

## Saudi University Learners' Metacognitive Abilities and Writing Performance

Fatima Mahmoud Basaffar<sup>1\*</sup>, Syeda Saima Ferheen Bukhari<sup>1</sup><sup>1</sup>English Language Institute, University of Jeddah, Kingdom of Saudi ArabiaDOI: [10.36348/sijll.2023.v06i02.004](https://doi.org/10.36348/sijll.2023.v06i02.004)

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\*Corresponding author: Fatima Mahmoud Basaffar

English Language Institute, University of Jeddah, Kingdom of Saudi Arabia

### Abstract

Metacognitive knowledge, knowledge about knowledge, was found to have a positive effect on learners' performance, self-regulation, and academic success (Hartman, 2001; Wenden, 2001 & McCormick, 2013). However, little research has been done about the use of metacognitive knowledge and strategies applied in EFL writing in a Saudi context. The present study investigated the university learners' metacognitive abilities in relation to writing including other variables like learners' educational background and years of studying English. The study examined the correlation between the learners' metacognitive abilities and their writing performance affected by their metacognitive knowledge and its regulation. Data were collected using a modified version of the Metacognitive Components of Planning Writing Self-inventory developed by Escorcía and Gimenes (2020) to analyze the learners' metacognitive writing strategies. The survey consisted of three factors, metacognitive conditional knowledge, covert self-regulation, and environmental self-regulation. Participants were 190 female learners, first-year students studying English in a comprehensive program including writing at the University of Jeddah. Learners were asked to complete the survey adapted by the end of their course. The level of metacognition was checked for its effect on learners' writing through Linear Regression. Findings indicate a positive significant correlation between the learners' metacognitive conditional knowledge and writing performance. Also, a significant impact was predicted on learners' writing performance. However, findings also specify a negative correlation between environmental self-regulation and learners' writing performance. Additionally, the 'years of studying English' highly correlate with the learners' metacognitive abilities, unlike learners' educational background.

**Keywords:** Covert self-regulation, EFL writing, environmental self-regulation, metacognition, metacognitive knowledge, metacognitive conditional knowledge, writing performance.

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### INTRODUCTION

Writing in an English as a Foreign Language (EFL) context is one of the most essential and challenging skills that most learners have to deal with (Feng, 2020, Bukhari, 2016). Teachers as well as learners find themselves in a situation where they have to put together all the knowledge acquired and combine several strategies together to end up with a logically well-organized piece of writing. Writing proficiency does not simply require being aware of the grammatical rules, genre, and vocabulary but it requires the ability of self-regulation where a learner needs to plan, monitor, evaluate their writing processes and stay focused and motivated (Zimmerman & Risemberg, 1997 & Graham & Harris, 2000). The writing process requires problem-solving strategies that demand metacognitive control of text generation and recursive revision (Hyland and Hyland, 2019). Writers need to go through different metacognitive levels to set goals, make decisions, and find solutions (Wong 1991). Metacognition is the

knowledge used by learners to plan, monitor, regulate and develop cognitive processes.

The term metacognition, first coined by Flavell (1976), refers to "one's knowledge concerning one's cognitive processes and products" (p. 232). Metacognition was later defined as the awareness of a person of his/her knowledge, experiences, and emotions during the learning processes (Haukås, 2018). This kind of awareness was found to be a crucial element for language learning success (Wenden, 1998; Zhang, 2010; Zhang & Zhang, 2019 & Wu, 2021). Escorcía and Gimenes (2020) stated that metacognition plays an essential role in learning procedures. Writers have to engage in a complex cognitive process by selecting, organizing, and reviewing ideas. Using metacognition to improve the learners' writing skills has therefore been given a special focus and importance by many researchers (Tarricone, 2011 & Hattie, 2012).

As far as English writing is concerned, metacognitive strategies were found to be a central component that can lead to better writing performance (Victori, 1999; De Silva and Graham, 2015; Teng and Zhang, 2020). However, even though metacognitive competence was found to be an essential factor in English language learning (Qiyu Sun, Lawrence Jun Zhang, & Susan Carter 2021), further studies are still needed to provide more information about EFL learners' metacognition in relation to writing.

