

Online Self-Regulation in EFL Writing Classes: A Mixed-Method Approach

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Abstract

Research on self-regulation has been extensively conducted but rarely undertaken in online EFL writing classes involving gender and motivation, and the results remain inconsistent. Considering gender and motivation, we posed four research questions: Which online self-regulation is most frequently used by EFL university students in writing classes? Does the use of online self-regulation differ across genders and motivations? To what extent does motivation correlate with online self-regulation? How do the students self-regulate their online writing classes? This mixed-method approach involved 252 Indonesian EFL university students. In the quantitative phase, the students were assigned to respond to Questionnaires about Self-Regulation in Online Writing Classes and the Motivation for Learning Writing Online. We analyzed the data using descriptive statistics, One-way ANOVA, and multiple regression. Based on the statistical results, we invited twelve participants to join group interviews and analyzed the data using content analysis. We interpreted the quantitative and qualitative results separately and compared them. This study reported the high use of online self-regulation in writing classes. The most and the least frequent subscales are environment structuring and task strategies. The students' use of online self-regulation is significantly different, especially across motivation levels. High-motivation students apply online self-regulation more frequently. Motivation correlates significantly with online self-regulation, meaning that it can be a predictor of online self-regulation use. The qualitative results confirm that high-motivation students apply more self-regulation in task strategies, time management, help-seeking, and self-evaluation. These research findings imply the need for EFL students with moderate motivation to engage in self-regulation more frequently.

Key Words: gender, motivation, online self-regulation, writing classes

Introduction

Being autonomous is a critical demand for students today. They should be able to self-regulate their learning to successfully attain the learning result because self-regulation predicts academic achievement (Çelik et al., 2012; Nota et al., 2004; Theobald, 2021; Zimmerman & Kitsantas, 2014). Self-regulation has been proven to be a critical aspect of learning writing. For example, Helsel and Greenberg (2007) reveal that self-regulation helps struggling writers overcome writing difficulties. More specifically, Geres-Smith et al. (2017) unveil that self-regulation improves the quality of writing, writing time, and self-efficacy. Kartika (2015) finds a substantial improvement in the students' writing scores after the intervention of self-regulation. Students engaged in the self-regulated strategy intervention perform better than those who do not receive any intervention (Teng & Zhang, 2019). Self-regulation is necessary for students to learn writing since students should have a personal schedule, work on the tasks individually, and possess maintainable creative efforts (Zimmerman & Bandura, 1994). Additionally, the cyclical writing process demands students' high investment of time (Rosário et al., 2019). To this point, students should have self-regulation to enhance their writing knowledge and strategies (Harris & Graham, 2016).

Current issues regarding self-regulation highlighted three significant issues: intensity of use, different use, and correlation. In terms of intensity of use, previous studies report different use of self-regulation: high (Abadikhah et al., 2018; Muwonge et al., 2020; Sari et al., 2023; Umamah & Cahyono, 2020; Umamah et al., 2022; Vanslambrouck et al., 2019; Xu, 2021), moderate (Chen & Hsu, 2020; Kara et al., 2020), and low (Sun & Wang, 2020). The method (Abadikhah et al., 2018) and social support/help-seeking (Umamah & Cahyono, 2020; Umamah & Cahyono, 2020; Umamah et al., 2022; Yot-Domínguez & Marcelo, 2017), and environment structuring (Bylieva et al., 2021; Vanslambrouck et al., 2019) are reported as the most frequently used subscales. Concerning the different use, the previous studies examine the role of gender and motivation, depicting inconsistent findings. Some studies highlight significant differences in self-regulation between male and female students, favoring female students. Female students show better control in self-regulation in language learning regarding emotion, awareness, and boredom control (Tseng et al., 2017). Also, female students score higher on help-seeking strategies, utility value, and performance anxiety (Virtanen & Nevgi, 2010). Conversely, some studies report insignificant differences (Hong et al., 2009; Kara et al., 2020; Liou & Kuo, 2014; Ramírez-Correa et al., 2015; Yukselturk & Bulut, 2009). Meanwhile, Zheng et al. (2018) and Wang and Zhan (2020) prove that students with high motivation have better self-regulation in learning. Regarding the correlation, some research shows different results. Pérez et al. (2017) report a significant effect of gender on self-regulation, while the role of gender is not significant in self-regulation (Kara et al., 2020). Meanwhile, some studies highlight the correlation between motivation and self-regulation (Ertmer & Newby, 1996; Wang & Zhan, 2020; Zheng et al., 2018).

Most of the previous studies were done in the offline learning context. Currently, students have been engaged in online learning because of the COVID-19 pandemic. Online learning has emerged as an option since it enables students to gain knowledge without spatial or temporal constraints (Min & Nasir, 2020). This situation has also impacted writing learning in the EFL context, where students have been shifted to online writing classes. Learning online, in fact, is not easy since students are required to be more adaptive and autonomous (Broadbent & Fuller-Tyszkiewicz, 2018). Students need specific self-regulation in an online learning context because there is a noteworthy distinction in the students' use of self-regulation in the online and offline learning environment regarding frequency of use, primarily related to metacognitive self-regulation and effort regulation (Barnard et al., 2009; Min & Nasir, 2020; Shea & Bidjerano, 2012; Quesada-Pallarès et al., 2019). While offline self-regulation has been

widely studied, further investigation of self-regulation in an online context is necessary. Additionally, the previous studies on the use of online self-regulation were conducted in China (Wang & Zhan, 2020; Xu, 2021; Zheng et al., 2016; Zheng et al., 2018), Belgium (Vanslambrouck et al., 2019), Chile (Kizilcec et al., 2017), Turkey (Kara et al., 2020), and Russia (Martinez-Lopez et al., 2017), and the United States (Song & Kim, 2021). Minimal publications in the Indonesian context (Hindradjat et al., 2022; Mahmud & German, 2021) call for further research.

