed that SRL attitude mediates a positive relationship between learners' perception of online course communication and collaboration with academic performance.

Previous studies focusing on online learning have revealed that implementing SRL strategies such as metacognition, planning, time management, and effort management results in improved academic performance (Barnard-Brak et al., 2010; Broadbent & Poon, 2015; Zalli et al., 2019). Barnard-Brak et al. (2010) study established that individuals' academic performance would vary in accordance with their level of SRL skills; for instance, minimal and disorganized self-regulated learning profiles were both found to be related to poor academic achievement. In a similar vein, a study conducted by Zalli et al. (2019) in Malaysia revealed that SRL strategies such as time management, planning, and self-evaluation, had a significant impact on students' learning satisfaction. Therefore, this study also attempted to discover the problems that students faced as well as the strategies they employed in the online learning context.

Measuring Self-Regulated Learning

Measuring students' SRL requires a valid and reliable measurement tool. Lynch and Dembo (2004) investigated whether five self-regulatory elements—self-efficacy, intrinsic goal orientation, internet self-efficacy, help-seeking, and time and study environment management—could predict academic performance. A significant and

positive correlation was found between self-efficacy and course grades, while other elements were not significant predictors. Barnard et al. (2009) criticized these results, noting that they did not significantly identify the relationship between the students' self-regulated learning and their performance because the instruments employed were not specifically intended for online or blended learning contexts. Consequently, they developed the Online Self-regulated Learning Questionnaire (OSLQ), which measures learners' SRL in an online specific context. The reliability and validity of the questionnaire in measuring students undertaking coursework delivered via a blended or hybrid course format and online course were examined. Barnard et al.'s (2009) OSLQ was confirmed to be an acceptable instrument for identifying the SRL skills of students in these kinds of learning environment.

Although the OSLQ was developed more than a decade ago, studies that have employed the questionnaire to examine students' SRL skills are rather limited, particularly in Southeast Asia. Zalli et al. (2020) is one of the most recent studies to have adapted the OSLQ to develop a model to measure online SRL strategies in MOOCs in the Malaysian context. From the assessment of validity and reliability of the model, it was discovered that the six constructs of the OSLQ—goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation—possess validity and reliability levels that emphasize the applicability of the OSLQ in measuring students' online SRL skills (Zalli et al., 2020). Therefore, the current research employed Barnard et al. (2009) OSLQ questionnaire to measure students' online SRL skills in higher education in Indonesia.

MATERIALS AND METHODS

A convergent mixed-method research design was employed to investigate the students' SRL skills as they experienced an unprecedented shift to fully online learning on the English 3 (Academic Writing) course due to the spread of COVID-19. According to Creswell and Clark (2018), mixed-method researchers gather and examine qualitative and quantitative forms of data to address research questions or hypotheses. By integrating quantitative and qualitative data sets, this research aimed to better understand the students' SRL level and their problems and strategies in an online learning setting. The quantitative approach in this study focused on examining the students' level of SRL skills through the OSLQ (Barnard et al., 2009), while open-ended questionnaires were used in the qualitative

approach to reveal the students' problems in regulating their learning processes as well as their coping strategies.

Respondents

A total of 307 respondents were involved in this mixed-method research. The respondents were undergraduate students of various majors taking the English 3 (Academic Writing) course in Semester 1-2020 at President University, Indonesia. In terms of the demographic aspect, 201 female students and 106 male students participated in the study. In order to prevent the spread of COVID-19, the Indonesian government mandated all educational institutions to conduct online learning sessions so that students could study from home. Consequently, students experienced a dramatic shift from face-to-face learning to online learning for the rest of the semester. The respondents in this research studied English 3 (Academic Writing) through online platforms provided by President University or other Learning Management Systems (LMS), such as Google Classroom, Moodle, and other platforms selected by their English lecturers.

Instrumentation

The study employed the OSLQ (Barnard et al., 2009) which has previously been used to measure students' SRL skills in the online context (Onah & Sinclair, 2016; Zalli et al., 2019, 2020). The OSLQ measures students' level of self-regulated learning using a four-point response format with values ranging from 1 to 4. The scale scores are categorized into three levels. Mean scores between 3 and 4 indicate a high level of SRL, a medium level lies between the mean scores of 2 and 3, while mean scores between 1 and 2 show a low SRL level.