### Purpose of the Present Study

The present study is an attempt to investigate the effect, if any, of the learners' educational background and years of studying English on their metacognitive knowledge and its regulation. The study also examines the correlation between the learners' metacognitive knowledge and its regulation (MKR) and their writing performance. The following research questions have been addressed:

### Research Questions

1. RQ1. Does the first-year university learners' educational background affect their metacognitive knowledge and its regulation?
2. RQ2. Does the number of years of learning English affect first-year university learners' metacognitive knowledge and its regulation?
3. RQ3. Do metacognitive knowledge and its regulation significantly affect first-year university learners' Writing Performance?

## REVIEW OF THE LITERATURE

Metacognition was first defined as "cognition about cognition" or "thinking about thinking" (Dinsmore, Alexander, & Loughlin, 2008). More recently, the term came to include personal knowledge about different variables and personal factors and aspects related to tasks in addition to the individuals' cognitive practices (Schoonen *et al.*, 2003; Trapman, van Gelderen, van Schooten, & Hulstijn, 2018). Among the crucial techniques learners have to implement in this process is self-regulation (Azevedo, 2009). Self-regulation refers to the strategies for managing actions including planning, monitoring, and self-evaluation processes (Harris *et al.*, 2009; Mason & Graham, 2008). It is defined as an active, situational, and task-specific process in which individuals plan, execute, and evaluate their learning (Boekaerts, 1999; Zimmerman, 2000). Wirth and Leutner (2008) emphasized that this kind of process requires the activation of metacognitive strategies including planning, monitoring, and using other strategies to process information. Thus, the two dimensions of metacognition defined at an early stage are the knowledge about cognition referring to the knowledge an individual possesses about his cognition, and regulation of cognition referring to the activities that control an individual's learning or thinking processes such as planning, monitoring, and evaluation (Brown *et al.*, 1983).

Additionally, metacognition was categorized by other researchers into three subcategories: a) metacognitive knowledge, metacognitive experiences, and metacognitive strategies (Flavell, 1979; Garner, 1987; Efklides, 2001; Wu, 2006; Papaleontious-Louca, 2008; Efklides, 2009; Karlen, 2017; Zhang and Qin, 2018). According to them, metacognitive knowledge is the foundation that lies under cognitive and metacognitive strategies. It is the knowledge retrieved from the individual's memory to allow learners to know about themselves and others cognitively and to explore the relationships with cognitive tasks, goals, strategies, and experiences (Efklides, 2001). Metacognitive experiences are what an individual goes through during the cognitive process. It is defined as cognitive or affective experiences consciously stored in a learner's intellectual enterprise (Flavell 1979) and their awareness of the process needed to complete a task (Efklides 2008). Finally, metacognitive regulation includes planning, monitoring, and evaluating (Schraw, 1998). Planning is the ability to appropriately select strategies (Bukhari, 2019) and allocate resources for the task while monitoring is when learners employ strategies to monitor the task performance and evaluate deals with learners' products of the learning process.

As far as self-regulation strategies are concerned, cognitive, affective-motivational, behavioural and environmental processes that writers display while writing are considered (Harris *et al.*, 2009; Schunk & Zimmerman, 2007). Self-regulation writing strategies are classified into three categories, "Personal (or Covert) self-regulation", which aims at adjusting the cognitive strategies, e.g. changing self-evaluation standards to increase the personal interest in the task, "Behavioural self-regulation" which adapts the individuals' motoric behaviour based on the self-perceived action of writing, and the "Environmental self-regulation", the modification of the writing context through self-monitoring, goal setting, seeking help, structuring the environment, and mental imaging (Bukhari, 2016).

Several research has shown that metacognitive knowledge can have a positive effect on the learners' performance, self-regulation, autonomy, and academic success in general (Hartman, 2001; Wenden, 2001 & McCormick, 2013). Metacognition has also been found to positively affect writing (Hacker, Bol, and Keener 2008, Hacker, Keener, and Kircher 2009 & Dimmit and McCormick 2012). Karlen and Compagnoni (2017) conducted a study that aimed at examining learners' domain-specific implicit theories about the nature of their writing ability and its relation to metacognitive strategy knowledge and use in academic writing. Findings indicate that learners with higher metacognitive skills show higher quality work than learners with lower metacognitive skills. Those learners

show a higher level of awareness too regarding their strengths and weaknesses.