Previous studies regarding the role of gender and motivation in the online learning environment report inconsistent findings (Hartnett, 2016; Lin et al., 2017; Lim et al., 2020; McSparran & Young, 2011). Thus, further investigation of these two variables is worth taking (Basol & Balgalmis, 2016; Song & Kim, 2021; Wang & Zhan, 2020; Wong et al., 2019), especially when it is linked to the use of self-regulation. Moreover, the existing studies mainly analyze gender and motivation separately. In addition, only one report (Mahmud & German, 2021) about self-regulation in an online writing class was published. However, it did not consider the role of students' individual differences. Also, most previous studies on self-regulation involving gender and motivation provide statistical evidence (Urbina et al., 2021). Therefore, a descriptive qualitative report is recommended (Yot-Domínguez & Marcelo, 2017; Zheng et al., 2018) to interpret better the statistical analysis (Wang & Zhan, 2020). At this point, combining both statistical and qualitative data is supposed to provide more fruitful insight into the use of online self-regulation in writing classes across gender and motivation levels in EFL settings. Given the literature review above, this study posed four research questions.

1. Which online self-regulation is most frequently used by EFL university students in writing classes across gender and motivation?
2. Does the use of online self-regulation differ across genders and motivations? To what extent does motivation correlate with online self-regulation in writing classes?
3. How do the students self-regulate their online writing classes?

This study focused on self-regulation used by EFL university students in online writing classes, especially during the COVID-19 pandemic. This study analyzed the whole learning process in online writing classes. We did not specifically investigate the use of self-regulation in the writing process or the text types. While students have numerous individual differences, this study covered only two variables: gender and motivation. The motivation levels involved in the analysis were only high and moderate levels. These limitations might influence the results of this study.

Methodology

Research Design

This study adopted a mixed-method approach with an Explanatory Sequential Design since the quantitative and qualitative data collection and analysis were performed in two phases. The first phase was to deal with the quantitative data collection and analysis. A cross-sectional survey design was applied to investigate the first research question related to online self-regulation in online writing classes, the ex-post facto design examined the second research question about the different uses of online self-regulation across gender and motivation, and the correlational design investigated the link between motivation and online self-regulation. Given the statistical analysis, the participants for the qualitative phase were recruited to participate in the interview sessions. It is then followed by qualitative data collection and analysis. The qualitative data were to explore the last research question about how students across gender and motivation levels use online self-regulation in writing classes. The final

procedure was interpretation. Firstly, we interpreted the quantitative and qualitative results separately in the Findings. After that, the two interpretations were compared in the Discussion Part to see how the qualitative results explain and add insight into the quantitative results.

Participants

This study involved four universities in East Java, Indonesia. These universities offered an online writing course in 2020/2021 when the learning process was done virtually because of the COVID-19 outbreak. The participants were sophomores majoring in the English Education Department with at least one year of experience joining a writing course in an online context. The targeted participants were first asked about their willingness to participate in this research by clicking the “Yes” button on the online consent letter page before the questionnaires. The total number of participants who agreed and responded to the questionnaires was 261 students aged 18 to 23. Out of 261 participants, participants with low motivation were excluded from the statistical analysis due to the insufficient number of participants (five male and four female students). Statistical analysis is generally performed for at least 30 participants. The small number of low-motivated students is because the targeted participants are majoring in English Education; thus, their motivation to learn English is supposed to be relatively high. In the end, only 252 participants (65 male and 187 female students) were involved in the quantitative analysis. Based on the means of their responses to the questionnaire about motivation, they were categorized into four: male students with high motivation (MH), male students with moderate motivation (MM), female students with high motivation (FH), and female students with moderate motivation (FM).

Applying the purposive sampling technique, the researchers planned to interview five students representing each group (20 students in total) due to time constraints. We then asked for their agreement to participate in the interview sessions. However, only twelve participants (three students from each group) actively responded; thus, the twelve students were involved in some group interview sessions.

Instruments

The data were obtained from the Self-Regulation in Online Writing Class (SROWC) and the Motivation for Learning Writing Online (MLWO) questionnaires. Before the main questionnaires, the participants were asked for demographic information (e.g., name, gender, age). In addition to questionnaires, an interview guide was prepared to gain qualitative data.

Self-Regulation in Online Writing Class (SROWC) Questionnaire

The Self-Regulation in Online Writing Class (SROWC) Questionnaire was adapted from the Online Self-Regulated English Learning (OSEL) Questionnaire (Zheng et al., 2018). This questionnaire was an adaptation from Barnard et al. (2009) and Zheng et al. (2016). It is appropriate for the EFL context since it was assessed in the Chinese context, which has a similar status of English learning to the Indonesian context. The OSEL Questionnaire consists of 20 items with a five-point Likert-type ranging from 1, “do not agree at all,” to 5, “strongly agree.” It consists of six subscales: environment structuring, goal-setting, time management, help-seeking, task strategies, and self-evaluation. Some adjustments were made to ensure the questionnaire items were proper in the context of online writing classes. The adjusted questionnaire was later named the Self-Regulation in Online Writing Class (SROWC) Questionnaire.