The researchers adapted the OSLQ survey questions to the context of the online English 3 course amid the COVID-19 pandemic. The questionnaire consisted of eight sections with a total of two personal information questions, 24 OSLQ close-ended questions, and two open-ended questions. The close-ended questions focused on investigating aspects of goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation. The 24 adapted survey items were tested for validity and reliability using the IBM SPSS 25 software to ensure that they were truly measuring the students' level of SRL. As a result, three items were removed because their validity coefficients were lower than 0.25. Meanwhile, the other items were considered to have good reliability as the Cronbach's alpha was 0.817 and the value was above 0.7, which is

the lower limit commonly agreed upon (Hair et al., 2010). Therefore, the instrument was considered to have good reliability. In addition to the 21 items, two open-ended questions were designed to identify students' problems and their strategies to overcome them.

Data Collection

In convergent mixed-method research design, researchers gather quantitative and qualitative data sets that are equivalent to the responses from the research questions (Creswell & Clark, 2018). The process of collecting the research data was initiated by inviting prospective participants to fill in the OSLQ survey. The researchers distributed the survey, including an explanatory statement of the research, through Google Forms to all students at President University taking the English 3 (Academic Writing) course. In addition, the students were asked to complete two open-ended questions to explore the most common problems and strategies in regulating their learning activities in the online Academic Writing course. The selection of the open-ended questions was relevant to the second research question as they enabled the researchers to explore thoughts about a particular issue.

Data Analysis

The analysis of both quantitative and qualitative data sets is conducted independently in a convergent mixed-method research design (Creswell & Clark, 2018). Consequently, in the quantitative procedure, descriptive statistics were analysed through the IBM SPSS 25 in order to discover the general tendencies in the OSLQ. The qualitative analysis started with coding the students' responses gathered from the open-ended questions in the Google Form. To ensure the trustworthiness of the coding process, Creswell (2012) highlights the importance of a careful and systematic analysis procedure for the qualitative data, strongly advising researchers to read and re-read the transcribed data to attain a comprehensive and detailed understanding of the data during the coding process. Therefore, this research utilized NVivo 12 Plus software to support qualitative data management and organization. This kind of software enables qualitative researchers to set "an accessible system for data location, storage, organizing, filing, and handling" (Cohen et al., 2018, p. 646). The students' responses from Google Forms were stored and converted into a Microsoft Excel spreadsheet and subsequently coded utilizing NVivo 12 Plus. The data were then thematically analysed by classifying the students' responses based on the most common problems they faced in managing their SRL during their academic activities on the English 3 (Academic Writing) course and the common strategies in managing their problems.

RESULTS AND DISCUSSION

Students' Self-Regulated Learning Level

The investigation started by analysing the students' level of SRL skills based on six categories: goal setting, environment structure, task strategy, time management, help-seeking, and self-evaluation. The descriptive statistics of their SRL skills can be seen in the following table:

Table 1

Descriptive Results er Dimension of OSLQ

OSLQ Instruments	N	Min	Max	Mean	Std. Dev
Goal Setting	307	1.50	4.00	3.04	.40
Environment Structure	307	1.50	4.00	3.03	.48
Task Strategy	307	1.25	4.00	2.60	.47
Time Management	307	1.00	4.00	2.66	.55
Help Seeking	307	1.00	4.00	2.64	.58
Self-Evaluation	307	1.50	4.00	2.87	.40
Valid N (listwise)	307				

Table 1 shows that the SRL skill with the highest mean score was goal setting (3.04), while task strategies obtained the lowest mean (2.60). Goal setting (3.04) and environment structure (3.02) were above the medium level criteria of 3.0. However, the scores for task strategies (2.60), time management (2.66), help-seeking (2.64), and self-evaluation (2.87) were within the medium level criteria. The mean of the six dimensions was 2.81, which meant that the students had a medium level of SRL skills.