In another study, Rodríguez, Izquierdo, and Faubel (2018) investigated the relationship between the application of metacognitive strategies in writing and the quality of spontaneous writing products of 480 Spanish students. Their findings indicate that the application of metacognitive strategies can have a positive impact on student's academic performance. Nurbayti, Anita, and Kheryadi (2020) also investigate the effect of using metacognitive strategies on writing in Pandeglang using a quasi-experimental study design. Their findings indicate a significant effect of using metacognitive strategies in improving students' writing text. Bayata and Uyumazb (2021) also found a significant connection between writing sensitivity and the use of metacognitive strategies. The use of metacognitive strategies was found to decrease writing anxiety and help learners become more confident about their writing.

Escorcía and Ros (2019) investigated the metacognitive abilities of 1051 male and female students enrolled in different learning domains, Human and Social sciences, Language and Literature, Law and Economy, and Sciences. The study aimed to determine the interactions between sex and education variables with the self-reported metacognitive processes related to writing. Findings indicate that female students self-reported greater use of metacognitive knowledge and environmental self-regulation strategies than male students. Moreover, the findings of this study also indicate that high-school track determined statistically significant differences. Students from more technical backgrounds reported the lowest scores due to less exposure to re-reflective learning, writing practices, and theoretical content according to the researchers. However, the researchers indicate that learners' learning domain influenced their metacognition. Law and Economics domain determined variations in learners' scores as a result of their secondary-school background. Additionally, students enrolled in the Science domain showed the highest self-reported level. According to the researchers, this can be explained in light of the more collaborative learning environment the learners were exposed to since secondary school.

Teng (2020) examined 120 Chinese EFL students participating in an experimental study that investigated the relationship between metacognition and writing performance using multivariate analyses. Findings showed that for the six parameters of metacognition investigated, i.e., declarative knowledge, procedural knowledge, conditional knowledge, planning, monitoring, and evaluating, a positive correlation was found with learners' writing performance. The experimental group which received metacognitive guidance was found to display a high level of task perception. The researcher stressed the importance of enhancing learners' metacognitive skills

at the university level as a factor that can help in improving their writing performance.

Qiyu Sun, Lawrence Jun Zhang, & Susan Carter (2021) designed a questionnaire '*Writing Metacognitive Experiences Questionnaire*' (EFLWMEQ) to investigate the nature of students' metacognitive EFL writing experiences and the relationship between students' metacognitive experiences and their writing performance. The questionnaire was developed and validated with two independent samples of 340 and 540 Chinese undergraduates. Results showed that students' metacognitive experiences had a positive correlation with their EFL writing exam scores. Similarly, Escorcía and Gimenes (2020) conducted research aiming at constructing and validating a self-report instrument to measure two metacognitive processes implicated in writing planning, metacognitive knowledge, and self-regulation strategies. The Metacognitive Components of Planning Writing Self-inventory (MCPW-I) was constructed and validated. This instrument consists of three factors, Metacognitive Conditional Knowledge (MCK) 7 items, Covert Self-regulation (CSF) 5 items, and Environmental self-regulation (ESR) 5 items. The present study used The Metacognitive Components of Planning Writing Self-inventory developed by Escorcía and Gimenes (2020) to assess the first-year university learners' metacognitive writing strategies see Appendix A for the full instrument.

## METHOD

### Contextual Background

The University of Jeddah offers an intensive English program where first-year university students have to study basic language skills including reading, writing, listening, and speaking in a trimester system. Learners have to attend 18 hours per week on campus. The program uses the National Geographic Life Series as the main textbook in addition to some supplementary material including a writing booklet for basic writing activities related to the genres expected to be examined at the end of the semester. As far as writing is concerned, learners are evaluated both informally and formally during and toward the end of the semester. Learners have to submit a writing task during the semester, where they receive feedback on their first draft before they submit their final draft to be graded. At the end of the semester, learners have to sit for a final writing exam.