Table 1*Self-Regulation in Online Writing Class (SROWC) Questionnaire*

Subscales	Indicators	Items	Number of Items
Goal-setting	Planning and prearranging the outcomes of learning writing online	1, 2, 3, 4	4
Environment Structuring	Finding a good place for learning writing online	5, 6, 7, 8	4
Task Strategies	Applying appropriate strategies for accomplishing online writing tasks	9, 10, 11	3
Time Management	Setting specific time aside for learning writing online	12, 13, 14	3
Help-seeking	Seeking help from peers or teachers	15, 16, 17	3
Self-evaluation	Evaluating students' progress in online learning	18, 19, 20	3
Total			20

This questionnaire was translated into the participants' first language (Indonesian) using back-translation. The translation was to avoid misunderstanding, misinterpretation, and ambiguity. It was also validated by an expert in English language teaching, who has 28 years of teaching experience and is an expert in language learning strategy research. The translated questionnaire was tried out to 46 freshmen to verify the validity and reliability. Based on the analyses, the SROWC Questionnaire was valid and reliable, as indicated by the overall Cronbach's alpha value of .931. Therefore, this questionnaire could be used as a research instrument.

Motivation for Learning Writing Online (MLWO) Questionnaire

The second instrument to gain data about the students' levels of motivation was the Motivation for Learning Writing Online (MLWO) adapted from Questionnaire Online Language Learning Motivation (OLLM) (Zheng et al., 2018). This questionnaire was originally from You and Dörnyei (2014) and was adjusted by Zheng et al. (2018) to match the EFL context. This five-point Likert scale questionnaire consists of 16 items ranging from 1, "do not agree at all," to 5, "strongly agree." It is divided into five subscales: online English learning experience (OELE), cultural interest (CI), instrumentality-promotion (IPO), instrumentality-prevention (IPR), and others' expectations (OE). The items in the questionnaire were adjusted to match the context of online writing classes. The modified questionnaire was named the Motivation for Learning Writing Online (MLWO) Questionnaire.

Table 2*Motivation for Learning Writing Online (MLWO) Questionnaire*

Subscales	Indicators	Items	Number of Items
Online Writing Learning Experience	Students' situation-specific motives linked to the current or previous online writing experience	1, 2, 3	3
Cultural Interest	Students' interest in the cultural products of the English language (e.g., magazines and articles)	4, 5, 6	3

Instrumentality-promotion	Students' personal goals in learning writing (e.g., to get a better future)	7, 8, 9	3
Instrumentality-prevention	Students' acknowledgment of duties or obligations (e.g., learning writing to pass a certain exam)	10, 11, 12	3
Others' Expectations	Expectations of parents, teachers, or peers towards students' writing skills	13, 14, 15, 16	4
Total			16

We then translated the questionnaire into the participants' first language to ensure clarity and validity. It was also checked by the same expert and piloted to the same students in the SROWC Questionnaire. The validity and reliability were confirmed by the overall Cronbach's alpha value of .939. Therefore, this questionnaire could be used as the research instrument.

Interview Guide

The last instrument is a self-construct interview guide used to dig for detailed data about how the students across gender and motivation self-regulate their online writing classes. The interview guide consisted of an introduction, six questions related to online self-regulation, and a closing. The questions about online self-regulation were based on the six subscales: how the students set learning goals, structure their online learning environment, use task strategies, manage their time, ask for help, and self-evaluate their learning progress. The interview guide was validated by the same expert, validating the questionnaires. The interview sessions used the participants' first language to ensure clarity and avoid ambiguity.

Data Collection and Analysis

The questionnaires were administered online using a Google Form for practical reasons. Firstly, the targeted participants were requested to read the research objectives and two stipulations. The stipulations informed that the participants' personal information would be kept anonymous, and their questionnaire responses would not affect their academic performance. Additionally, a statement of agreement to take part in this study was given with 'Yes' or 'No' as the options. The participants could confirm their agreement to join this study by selecting 'Yes.' The participants then responded to the questionnaires. It took a week to collect their responses.

A descriptive statistic analysis was done to unveil the frequency of online self-regulation by EFL university students based on gender and motivation (Research Question 1). One Way ANOVA examined the significant difference in online self-regulation based on gender and motivation (Research Question 2). Meanwhile, multiple regression was applied to investigate the correlation between motivation and online self-regulation (Research Question 3).

Given the results of the quantitative analyses, twelve participants were recruited as participants in the qualitative phase to investigate the last research question about how they use the six subscales of self-regulation in online writing classes. They were invited to join focus group interviews. Focus group interviews were selected to make the participants feel relaxed in answering the questions as done in a group. Due to the COVID-19 pandemic, the interview sessions were recorded online via Zoom. This online meeting made the interview last longer; each group interview session took 90-120 minutes. It was due to a signal problem. The interviews were conducted two to three times to ensure the consistency of participants' responses. Follow-up interviews were done using WhatsApp voice notes to confirm and clarify the participants' answers (e.g., explaining how they managed their time, to whom they asked

for help, and what specific strategies they used in accomplishing writing tasks). The qualitative data were then analyzed using content analysis (Elo et al., 2014), covering preparation, organization, and report. In the preparation phase, relevant data were collected and made sense, followed by selecting the analysis unit. The organization phase used an inductive approach: coding, creating categories, and making abstractions. The reporting phase was to present the results based on the content of the categories.