Problems in Self-Regulated Learning Processes

After analysing the students' general level of SRL, the research also investigated the common problems faced by the students during their online SRL activities. Based on the thematic analysis of responses to the open-ended questions conducted, there were six emerging themes related to students' problems: technical issues (26%), material and task (23%), time management (20%), study space (11%), consultation and communication problems (10%), and motivation (10%). These will be discussed in the following section.

Technical Issues

Based on the qualitative analysis, the most common issue reported by the students in the online SRL context pertaining to their course was technical issues. The thematic analysis revealed that these technical issues were mainly related to connection problems experienced during the online learning activities, and problems with the learning platforms. One student expressed her concerns about this technical issue as she was forced to go back to her hometown during the pandemic:

“The internet connection in my hometown is not good, and I cannot use Wi-Fi. I also cannot go to the town to get a proper network because of the large-scale social restrictions.”

Another student also had concerns about the internet, which would affect the quality of the learning he experienced:

“A slow internet speed will affect the quality of learning. Online classes will take us more time to study. Without face-to-face teaching, it is not easy to understand the teaching content.”

Besides the connection problems, some students also reported an issue relating to the use of the online learning platforms. In this case, a student highlighted the limited interaction time that the learning platform offered:

“The video-conferencing tool that is provided by the lecturer has time limitations. It is better to have face-to-face consultations with the lecturer instead of via online chat.”

Issues with Materials and Tasks

In addition, students also reported problems with materials and tasks. These problems were mainly connected with the assignment load and the clarity of the materials. For instance, one student reported her concern about her English lecturers' tendency to give more assignments to students during online learning sessions:

“Every lecturer thinks that they need to give us assignments during the online class. But I think

there are a lot of ways to get around it. Students' understanding cannot be judged simply by a number. It is good to give us online lectures and assignments, but we also have a life to live and health to take care of."

A similar concern was also raised by another student who highlighted the issue of managing the nature of the English 3 assignment that required him to allocate more time:

"I need to allocate extra time to do the task in this online learning since many subjects have also assigned some tasks, unlike during a regular class."

Besides the assignment load, some students also reported concerns relating to the clarity of the tasks. One student drew attention to the nature of the English course assignment, which required a thorough explanation from the lecturer:

"Because English 3 is about writing techniques, online learning without a proper direct explanation from the lecturer makes it harder to understand the details."

Meanwhile, another student also compared the online and conventional modes of teaching with regards to the clarity of materials:

"The learning materials delivered by the lecturers during the online learning are not as detailed as during the face-to-face learning on campus, which makes it difficult to understand the material."

Time Management Issues

The problem of managing time was also reported by the students as hindering their SRL skills in the online learning context:

"I have some problems with managing time. Honestly, sometimes I can't wake up in the morning like at 7–8 a.m. because I had to finish another assignment in the middle of the night."

Study Space and Motivation Issues

Students also reported that they faced difficulties in looking for study space and maintaining learning motivation during the process of the online academic writing lesson.

“Direct consultation is more comfortable rather than an online meeting. Besides the unstable internet connection, an uncomfortable learning environment can also disturb my focus while learning or discussing.”

Meanwhile, another student highlighted his concern about maintaining learning motivation during online learning activities:

“It is hard to get motivated when we are learning online because there are more distractions than when we are learning in the classroom.”

Strategies to Alleviate Self-Regulated Learning Problems

Besides exploring the students' SRL problems, this study also focused on investigating their strategies. There were four emerging themes pertaining to the students' strategies in dealing with the issues they faced in online SRL activities for the English 3 course. Improving collaboration and time management strategies were the most common strategies employed (42%), followed by technical strategies (25%). Meanwhile, affective strategies constituted 21% of the strategies reported. Finally, academic strategies (12%) were least employed in managing problems during online SRL. Each strategy will be discussed in the following section.

Improving Collaboration and Time Management

As stated earlier, the most common strategy reported by students in the open-ended questionnaire was collaboration and improving time management. For instance, a student highlighted her experience in solving her difficulties in online SRL:

“To solve my problem, I ask the lecturer or my other friends about the materials I do not understand through communication platforms.”