### Instrument

The Metacognitive Components of Planning Writing Self-inventory (MCPW-I), a self-report inventory (instrument), constructed and validated by Escorcía and Gimenes (2020) was used to measure the university learners' metacognition. The survey consists of 17 items categorized under three main categories, Metacognitive Conditional Knowledge (MCK) 7 items, Covert Self-regulation (CSF) 5 items, and

Environmental Self-regulation (ESR) 5 items. Data were collected during the first semester of the academic year 2022-2023 at the English Language Institute, University of Jeddah. First, all items in the survey were translated into Arabic. Arabic translation was then added to the original survey for each item to make it easier for learners to comprehend and respond. Moreover, a few examples were added to some items to make the terms clearer and to avoid confusion.

Permission was obtained from the head of the Scientific Research Unit and the Vice-dean of the

English Language Institute at the University of Jeddah to collect the data. The electronic survey link was then shared with the conveniently selected sample of participants. A consent form was included in the electronic survey. The students were asked to complete the survey during their usual class time. The estimated time for completing the survey was fifteen to twenty minutes. The survey's data were then analyzed for reliability and the Alpha value (.860) given in Table 1 verifies the tool's reliability for the sample size chosen for this study.

**Table 1 :Reliability and Scale Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	Mean	Variance	Std. Deviation	N of Items
.860	.871	89.44	205.665	14.341	17

**Sample of the Study**

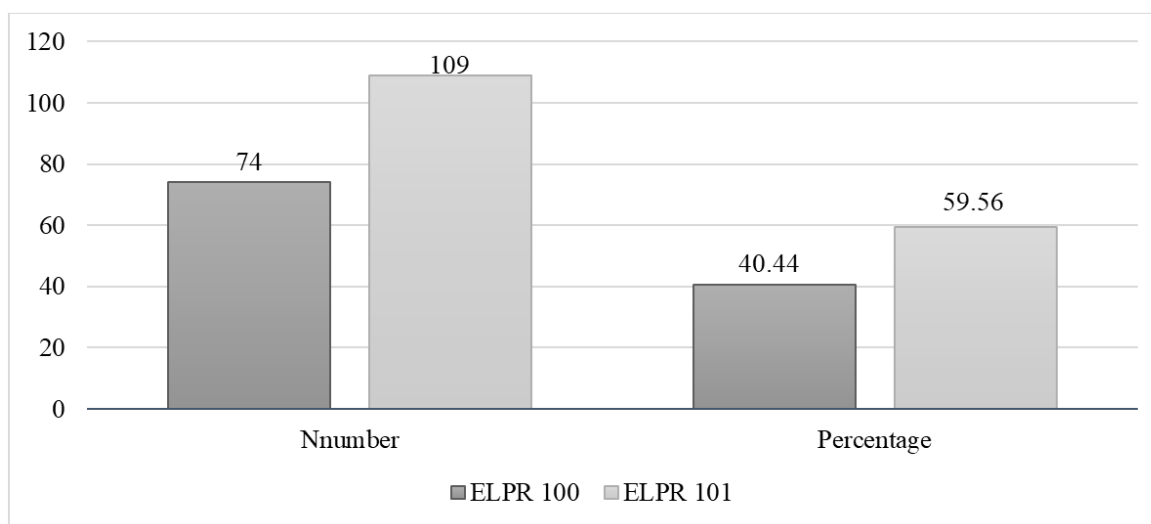
A total of 190 female learners studying English at the English Language Institute, University of Jeddah participated in this study. The participants were from two levels, ELPR Level 100 and 101, which are equal to the CEFR A2 and B1.

**Data Analysis and Results**

The analysis of the data collected for this study was conducted using the Statistical Package of Social Sciences (SPSS). Data were coded, and missing cases were excluded. Thus, only 183 responses were analyzed. During the first semester at the University of Jeddah, the first-year students are placed in different levels

according to their educational background and upcoming major, Level One (ELPR 100) stands for the humanities track students, and Level Two (ELPR 102) is for the science track students.