Results

The Frequency of Use of Online Self-regulation

To answer the research question, “Which online self-regulation is most frequently used by EFL university students in online writing classes across gender and motivation?” a descriptive statistics analysis was conducted. The result is presented in Table 3.

Table 3

The Use of Online Self-regulation Based on Gender and Motivation

Group	N	GS	ES	TS	TM	HS	SE	Average
		Mean	Mean	Mean	Mean	Mean	Mean	
Male high motivation	38	3.69	4.12	3.11	3.36	3.93	3.73	3.66
Male moderate motivation	27	3.16	3.85	2.82	3.16	3.75	3.40	3.36
Female high motivation	126	3.77	4.25	3.43	3.63	3.93	3.81	3.80
Female moderate motivation	61	3.36	3.88	2.99	3.04	3.61	3.37	3.38
Overall	252	3.59	4.10	3.21	3.40	3.83	3.65	3.63

Note: GS (Goal-setting), ES (Environment Structuring), TS (Task Strategies), TM (Time Management), HS (Help-seeking), SE (Self-evaluation)

Table 3 explains that EFL university students' overall use of online self-regulation (N=252) is high, with a mean of 3.63. The highest use of online self-regulation goes to environment structuring (M= 4.10), while the lowest is task strategies (M= 3.21). Male and female students with high motivation have a high mean (M= 3.66 and 3.80), while those with moderate motivation obtain a moderate mean (M= 3.36 and 3.38).

Specifically, male students with high motivation apply online self-regulation at a high level (environment structuring=4.12, help-seeking=3.93, self-evaluation=3.73, and goal-setting=3.69), except for time management and task strategies (M=3.36 and 3.11) used moderately. The online self-regulation use by male students with moderate motivation is moderate (self-evaluation=3.40, goal-setting=3.16, time management=3.16, and task strategies=2.82), except environment structuring and help-seeking (M=3.85 and 3.75) used at a high level. Meanwhile, female students with a high level of motivation generally use online self-regulation at a high level (environment structuring=4.25, help-seeking=3.93, self-evaluation=3.81, goal-setting=3.77, and time management=3.63); they use task strategies at a moderate level (M=3.43). Like the male students, online self-regulation is used moderately by female students with moderate motivation (self-evaluation=3.37, goal-setting=3.36, time management=3.04, and task strategies=2.99). Only environment structuring and help-seeking are used at a high level (M=3.88 and 3.61).

In brief, EFL university students use online self-regulation in writing classes at a high level. The most frequent use of online self-regulation by all four groups of students is environment structuring and help-seeking, respectively. Self-evaluation and goal-setting are used by students with high motivation at a high level but moderately used by those with

moderate motivation. Time management is at a high level only by female students with high motivation, while the other three groups use this subscale moderately. Task strategies, with the lowest mean, are used at a moderate level by all of the four groups.

The Different Uses of Online Self-regulation

The second research question, “Does the use of online self-regulation differ across gender and motivation?” was answered by performing One-Way ANOVA. The results of this analysis are visualized in Table 4.

Table 4

The Different Use of Online Self-regulation Based on Gender and Motivation

Subscales	Group	Group 2		Group 3		Group 4	
		Mean Difference	Sig.	Mean Difference	Sig.	Mean Difference	Sig.
Goal-setting	1	.53338*	.003	-.07508	1.000	.33013	.051
	2		-	-.60847*	.000	-.20325	.872
	3				-	-.40522*	.000
	4						-
Environment Structuring	1	.26657	.692	-.12959	1.000	.23727	.528
	2		-	-.39616*	.034	-.02930	1.000
	3				-	.36687*	.003
	4						-
Task Strategies	1	.29802	.401	-.31423	.053	.11952	1.000
	2		-	-.61225*	.000	-.17850	1.000
	3				-	.43375*	.000
	4						-
Time Management	1	.19847	1.000	-.27277	.235	.31511	.198
	2		-	-.47124*	.012	.11664	1.000
	3				-	.58789*	.000
	4						-
Help-seeking	1	.17714	1.000	-.00122	1.000	.31761	.145
	2		-	-.17836	1.000	.14046	1.000
	3				-	.31882*	.017
	4						-
Self-evaluation	1	.33287	.235	-.08110	1.000	.36252*	.038
	2		-	-.41397*	.015	.02965	1.000
	3				-	.44362*	.000
	4						-

*. The mean difference is significant at the .05 level.

Note: (1) Male students with high motivation, (2) Male students with moderate motivation, (3) Female students with high motivation, (4) Female students with moderate motivation

Table 4 describes the significant difference between each student group in the use of six subscales of online self-regulation. Overall, students across gender and motivation use online self-regulation significantly differ. Male students with high and moderate motivation have no significant difference except in goal setting (Sig. = .003 < .05). Male students with high motivation tend to have a higher mean than those with moderate motivation. Meanwhile, male and female students with high motivation are not significantly different in all subscales (Sig. = .1000, 1.000, .053, .235, 1.000, and 1.000 > .05). No significant difference is also revealed between male students with high motivation and female students with moderate motivation, except in self-evaluation (Sig. = .038 < .05), in which male students with high motivation have

a better mean. Meanwhile, a significant difference appears between male students with moderate motivation and female students with high motivation in the use of five subscales (Sig. = .000, .034, .000, .012, and .015 < .05), and female students with high motivation are more dominant. A significant difference is also found between female students with high and moderate motivation in using all subscales (Sig. = .000, .003, .000, .000, .017, and .000 < .05), and female students with high motivation outperform those with moderate motivation.