Another common strategy was improving time management. Many students reported that they attempted to manage their time more effectively to cater to all their tasks during the online learning mode. For instance, one student reported that she created a study plan to manage her time to finish her lessons and assignments:

“My strategy to handle my problem is to make a study plan, so I made some kind of schedule to do my assignments. I will follow my study plan, and then I will know exactly what is the assignment that I should do on Monday, Tuesday, Wednesday, etc.”

Technical, Academic, and Affective Strategies

Students also reported that they attempted to implement technical, academic, and affective strategies. In the case of technical strategies, students mentioned that they handled problems during the online SRL activities by changing to more reliable internet providers, purchasing a mobile internet quota to ensure a stable connection, and finding a more comfortable study space for the online learning activities.

Some students also stated that they attempted to employ certain academic strategies to alleviate their problems in SRL, such as goal setting, note-taking, reviewing, and reflecting on lessons. Affective strategy was another type of strategy that emerged. This strategy was mainly related to the students’ attempts to motivate and encourage themselves during online SRL activities.

DISCUSSION

Following the COVID-19 outbreak in early 2020, the Indonesian government instructed all educational institutions to conduct online learning activities for all students, including university students. Consequently, students experienced a significant shift in their learning activities as they were required to study from home through online platforms. Furthermore, students needed to possess a certain degree of independence, particularly for courses with long-term projects, such as English 3 (Academic Writing). Therefore, this study was part of an effort to gain more knowledge about the university students’ level of SRL skills as well as the common problems they faced and coping strategies they developed during their online learning activities.

Through the OSLQ, this study found that students generally had a medium level of SRL skills. Interestingly, they possessed higher skills in goal setting and environment structure compared to other elements of SRL. This suggests that students set particular standards for their assignments during the online learning process, possess adequate skills to set goals, learn, manage their study time, and produce work of good quality. In addition, they have positive skills for structuring their study space to focus on their work. Meanwhile, self-evaluation and time management skills appeared to be at a medium level. These results suggest that students are able to allocate extra study time for their online academic writing course and set up daily and weekly schedules. Help-seeking and task strategies were also at the medium level, but slightly lower than self-evaluation and time management. This may reflect difficulties in seeking assistance from instructors, friends, and those who are considered more knowledgeable than themselves when they encounter problems, while possessing some strategies to finish the tasks for their course. The finding is supported by the open-ended questionnaire, which showed that the students had experienced challenges in communicating and consulting with their peers as well as their lecturers during their online learning.

Due to the medium level of SRL, strategies aimed at improving academic achievement should be implemented. SRL intervention is suggested to enhance students' SRL. Jansen et al. (2020) found that the completion of a course in MOOCs was successfully improved by integrating SRL intervention into the course. It was likely that the learners' SRL activity was made more successful by this intervention as well. Furthermore, in stimulating SRL strategies aimed at enhancing students' academic achievement, Wandler and Imbriale (2017) suggest six evidence-based strategies for online instructors. The first strategy is teaching self-regulated learning strategies by developing online modules, sections, or content folders integrated into a Learning Management System. It is also suggested that online instructors have a student study log, which may lead them to better reflect on their SRL strategies. Prompting students to self-regulate throughout a given semester is another suggestion. Text message reminders can also be useful, particularly for students getting low grades. Scaffolding by posting sample rubrics or sample student work may help students understand their teachers' expectations. The last strategy is help seeking, a method by which students get additional assistance from their friends or more knowledgeable people.

Besides investigating the students' level of SRL, this study also aimed to uncover the common problems that they faced during

their engagement with the online academic writing course and their coping strategies for dealing with the challenges. Technical issues, such as poor internet connectivity and a lack of familiarity with the technological tools were the students' biggest challenges in following this course. This finding is consistent with recent studies focusing on tertiary students' online learning experiences, that have revealed accessibility issues to be the main obstacle (see Aboagye et al., 2020; Adnan & Anwar, 2020; Bisht et al., 2020; Dhawan, 2020). Nonetheless, students also reported that they adopted technical strategies to tackle the problems by using more dependable internet providers and other technical strategies. This is closely related to the behavioural and contextual regulation strategies proposed by Zhu et al. (2020), in which students attempt to structure their study environment to prepare for their e-learning activities.

