

Effective Use of Metacognitive Strategies of Students in ESL Writing Based on Gender

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Received: March 7, 2023

Accepted: July 13, 2023

Online Published: September 4, 2023

doi:10.5430/wjel.v13n8p26

URL: <https://doi.org/10.5430/wjel.v13n8p26>

Abstract

There is a clear association between gender differences in using metacognitive strategies in English as a second language (ESL) writing and poor writing achievement, and one of the factors that contributes to this correlation is the sense of how male or female students use their brain hemisphere when presented with the writing task. Students who are studying ESL view the ESL writing task as difficult because they find it significantly more difficult to use metacognitive writing strategies in their writing tasks due to their poor proficiency in ESL and failure to use appropriate metacognitive writing strategies, which makes it difficult for them to write a coherent and cohesive essay. This study's primary purpose is to investigate whether students' gender significantly affects their metacognitive writing strategies before, during, and after writing. This study employed a descriptive research design using quantitative data. 480 Form Four students from 12 secondary schools in Melaka, Negeri Sembilan, and Selangor made up the study's sample. The sample was chosen via purposive sampling. In order to gather data, the questionnaire served as the preferred method. The data from the questionnaire were analyzed using SPSS for Windows version 25. In this study, a one-way ANOVA was employed to detect whether there was a discernible gender gap in the use of metacognitive writing strategies before, during, and after the writing process by ESL male and female students. This study showed some interesting findings. First, the findings showed that in the use of overall metacognitive writing strategies, female students were much higher than their counterparts in ESL writing in terms of taking a position on the topic. Second, and this difference is crucial, female students also employed more metacognitive writing strategies before, during, and after writing. Therefore, it is suggested that metacognitive writing strategies be employed as an effective pedagogical tool to improve students' writing performance and thus, education quality, in future ESL classes.

Keywords: metacognitive writing strategies, writing skills, writing process, ESL students, form four students, gender

1. Introduction

Writing is what writers do when they put pen to paper to communicate their thoughts, ideas, and concepts to readers. Guneyli (2016) defined writing as a method of communicating emotions, views, ideas, dreams, and experiences via the use of linguistic rules and symbols known as letters. Writing skill acquisition becomes more difficult for ESL students since it requires them to follow a precise method and use certain strategies to guarantee that the written material is delivered as intended. Al-Sawalha and Chow (2012) also stated that the writing process in a second language is often regarded as the most intricate and hardest talent to learn, even more so than one's native language.

According to Petric and Czal (2003), the process of writing may be broken down into three stages: before, during, and after. These three stages of the writing process are interrelated and non-linear in the sense that they may overlap and occur frequently without any definite sequence or order (Manchon & Roca de Larios, 2007). Traditionally, both researchers have subscribed to the belief that the before-writing stage involves writing preparation. Typically, teachers provide substantial assistance at this level to aid students in the creation of ideas. After that, in the second step, which is the during-writing stage, the students themselves would write the first draft and then review and create the second draft. In the after-writing stage, students would concentrate on grammatical features, the arrangement of ideas, and vocabulary. After the last round of editing, students would submit their final written assignment.

All these stages would not have happened without a good strategy in the writing process. The writing process requires students to use their critical and creative thinking skills to retain their prior knowledge. Aripin and Rahmat (2019) argue that writers need writing strategies to help them regulate their writing while they are writing. Effective factors that lead to the quality of an essay are metacognitive writing strategies that entail reflection and evaluation in the writing process. Metacognitive writing strategies is the conscious and

deliberate techniques that writers use to monitor, regulate, and reflect on their own thinking and learning processes during the act of writing. These strategies involve higher-order thinking skills and allow writers to become more aware of their writing strengths, weaknesses, and goals. By employing metacognitive strategies, writers can take an active role in their writing process and make informed decisions to improve their writing performance. Similarly, metacognitive writing strategies incorporate contemplation of the writing process itself, including planning, monitoring, and evaluation. These are the three pillars around which metacognitive writing strategies are built. More specifically, the writer controls, directs, regulates, and directs his or her writing output through the abilities of planning, monitoring, and evaluating. They are a frequently employed strategy by ESL writers.