The results above indicate that the use of online self-regulation across gender and motivation is significantly different. Nevertheless, the difference likely appears across motivation levels, and high-motivation students, regardless of gender, outperform those with moderate motivation.

The Correlation between Motivation and Online Self-Regulation

The next question is, “To what extent do gender and motivation correlate with online self-regulation in online writing classes?”. The data were analyzed using multiple regression. The analysis result for each subscale of online self-regulation is presented in Table 5.

Table 5

Multiple Regression Analysis Results

Subscales	Predictors	β	Sig.
Goal-Setting	Motivation	-0.441	.004
	<i>Rsquare = .121</i>		
Environment Structuring	Motivation	-0.339	.004
	<i>Rsquare = .061</i>		
Task Strategies	Motivation	-0.396	.004
	<i>Rsquare = .114</i>		
Time Management	Motivation	-0.480	.004
	<i>Rsquare = .102</i>		
Help-seeking	Motivation	-0.280	.004
	<i>Rsquare = .038</i>		
Self-evaluation	Motivation	-0.413	.004
	<i>Rsquare = .090</i>		

Table 5 shows that the significance levels of motivation in using all subscales of online self-regulation are at .004 < .05, meaning that motivation significantly correlates with online self-regulation. Additionally, the contribution of motivation is relatively small, with the highest variance of 12.1% ($R^2=.121$) in the use of goal setting and the lowest variance of 3.8% ($R^2=.038$) in the use of help-seeking.

Based on the analyses mentioned above, it can be summed up that motivation can predict students’ online self-regulation. However, its contribution is relatively small.

The Description of Online Self-Regulation Use

The subsequent analysis deals with the interview data. It is to explore the last research question, “How do the students self-regulate their online writing classes?”. The twelve students were asked how they use six subscales: goal setting, environment structuring, task strategies, time management, help-seeking, and self-evaluation. We grouped the students into four: male students with high motivation (MH1, 2, 3), male students with moderate motivation (MM1, 2, 3), female students with high motivation (FH1, 2, 3), and female students with moderate motivation (FM1, 2, 3).

Goal-setting

Goal-setting is divided into short and long-term learning goals. All students with high motivation and female students with moderate motivation shared the same opinion that they set short-term learning goals (weekly). They admitted that the teacher's course outline helped them plan and prepare for what to do next. In addition, they had a particular target to accomplish, such as understanding specific materials before moving to the next. FH1 said, *"The teacher gave a course overview [lesson plan], so I checked the course outline before the class and found the materials to learn that day. I must understand the material before going to the next."* Some (MH2, MH3, FH2, FH3, FM2, and FM3) also set long-term goals to prepare for article writing, undergraduate thesis writing, and future career. FM3 explained, *"My long-term goal is to prepare for the undergraduate thesis and write articles after graduation."* Conversely, male students with moderate motivation had different answers. MM1 stated that he never set any learning goals. MM2 rarely set short-term learning goals, but his long-term goal in learning writing was to pass the IELTS exam. He stated, *"I rarely set short-term goals, almost never. I just follow the flow. But, my long-term goal is to pass the IELTS exam."* MM3 set his goals by creating a milestone for his writing skills.

Overall, students across gender and motivation levels set short-term learning goals, except male students with moderate motivation. Only half also set long-term learning goals. The students admitted that their short-term learning goals followed the teachers' lesson plans, providing detailed information about the materials and schedules. Those with long-term learning goals considered article writing, undergraduate thesis writing, test, and future careers as reasons to learn writing seriously.

Environment Structuring

In structuring the learning environment, all groups of students agreed that finding a comfortable, quiet place with minimum distractions from the surroundings and a good Internet signal is a priority. It was to make them stay focused and concentrated. They also prepared devices (e.g., a laptop, cellphone, and charger). MH1 explained, *"If it is noisy at home, I go to a café with my classmates and find a comfortable place with minimum distractions and a good signal. I bring a laptop and a cell phone (to anticipate a blackout)."* Some (FH1, FH2, FM3, and MM1) equipped themselves with learning materials. FH2 said, *"I also print the learning materials provided by my teacher in a GDrive."* Some students (MH1, FH2, FH3, and MM1) were also ready with drinks, e.g., mineral water or coffee. FH2 added, *"Often, I prepare a cup of coffee to make me relaxed."* MM1 also prepared cigarettes. MM1 answered, *"Coffee and cigarettes are to avoid sleepiness."*

The similar responses regarding environment structuring given by all students in the four groups confirmed the critical need for a conducive environment when learning in an online context. They prepared not only academic but also non-academic related things. It is crucial to stay focused and concentrated during online writing classes.