The unprecedented shift from face-to-face learning to e-learning has also driven many lecturers to give students numerous tasks or assignments. However, this is not usually accompanied by clear task instructions. Moreover, through the open-ended questions, students described how e-learning offered less opportunity for consultation and communication between learners and lecturers, aggravating the students' problems. The problems of unclear teaching and task instructions as well as a lack of communication and consultation opportunities have also been found in earlier studies (Aboagye et al., 2020; Adnan & Anwar, 2020; Dhawan, 2020; Song et al., 2004). From the qualitative analysis, however, students were found to have adopted behavioural and contextual regulation strategies to improve collaboration and time management; this was also reflected in the OSLOQ result which showed that students had a medium level of help-seeking skill. Dunn et al. (2014) argue that students' level of SRL skills is in line with their ability to seek academic help. In other words, self-regulated learners are aware of when they need assistance as well as the type of assistance they need (Dunn et al., 2014). The students in this research reported that they actively asked for the lecturer or peer's assistance with the learning materials they did not understand.

It is apparent from the findings that the students had various coping strategies to handle their difficulties in online SRL. In this case, tackling emerging issues is essential to maintain their SRL skills. According to Wandler and Imbriale (2017), self-regulated learners can actively engage in SRL strategies differently, such as seeking help from the instructor or a peer. As self-regulated learners, they actively seek help from individuals who have a greater understanding of the topics being learned (Wandler & Imbriale, 2017).

The students reported that the issues experienced decreased the learning quality and their own satisfaction and motivation for online learning. This is consistent with previous studies that have emphasized users' satisfaction as one of the essential elements affecting the success of SRL in an online learning environment (Lim et al., 2020; Liaw & Huang, 2007, 2013; Roca & Gagne, 2008; Zalli et al., 2019). At the same time, the students' strategies aimed at regulating their learning processes have developed a mediating role between their online learning experience and their satisfaction with it (Lim et al., 2020). In a similar vein, Zalli et al. (2019) revealed that SRL strategies such as planning, self-evaluation, and time management have become essential aspects for students' learning satisfaction in the MOOCs setting. In this regard, students reported that they performed motivational regulation strategies by motivating themselves in preparing and conducting online learning activities. Consequently, students need to acknowledge their problems and enhance their coping strategies to enable their SRL skills, thus promoting learning satisfaction in the online learning context.

CONCLUSION

In conclusion, the medium level of students' self-regulated learning skills reflected their ability to implement self-regulated strategies in the English 3 (Academic Writing) course in the online learning context. However, the level of self-regulated learning skills could still be improved by alleviating the problems they faced in the e-learning setting, including challenges with technology, materials and tasks, time management, study space, and motivation. Despite these issues, students were able to exert their agencies in managing the problems by implementing several strategies, including improving collaboration and time management, as well as other technical, academic, and affective strategies; these should be supported by lecturers and university stakeholders to improve their coping strategies.

From the current research, some implications and recommendations can be highlighted. First, the transition from face-to-face learning to online learning should be aligned with the amount of support provided by lecturers and universities to equip the students to become self-regulated learners. In this regard, the learning activities provided by lecturers should be able to equip students with the skills needed to become more independent learners. Second, since some problems were found during the students' self-regulated learning experience,

such as technical issues, materials and tasks, and time management issues, students should be supported with the provision of clear and systematic instructional materials. Finally, constant communication should be maintained between lecturers and students during the online learning process to navigate possible issues that they might experience.