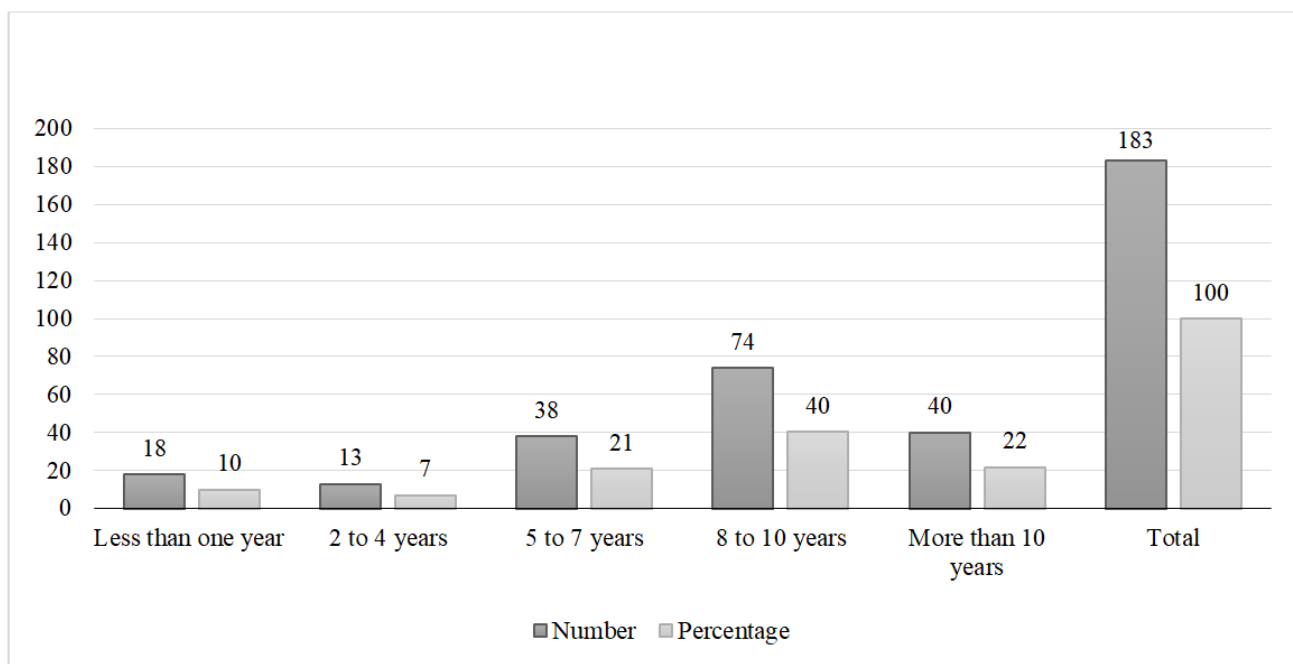
For the purpose of this study, participants were selected from two different levels, Level One (40.44%) and Level Two (59.56%). Including participants from the two different levels in the study was made intentionally to examine the influence of the learners' background education on their metacognitive abilities. Figure 1 below shows the number of participants from each level and percentage.



**Figure 1: Educational Background - Learners' ELPR Level**

Moreover, the number of years in which learners were exposed academically to studying English as a foreign language was considered the second variable. Students were classified into five categories based on the years of studying English which was

further examined while investigating the effect of the number of 'years of studying English'. The five categories of years of studying English are presented in Figure 2 below.



**Figure 2: Years of Studying English**

The survey adopted for this study, as mentioned above, consisted of 17 items. Table 2 below presents the Mean and the Standard Deviation for each item. These items helped the researchers investigate the learners’ metacognitive knowledge and its regulation,

particularly in relation to their writing. The learners had to respond to each of the items by choosing a score from a 7-point scale, leading from 1 to 7 (see Appendix A).