Task Strategies

Regarding task strategies, students of all groups used some strategies for learning writing. The first strategy was note-taking (writing important notes or recording the Zoom meeting). FH1 answered, *"I wrote important points in a notebook."* They also used online resources for additional materials (e.g., Google search engine, Google Translate, YouTube, and Brainly) and writing tasks (e.g., plagiarism checker and reference manager). MM1 explained,

"I access Google and YouTube to find the materials and examples as inspiration. Google Translate and Brainly to get additional references." Interestingly, to stay relaxed and not dizzy, some students (FH1, FH2, FM1, FM2, MM1) listened to music while doing their writing tasks. They did it to stay happy, relaxed, focused, and get ideas. MM1 said, *"[doing the task] while listening to music to stay relaxed, not dizzy, and reduce stress."* The following strategy was asking peers or teachers. FH1 answered, *"If I do not understand the material, I ask my friends via WhatsApp. [If not getting an answer from her friends], I ask my teacher."* FM1 and FM3 added that they asked their peers or teachers for feedback provision. FM3 stated, *"I also get feedback from both of them [peers and teachers]."* The next strategy was organizing a task schedule. MH2 and MH3 usually did their writing tasks immediately to avoid piled-up tasks. MH2 said, *"I usually do my tasks step by step. I try to finish the tasks, at last, a day before the due date."* Finally, only highly motivated male and female students reviewed the materials to ensure their understanding. FH1 stated, *"If I have no more class, I usually review my materials or do the tasks 15 minutes after the class ends."*

Generally, regardless of gender and motivation, students used various strategies during online writing classes. They agreed that taking notes, using online resources, listening to music, asking peers/teachers, and setting a schedule benefit their writing learning. Unfortunately, only those with high motivation reviewed their materials.

Time Management

In time management, students of all groups disclosed that they were always disciplined in joining the classes. MM3 stated, *"I am disciplined, getting ready five minutes before the class starts."* They also set a particular schedule to finish the writing tasks on time with some considerations. First, they did the tasks during free days or lecture breaks. MH1 learned on Saturdays, while MH2 and FM1 enjoyed learning on Fridays with only one lecture. MH1 said, *"I do the tasks usually on Saturday."* Meanwhile, FH1 learns every day after class. She said, *"If I have no more class, I usually review my materials or do the tasks 15 minutes after the class ends."*

In addition, female students with high and moderate motivation did their tasks when they were in a good mood. FH2, FM2, and FM3 enjoyed learning or doing their tasks at night, not immediately after class since they felt tired and could not focus. MM3 said, *"I try to do my tasks as soon as possible and do these at night because I feel more comfortable. I use my free time after class to rest."* Finally, they performed the tasks by considering the due dates. Female students with high motivation tried to do the tasks long before the due date to be relaxed. FH1 answered, *"I do the tasks long before the due date to do it step by step and not in a hurry."* MM2 and FM2 performed their tasks a few days before the due date. MM2 admitted he was not good at time management. He explained, *"I have bad time management. It is because of my laziness. I usually do my tasks a few days before the deadline, but not late."* FM2 sometimes forgets to do the tasks, so she was late in submission.

Based on the student's responses, all students across gender and motivation levels made an effort to manage their learning time. They joined online writing classes and did the tasks on time. Their considerations in doing the tasks were free time, good mood, and due dates. However, moderate-motivation students struggled with time management, especially when performing writing tasks.

Help-Seeking

All students, despite gender and motivation, confirmed that they generally asked for help from close friends. MM1 said, *"I usually ask my classmates or seniors via WhatsApp if I*

do not understand the materials.” The reason was that their close friends would not refuse to help, and they felt more relaxed and free to discuss. MH1 said, *“It is more fun and relaxed with friends.”* They also asked for help from more knowledgeable students. The reason was that more knowledgeable students would give proper answers or feedback. FM1 admitted, *“I usually ask more knowledgeable friends to get a correct answer.”* All students, except MM1 and FM1, used the Internet (e.g., Google or YouTube) to get immediate help. MH1 said, *“I usually ask Google or YouTube because others [peers, seniors, and teachers] might be unable to help, especially to give immediate answers...moreover, if in a hurry.”* FH2 and MH2 added that he also used social media (e.g., TikTok or Instagram). FH2 explained, *“I also use social media like TikTok and Instagram to help me understand certain materials that I still don’t understand.”*

The last place to get help was from the writing teachers. All male and female students admitted they felt reluctant to ask their writing teachers. The first reason for the reluctance was feeling reticent about disturbing the teachers’ time, as answered by FH2, *“I am afraid of disturbing my teacher’s time or asking questions too many times.”* The slow response was the second reason, as stated by MM1, *“The teacher does not immediately answer my question.”* The last reason for not prioritizing teachers’ assistance was an inconvenient answer. MH1 said, *“I rarely ask the writing teacher because I’m reticent and afraid of getting an inconvenient answer because the teacher is busy or tired.”*

The students of all groups preferred close friends, more knowledgeable students, and the Internet/social media than their teachers to get help. They felt reluctant to ask their teachers for reasons such as feeling reticent, slow responses, and negative responses.