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REFERENCES

- Aboagye, E., Yawson, J. A., & Appiah, K. N. (2020). COVID-19 and e-learning: The challenges of students in tertiary institutions. *Social Education Research*, 2(1), 109–115. <http://ojs.wiserpub.com/index.php/SER/article/view/422>
- Adnan, M., & Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 2–8. <https://doi.org/http://www.doi.org/10.33902/JPSP.2020261309> Research.
- Ariyanti, A., Fitriana, R., & Pane, W. S. (2018). Self-regulated learning in writing of EFL learners. *Indonesian Journal of English Language Teaching and Applied Linguistics*, 3(1), 155–166. <https://doi.org/10.21093/IJELTAL.V3I1.170>
- Barnard-Brak, L., Paton, V. O., & Lan, W. Y. (2010). Self-regulation across time of first-generation online learners. *ALT-J: Research in Learning Technology*, 18(1), 61–70. <https://doi.org/10.1080/09687761003657572>
- Barnard, L., Lan, W. Y., Crooks, S. M., & Paton, V. O. (2008). The relationship between epistemological beliefs and self-regulated learning skills in the online course environment. *MERLOT Journal of Online Learning and Teaching*, 4(3), 261–266.
- Barnard, L., Lan, W. Y., To, Y. M., Paton, V. O., & Lai, S. L. (2009). Measuring self-regulation in online and blended learning environments. *Internet and Higher Education*, 12(1), 1–6. <https://doi.org/10.1016/j.iheduc.2008.10.005>
- Barnard, L., Paton, V., & Lan, W. (2008). Mediator in the relationship between online course perceptions with achievement. *International Review of Research in Open and Distance Learning*, 9(2), 1–11.

- Bisht, R. K., Jasola, S., & Bisht, I. P. (2020). Acceptability and challenges of online higher education in the era of COVID-19: A study of students' perspective. *Asian Education and Development Studies*. <https://doi.org/10.1108/AEDS-05-2020-0119>
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies & academic achievement in online higher education learning environments: A systematic review. *Internet and Higher Education*, 27, 1–13. <https://doi.org/10.1016/j.iheduc.2015.04.007>
- Cohen, L., Manion, L., & Morrison, K. (2018). *Research methods in education* (8th ed.). Routledge.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Creswell, John W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Dunn, K. E., Rakes, G. C., & Rakes, T. A. (2014). Influence of academic self-regulation, critical thinking, and age on online graduate students' academic help-seeking. *Distance Education*, 35(1), 75–89.
- Hacker, D. J., Dole, J. A., Ferguson, M., Adamson, S., Roundy, L., & Scarpulla, L. (2015). The short-term and maintenance effects of self-regulated strategy development in writing for middle school students. *Reading and Writing Quarterly*, 31(4), 351–372. <https://doi.org/10.1080/10573569.2013.869775>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th ed.). Pearson Education.
- Hamman, L. (2005). Self-regulation in academic writing tasks. *International Journal of Teaching and Learning in Higher Education*, 17(1), 15–26.
- Iqbal, M. (2020). Nadiem: Belajar dari rumah, guru jangan hanya beri tugas berat, harus interaksi. *Kumparan.Com*. <https://kumparan.com/kumparannews/nadiem-belajar-dari-rumah-guru-jangan-hanya-beri-tugas-berat-harus-interaksi-1t5SCYZuYAU>
- Jansen, R. S., van Leeuwen, A., Janssen, J., Conijn, R., & Kester, L. (2020). Supporting learners' self-regulated learning in Massive Open Online Courses. *Computers and Education*, 146, 103771. <https://doi.org/10.1016/j.compedu.2019.103771>