**Table 2: Descriptive Analysis: Mean and Standard Deviation of the MCKR Items**

Statements (1-17)	N	M	STD
1. I know how to select the main idea of the topic that I will develop in the written text.	183	5.39	1.425
2. I know what are the advantages of my writing strategies such as planning, monitoring, and evaluating, depending on the kind of writing task that I have to achieve.	183	5.24	1.459
3. I know how to find ideas to write.	183	5.33	1.384
4. Before writing, I know what are the formal characteristics of the text (such as introduction, supporting details, and conclusion) that I have to construct.	183	5.79	1.423
5. I know what are the writing strategies (planning, monitoring, and evaluating) to employ depending on the kind of writing assignment.	183	5.28	1.462
6. I know how to adapt my writing strategies requirements of the writing task.	183	5.03	1.588
7. I know how to decide if it is necessary to change my writing strategies according to the task demands.	183	4.98	1.609
8. I repeat in my head the ideas to write when I am reflecting about the organization of my text.	183	5.87	1.356
9. I connect my ideas with some keywords that flow in my head before writing.	183	5.82	1.401
10. I make a checklist of all my ideas in my head before writing.	183	5.70	1.343
11. I let flow my knowledge about the topic before writing.	183	5.40	1.437
12. Before writing, I know clearly what are the sections that I will develop in my text.	183	5.01	1.558
13. I ask someone to read the plan of my text in order to make sure that it is clear.	183	4.79	1.841
14. I use a text plan (a sample) that someone recommended to me.	183	3.95	1.645
15. I discuss with my peers in order to identify the ideas that I will write.	183	5.04	1.660
16. I ask questions to the proofreader of a text to know about his/her expectations.	183	5.42	1.556
17. I show my proofreader a draft of my text to get his/her advice.	183	5.39	1.561

Note. N=number, M=mean, STD=standard deviation

A Pearson correlational analysis was then conducted to answer RQ1 and RQ2:

- RQ1. Does the first-year university learners’ educational background affect their metacognitive knowledge and its regulation?

- RQ2. Does the number of years of learning English affect first-year university learners' metacognitive knowledge and its regulation?

The purpose of this analysis was to determine if learners' metacognition positively affects their writing performance. The significance level for the analysis was set at .05 and .01. Items were computed based on the survey's three different categories, i.e., metacognitive conditional knowledge (MCK), covert self-regulation (CSF), and environmental self-regulation (ESR).

As far as RQ1. is concerned, i.e., learners' educational background effect on their metacognitive knowledge and its regulation, Table 3 and 4 indicate no significant correlation between learners' educational background and their overall metacognitive abilities. Level 100 students' scores (humanities track students) show no significant differences in their metacognitive knowledge and its regulation (MCKR) compared to Level 101 students' scores (science track students).

**Table 3: Correlation: Learners' Educational Background and Overall MCKR Score**

		MCKR Scores
Educational Background – Level	Pearson Correlation	.023
	Sig. (2-tailed)	.759
	N	183

Also, there is a non-significant correlation between the learners' level of English (educational background) and the three metacognitive categories,

Metacognitive Conditional Knowledge-MCK ( $p \geq .390$ ), Covert Self-regulation – CSF ( $p \geq .966$ ), and Environmental self-regulation -ESR ( $p \geq .674$ ).

**Table 4: Correlation: Learners' Educational Background and MCKR Categories**

		MCK	CSF	ESR
Educational Background – Level	Pearson Correlation	.064	-.003	-.031
	Sig. (2-tailed)	.390	.966	.674
	N	183	183	183

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

In relation to investigating RQ2, i.e., the effect of the number of years of learners' exposure to academic English learning on learners' metacognitive knowledge and its regulation, the analyses in Table 5 show that learners' overall MCKR is moderately

affected ( $< .033$ ) by the years of studying English. Also, the metacognitive conditional knowledge is affected ( $< .001$ ) by the number of years of learning English as can be seen in Table 6.

**Table 5: Correlation: Number of Years of Learning English and Overall MCKR Score**

		MCKR Scores
Number of Years Studying English	Pearson Correlation	.158*
	Sig. (2-tailed)	.033
	N	183

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 6: Correlation: Number of Years of Learning English and MCKR Categories**

		MCK	CSF	ESR
Number of Years of Learning English	Pearson Correlation	.233**	.133	-.064
	Sig. (2-tailed)	.001	.072	.389
	N	183	183	183

\*\* . Correlation is significant at the 0.01 level (2-tailed).