Self-Evaluation

Finally, the students did some activities to self-evaluate their understanding of the writing materials and tasks. The evaluation was generally obtained from self-review. All students, except FH2 and FM2, reviewed their learning progress independently by analyzing their weaknesses, noting them, and trying to improve them. MH3 explained, *“I usually evaluate my performance at the end of the class and semester based on the task results and the time in accomplishing the tasks. I reviewed my writing tasks by checking the content and structure because the two aspects are fundamental.”* All female students and one male with high motivation also obtained peer evaluations. MH1 said, *“I review the materials to check whether my understanding is correct. I discuss the materials with more knowledgeable friends or seniors. If we have different ideas, it can be additional knowledge.”* The students (except MM1, MM3, and FM1) also used teachers’ feedback for self-evaluation. MH3 said, *“I also consulted my tasks to my teacher.”* Three students (MH3, FH1, and MM3) evaluated their understanding of the materials by finding additional references from online resources (e.g., Google) to assess their understanding. MH3 said, *“I also use the Internet to check my understanding.”* FH2, interestingly, used social media (e.g., TikTok and Instagram) to check her understanding. She stated, *“I also use the Internet, TikTok, and Instagram to improve my understanding.”*

Generally, regardless of gender and motivation, almost all students performed independent reviews to self-evaluate their learning progress. They also completed self-evaluations based on their peers’ and teachers’ feedback. Interestingly, some high-motivation students admitted using online resources and social media to evaluate their understanding of the writing materials.

Discussions

Based on the quantitative results, EFL university students apply online self-regulation at a high level. It coincides with previous research conducted in China (Xu, 2021) and Belgium (Vanslambrouck et al., 2019). Conversely, in an offline context, Chinese EFL university students are reported to use self-regulation infrequently (Sun & Wang, 2020). Learning in an online context seems to encourage students to use a higher level of self-regulation (Quesada-Pallarès et al., 2019; Xu, 2021). Remarkably, all groups, despite their gender and motivation, use the six subscales of online self-regulation in the same rank: environment structuring, help-seeking, self-evaluation, goal setting, time management, and task strategies, respectively. These quantitative findings are in conjunction with the results from the qualitative phase, indicating students' recognition of the essential role of self-regulating their online learning. Learning online forces students to be more independent and use self-regulation more frequently, as reported by previous studies (Quesada-Pallarès et al., 2019; Xu, 2021).

The quantitative result reveals that goal-setting is used by students with high motivation at a high level but moderately used by those with moderate motivation. Bylieva et al. (2021) conversely report that goal orientation is the least used subscale. This difference might be because the students in this study have high and moderate motivation levels that are supposed to be more goal-oriented. It is reasonable since goal orientation significantly correlates with motivation (Usán et al., 2019). The qualitative result further explains that students across gender and motivation levels primarily manage short-term learning goals. The teachers' lesson plan is essential in helping students set short-term learning goals. Unfortunately, only half of them set long-term learning goals. These results depict ineffective use of the goal-setting subscale. Short and long-term learning goals are all required to attain success in learning; thus, they must be balanced (Boud & Falchikov, 2006). Long-term learning goals directly affect short-term learning goals and indirectly influence academic performance (Schutz & Lanehart, 1994). Moreover, the statistical result depicts that motivation contributes the most to goal-setting. To this point, teachers' roles are essential to direct students in setting short and long-term learning goals and emphasize these goals with structured activities (Alzubaidi et al., 2016).

Based on the quantitative result, environment structuring is the most frequently used by the students of all groups. This finding supports Vanslambrouck et al. (2019) and Bylieva et al. (2021). The students set their environment to find a comfortable place with minimum distractions to stay focused. The qualitative result supports this finding. They specifically need a stable Internet connection. These findings affirm the critical role of a conducive learning environment during online learning. Unfortunately, based on the interviews, most students admitted that their obstacles during online learning are related to the Internet and domestic issues. Baticulon et al. (2021) reveal that those obstacles are two main barriers to online learning. These distractions potentially decrease students' focus and concentration in online learning (Maqableh & Alia, 2021). It might be why the students prioritize environment structuring, as reflected in the highest use of this subscale. This current finding confirms that regardless of gender and motivation levels, students experience problems in concentrating and controlling anxiety during online learning (Lemay et al., 2021).

As depicted in the quantitative result, task strategies, the least used subscale, are used moderately by all four groups. It indicates students' difficulty organizing tasks efficiently, even for those with high motivation. This phenomenon possibly appears because the students participating in this study have experienced online learning for about one year. They did not have proper task strategies since they were still adapting. Online learning forces students to work on tasks more independently (Broadbent & Fuller-Tyszkiewicz, 2018); thus, they need various and proper task strategies (Barnard et al., 2009; Min & Nasir, 2020; Shea & Bidjerano, 2012). Surprisingly, the qualitative result indicates that students across gender and motivation levels use various task strategies such as using online resources, setting a schedule to finish the

tasks, asking peers or teachers, taking important notes, and listening to music. The qualitative result also reveals that students with high motivation are inclined to review their materials independently. Writing demands that students set a personal schedule, work individually, and have a sustainable creative effort (Zimmerman & Bandura, 1994). The least use of task strategies in the quantitative result and the use of various strategies based on the qualitative result imply that students across gender and motivation levels might have various strategies. Still, they have not used them frequently and optimally. Graham et al. (2000) unveil that failure to deploy effective strategies causes difficulties in learning writing skills. To this point, teachers need to deliver strategies-based writing instructions involving online resources that are reported to assist students' self-regulated writing (Umamah & Cahyono, 2022).