- Kizilcec, R. F., Pérez-Sanagustín, M., & Maldonado, J. J. (2017). Self-regulated learning strategies predict learner behavior and goal attainment in Massive Open Online Courses. *Computers and Education*, 104, 18–33. <https://doi.org/10.1016/j.compedu.2016.10.001>
- Liaw, S. S., & Huang, H. M. (2007). Developing a collaborative e-learning system based on users' perceptions. *Lecture Notes in Computer Science*, 4402, 751–759.
- Liaw, S. S., & Huang, H. M. (2013). Perceived satisfaction, perceived usefulness and interactive learning environments as predictors to self-regulation in e-learning environments. *Computers & Education*, 60, 14–24.
- Lim, C. L., Ab Jalil, H., Ma'rof, A. M., & Saad, W. Z. (2020). Self-regulated learning as a mediator in the relationship between peer learning and online learning satisfaction: A study of a private university in Malaysia. *Malaysian Journal of Learning and Instruction*, 17(1), 51–75. <https://doi.org/10.32890/mjli2020.17.1.3>
- Lynch, R., & Dembo, M. (2004). Online learning in a blended learning context. *International Review of Research in Open and Distance Learning*, 5(2), 1–16. <http://www.irrodl.org/index.php/irrodl/article/view/189/799>
- Mbato, C. L., & Cendra, A. (2019). EFL undergraduate students' self-regulation in thesis writing. *Journal of English Language and Education (JELE)*, 5(1), 66–82. <https://doi.org/http://dx.doi.org/10.26486/jele.v5i1.949>
- McMahon, M., & Oliver, R. (2001). Promoting self-regulated learning in an online environment. In C. Montgomerie & J. Vitelli (Eds.), *Proceedings of ED-MEDIA 2001--World Conference on Educational Multimedia, Hypermedia & Telecommunications* (pp. 1299–1305). Association for the Advancement of Computing in Education (AACE). <https://www.learntechlib.org/primary/p/8630/>
- Mehrabi, M., Kalantarian, S. R., & Boshraadi, A. M. (2016). The interplay between self-regulation strategies, academic writing achievement and gender in an Iranian L2 context. *Journal of Applied Linguistics and Language Research*, 3(2), 230–239.
- Onah, D. F. O., & Sinclair, J. E. (2016). An empirical investigation of students' perceptions of self-regulated learning in online blended learning: A case study of a novel e-learning platform. *EDULEARN16 Proceedings*, 1, 5960–5969. <https://doi.org/10.21125/edulearn.2016.0271>
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.),

- Handbook of self-regulation* (pp. 451–502). Academic Press.
- Roca, J. C., & Gagne, M. (2008). Understanding e-learning continuance intention in the workplace: A self-determination theory perspective. *Computers in Human Behavior*, 24, 1585–1604.
- Serdyukov, P., & Hill, R. (2013). Flying with clipped wings: Are students independent in online college classes? *Journal of Research in Innovative Teaching*, 6(1), 54–67.
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7(1), 59–70. <https://doi.org/10.1016/j.iheduc.2003.11.003>
- Wandler, J. B., & Imbriale, W. J. (2017). Promoting undergraduate student self-regulation in online learning environments. *Online Learning Journal*, 21(2). <https://doi.org/10.24059/olj.v21i2.881>
- Wang, C. H., Shannon, D. M., & Ross, M. E. (2013). Students' characteristics, self-regulated learning, technology self-efficacy, and course outcomes in online learning. *Distance Education*, 34(3), 302–323.
- Yulistiana, F. (2020). Imbas pandemi virus Corona bagi dunia pendidikan Indonesia dan global. *Kumparan.Com*. <https://kumparan.com/kumparansains/imbas-pandemi-virus-corona-bagi-dunia-pendidikan-indonesia-dan-global-1t5YVXRYAbo/full>
- Zalli, M. M. M., Nordin, H., & Hashim, R. A. (2019). The role of self-regulated learning strategies on learners' satisfaction in massive open online course (MOOC): Evidence from Malaysia MOOC. *International Journal of Innovative Technology and Exploring Engineering*, 8(10), 2286–2290. <https://doi.org/10.35940/ijitee.J1138.0881019>
- Zalli, M. M. M., Nordin, H., & Hashim, R. A. (2020). Online self-regulated learning strategies in MOOCs: A measurement model. *International Journal of Emerging Technologies in Learning*, 15(8), 255–263. <https://doi.org/10.3991/IJET.V15I08.12401>
- Zhao, H., & Chen, L. (2016). How can self-regulated learning be supported in e-learning 2.0 environment: A comparative study. *Journal of Educational Technology Development and Exchange*, 9(2), 1–20.
- Zhu, Y., Mustapha, S. M., & Gong, B. (2020). Review of self-regulated learning in Massive Open Online Course. *Journal of Education and Practice*, 11(8), 9–14. <https://doi.org/10.7176/jep/11-8-02>

- Zimmerman, B. J. (1989). A social cognitive view of self-regulated academic learning. *Journal of Educational Psychology*, 81(3), 329–339. <https://doi.org/10.1037/0022-0663.81.3.329>
- Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist*, 25(1), 3–17.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2
- Zimmerman, B. J., Bonner, S., & Kovach, R. (1996). *Developing self-regulated learners: Beyond achievement to self-efficacy*. American Psychological Association.