However, Table 6 shows that learners' covert self-regulation and environmental self-regulation do not seem to be significantly affected by the number of years learners got exposed to English. The Sig. 2-tailed values are  $< .072$  and  $< .389$  respectively.

significantly affect first-year university learners' Writing Performance, the researchers first investigated the significance to determine the relationship of the variables and then checked the effect of the learners' level of MCKR and their Writing Exam Score (WES). Pearson correlation was first checked for the overall MCKR and the learners' WES, and then for the three categories MCK, CSF, and ESR separately. The table

below (Table 7) shows that there is a significant correlation (.345) between the students' overall

metacognition level and their writing performance and Sig. (2-tailed) .000 is lower than the p-value (0.05).

**Table 7: Correlation: Overall MCKR and Writing Exam Scores**

		WES
MCKR	Pearson Correlation	.354**
	Sig. (2-tailed)	.000
	N	183

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

In other words, the correlation is found to be highly significant at the .000 level (2-tailed). Further, the association of the writing exam scores analyzed with MCK is given in Table 8 below. The values represent a significantly positive correlation (.453) between the Writing Exam score and the MCK score. The results also show a positive correlation between the CSF and writing performance, the correlation statistics (.329) and the (2-tailed)  $p < .000$  are highly significant as it is lower than the *p-value* (0.05).

However, non-significant values are also observed while checking the WE grade in relation to the learners' environmental self-regulation scores. The statistics given in the output in Table 8 indicate a non-significant (2-tailed =  $> .335$ ) correlation, and the values (-.072) represent a negative association between the two variables, ESR and the writing exam scores.

**Table 8: Correlation: Writing Exam Scores and MCKR Categories**

		MCK	CSF	ESR
Writing Exam Score	Pearson Correlation	.453**	.329**	-.072
	Sig. (2-tailed)	<.000	<.000	.335
	N	183	183	183

\*\**. Correlation is significant at the 0.01 level (2-tailed).*

\**. Correlation is significant at the 0.05 level (2-tailed).*

The way learners' overall MCKR affects their writing performance was then investigated. MCKR was used as a predictor variable to measure the impact of students' metacognitive knowledge and its regulation

on writing. Linear Regression was applied to SPSS at this stage of the analysis. Table 9 represents the results, which indicate a significant impact/effect of the students' MCKR on their writing performance.

**Table 9: Regression: MCKR Predicting the Learners' WES**

Regression Weights	Beta Coefficient	R <sup>2</sup>	F	t-value	p-value
MCKR	.354	.125	25.952	5.094	.000b

*Note. \* $p < 0.05$ . MCKR=Metacognitive Knowledge & Regulation*

The dependent variable (WEP) was regressed on the predicting variable (MCKR). MCKR significantly predicted the WEP through the F values (=25.952) and the  $p < .000^b$ , which indicates that the MCKR plays a significant role in shaping the learners' writing skills ( $b = .354$ ,  $p < .000^b$ ). Moreover, the R Square ( $R^2 = .125$ ) also depicts that the model explains almost 11.6 % of the variance in WEP. It can be concluded through the summary of the findings that the R Square is significantly apparent from the regression ANOVA value which is highly significant  $.000^b$ . Finally,  $t\text{-value} = 5.094$  ( $> 1.96$ ) also represents a significant impact of students' metacognitive knowledge and its regulation on their writing output.

metacognitive abilities including their background education and years of studying English as a foreign language. Findings revealed a positive significant correlation between learners' metacognitive abilities and learners' writing performance. These findings are consistent with previous findings found in the literature (see for example Harris and Graham 2009; Pugalee 2001; Teng 2016 and Teng 2020). However, only the number of years of learning English was found to influence learners' metacognitive abilities.