Besides, the use of time management depicted in the quantitative finding is high only by female students with high motivation. In contrast, the other three groups use this subscale moderately. Although previous studies report that female students have better time management (Kaya et al., 2012; Trueman & Hartley, 1996), this current finding emphasizes that only those with high motivation have better time management. It highlights the prominent role of motivation (Hartnett, 2016). The result that the other three groups are moderate self-regulators in managing time affirms that time management is an immense challenge in learning online (Maqableh & Alia, 2021; Song et al., 2004). The qualitative finding confirms the quantitative one. Based on the interviews, the students of all groups generally can manage their time by being on time to join the online writing classes. However, some students with moderate motivation struggle to manage their time to accomplish writing tasks. These findings confirm the significant challenge of time management in online learning.

Help-seeking is the second subscale used the most frequently by the students of all groups, depicting insignificant differences. This finding indicates the importance of social support from peers and teachers to overcome difficulties in understanding the materials and accomplishing the writing tasks. It is consistent with a report that social support is the most used self-regulation in offline learning (Yot-Domínguez & Marcelo, 2017). These findings prove EFL students' poor self-regulation to learn independently (Rasheed et al., 2020) in both online and offline learning. It is in line with the result in the qualitative phase. Students of all groups seek help to understand the writing materials and perform tasks. It confirms that writing is challenging, especially for EFL university students (Farooq et al., 2012; Karim et al., 2017; Umamah et al., 2019). They usually ask close and more knowledgeable peers to get proper assistance, discuss with seniors, and consult with the teachers. Students, regardless of gender and motivation levels, feel reluctant to ask their teachers for three reasons: feeling reticent, the teacher's slow response, and the teacher's negative response. To this end, teachers must provide a relaxed and accepting learning environment to promote students' development and academic performance (Vonkova et al., 2021). Remarkably, students with high motivation have more creative efforts by using online resources and social media to get instant help. A sustainable creative effort is required to learn writing (Zimmerman & Bandura, 1994). Students with moderate motivation should be encouraged to utilize accessible online resources and social media to help them learn writing.

The quantitative result reveals that students with high motivation use self-evaluation at a high level, but those with moderate motivation moderately use it. This finding demonstrates that more motivated students tend to have a greater need to evaluate their learning progress. It is evident that motivation and online self-regulation are closely related (Cho et al., 2021), and one of the motivational processes is progress evaluation (Schunk & DiBenedetto, 2020). The evaluation is performed by confronting understanding with peers or teachers and asking for feedback. Peer interaction significantly affects students' achievement in an online class (Kurucay & Inan, 2017), while teachers' information about the student's current performance is significant for students' learning progress and strategy evaluation (Farsani et al., 2014). This

quantitative finding is confirmed by the qualitative result that students with high motivation have slightly different ways to self-evaluate their learning progress. Online resources and social media were used to evaluate their knowledge of the writing materials. Not only is the intensity of use high, but they also have more creative efforts to self-evaluate their learning progress. It is in conjunction with a report that students with high motivation tend to make sustainable efforts to learn (Zimmerman & Schunk, 2008).

Reflecting on the quantitative and qualitative results, all students, despite gender and motivation, have understood the prominence of self-regulation and are intensely engaged in their online writing classes. The results of the qualitative analysis prove that students across motivation levels significantly differ in online self-regulation and that the relationship between motivation and self-regulation is significant. Based on the qualitative interpretation, high-motivation students are more self-regulated in task strategies, time management, help-seeking, and self-evaluation. Therefore, EFL teachers need to foster more autonomous learning by providing self-regulatory instruction (Oates, 2019) to help students with moderate motivation.

Conclusion

In general, the qualitative results support the quantitative results regarding the students' high frequency of self-regulation in online writing classes, the significant difference in online self-regulation mainly found across motivation levels, and the significant relationship between motivation and online self-regulation. Some critical issues are highlighted in the quantitative and qualitative interpretations. First, regardless of gender and motivation levels, students set short-term learning goals following their teachers' lesson plans, but only half also set long-term learning goals. It infers the urgency to explicitly inform the students about the significance of learning writing skills for their future needs as English students during their studies and after graduation. Next, all students, without exception, demand a learning environment that is comfortable and conducive with a fast, stable Internet connection to stay focused during online writing classes. All students apply various task strategies but use them infrequently. Moderate-motivation students should be encouraged to use multiple and appropriate learning strategies. Regarding time management, students with moderate motivation still have difficulty performing their tasks punctually. It implies the problem of managing time during online learning. In addition, students with high motivation are more creative in seeking help by using online resources and social media. It suggests bringing Information and Communication Technology (ICT) into online writing classes. The students' reluctance to get help from teachers infers the need for a more relaxed and accepting learning environment. Finally, high-motivation students show more effort in self-evaluating their learning progress. Students with moderate motivation should be given more attention and motivation in learning to survive in online writing classes.

Limitations

This study concerned online self-regulation use at the university level. Thus, future studies should investigate the same issue at the school level. Additionally, this study was done in the context of writing classes. Future studies should explore online self-regulation use in other skills, e.g., speaking, reading, or listening. The next issue that needs further investigation concerns motivation levels. This study investigated only high and moderate motivation. Recruiting low-motivation students in future studies is essential to present more insightful results. Another potential issue is related to students' differences. This study examined only gender and motivation. Accordingly, exploring other individual differences (e.g., anxiety,

writing achievement, and Internet addiction) will provide more comprehensive insight into factors affecting online self-regulation.

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