## DISCUSSION

The objective of the present study was to investigate learners' metacognitive abilities and their writing performance. The analysis also examined the influence of some variables in affecting learners'

As far as research question one is concerned, findings indicate that there is no significant correlation between learners' background education and their metacognitive abilities. Unlike Escorcía and Ros (2019) findings, humanities track learners and science track learners show similar results. Escorcía and Ros (2019) found that students enrolled in different domains show different MCK scores. According to them, the reason behind this can be traced back to the extensive practice

learners receive in certain domains such as law and economics (Jia & Maloney, 2015 & Escorcía & Ros, 2019). This point in particular leads to an explanation for the correlation found between learners' years of studying English and their metacognitive abilities, i.e., research question two.

'Years of studying English' was found to highly correlate with learners' metacognitive abilities and metacognitive conditional knowledge in particular. These findings indicate that the more learners are exposed to the language, the better they develop their metacognitive awareness.

In relation to research question three examining the relationship between metacognition and writing, findings indicate that MCK and CSF significantly correlate with the writing exam scores. These findings coincide with other studies (see for example, Zhang and Zhang, 2019; Escorcía & Gimenes, 2020; Teng & Zhang, 2020 & Wu, 2021). However, the Pearson correlation coefficients indicated no significant relationship between ESR and learners' performance.

Finally, the regression analysis establishes that the learners' metacognitive knowledge and their knowledge regulatory habits significantly impact their writing skills. The metacognitive knowledge regulation affects the way the learners put their strategies and shape their writing. Findings show that the level of metacognition, metacognitive knowledge, and the regulation of meta-knowledge help learners improvise their writing processes by planning, monitoring, and evaluating (Brown *et al.*, 1983).

### Implications and Limitations

As reported in the literature (see for example Kim 2013; Negretti 2012; Teng 2016 and Teng 2020), metacognition plays an important role when it comes to writing. The present study shows that metacognitive knowledge and regulation are closely related to better writing performance. It is, therefore, highly recommended to pay more attention to learners' metacognitive levels to improve their writing performance,

Limitations of this study may lie in the tool used. The survey adopted for this study may have measured learners' actual metacognitive abilities in limited manners or might have not covered all areas of the metacognitive knowledge and the regulation of knowledge in a broader sense. Moreover, the findings of the survey depend basically on the participants' judgment. A more detailed survey along with additional tests, interviews, and observations can reveal detailed aspects of the learners' metacognitive abilities.

Furthermore, only 190 first-semester females participated in this study. Including more participants,

both male and female, from a more advanced university level may reveal more interesting results.

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## Appendix A

The Metacognitive Components of Planning Writing Self-inventory (MCPW-I) (Escorcía & Gimenes, 2020).

The seventeen items of the initial MCPW-I.

Categories	Items
Metacognitive conditional knowledge (MCK)	(1) I know how to select the main ideas that I will develop in the written text <sup>a</sup>
	(2) I know what are the advantages of my writing strategies depending on the kind of writing task that I have to achieve
	(3) I know how to find ideas to write
	(4) Before writing, I know what are the formal characteristics of the text that I have to construct
	(5) I know what are the writing strategies to employ depending on the kind of writing assignment
Covert Self-regulation (CSF)	(10) I know how to adapt my writing strategies to the requirements of the writing task
	(11) I know how to decide if it is necessary to change my writing strategies according to the task demands
	(9) I repeat in my head the ideas to write when I am reflecting about the organization of my text
	(13) I connect my ideas with some key words that flow in my head before writing
	(14) I make a checklist of all my ideas in my head before writing
	(15) I let flow my knowledge about the topic before writing
Environmentamental Self-regulation (ESR)	(16) Before writing, I know clearly what are the sections that I will develop in my text <sup>a</sup>
	(6) I ask someone to read the plan of my text in order to make sure that it is clear
	(7) I use a text plan that someone recommended to me
	(8) I discuss with my peers in order to identify the ideas that I will write
	(12) I ask questions to the proofreader of my text for better knowing his/her expectations
	(17) I show my proofreader a draft of my text with a view to knowing his/her advice
	(1) I know how to select the main ideas that I will develop in the written text <sup>a</sup>

Note. Items are rated on a seven-point Likert scale (1 = never; 2 = very rarely; 3 = rarely; 4 = sometimes; 5 = frequently; 6 = very frequently; 7 = always).