The examples of metacognitive writing strategies at each stage of the writing process:

Before Writing (Planning):

1. **Goal Setting:** Establish specific goals for the writing task, such as improving grammar accuracy or enhancing argument development.
2. **Planning and Organization:** Create an outline or mind map to structure the ideas and main points of the piece.

During Writing (Monitoring):

1. **Self-Monitoring:** Reflect on your writing progress, monitor your thoughts and ideas, and check if you are effectively conveying your intended message.
2. **Self-Talk:** Use self-talk to regulate your writing process. For example, reminding yourself to stay focused, maintain coherence, or ensure clarity in your writing.

After Writing (Revising):

1. **Self-Reflection:** Reflect on the overall effectiveness of your writing, identify strengths and weaknesses, and consider areas for improvement.
2. **Revision Strategies:** Review your draft with a critical eye, looking for opportunities to reorganize ideas, strengthen arguments, or enhance clarity and coherence.
3. **Editing Techniques:** Use proofreading strategies to address grammar, punctuation, spelling, and other language-related issues. Employ techniques such as reading aloud, using spell-check tools, or seeking peer feedback to identify errors or areas that need improvement.

Metacognitive strategies empower students to think about their own thinking (Pitenoee et al., 2017; Wider & Wider, 2023). In writing, metacognitive strategies increase awareness of the writing process. This awareness enhances control over students' own writing. Planning one's approach to writing, employing the most suitable skills to solve a writing problem, monitoring one's own writing task, self-correcting one's own writing task, and evaluating one's progress towards the writing task's completion are all examples of metacognitive writing strategies.

Besides, metacognitive writing strategies also enhance students' personal capacity for self-regulation and managing their own motivation for writing in ESL classes. Not only that, Graham et al. (2005) agreed that metacognitive writing strategies are important in promoting students' cognitive, psychological, and motivational engagement and in developing their writing competence. In the same vein, Goctu (2017) notes in his study that once students have mastered metacognitive writing strategies, they will become more self-reliant, as well as better able to plan, monitor, and evaluate their writing tasks; hence, they will be successful writers.

Metacognitive writing strategies are used to manage the whole writing process. Simply described, metacognitive writing strategies are abilities, methods, thoughts, and behaviors that students use to govern their cognition and learning process. However, Graham et al. (2005) also noted that a lack of planning, monitoring, and evaluating, which are popular metacognitive writing strategies, hinders students' progress in ESL writing.

The issue above has grown in importance in light of recent studies by Aripin and Rahmat (2019). They asserted that, although the use of metacognitive writing strategies is crucial, students lack an understanding of how to use them throughout the writing process. This negatively impacted their final literary product. Many ESL students are unaware that metacognitive writing strategies serve as a useful guide throughout the writing process; hence, they do not know how to employ this approach effectively. As a result, many ESL teachers have reported that students hesitate to write and leave their work unfinished because they see writing as a challenging endeavor. Thus, they make no further efforts to improve their writing.

These contradicting results highlight the need for further investigation into the impact of gender on the use of metacognitive writing strategies in ESL classrooms. Evidently, there is also some uncertainty about the distinctions between male and female students when it comes to using metacognitive writing strategies. Although previous studies prove that using metacognitive writing strategies improves students' writing performance across gender (e.g., Aripin & Rahmat, 2019), little is known about how male and female students use and adopt these strategies differently or similarly before, during, and after writing. When it comes to ESL writing tasks, do male and female students use and adopt metacognitive writing strategies in the same ways? Furthermore, most previous studies on gender and writing have focused on the writing process rather than metacognitive writing strategies (e.g., Ballard, 2018; Reilly et al., 2019).

Therefore, this issue has attracted the attention of many scholars because of the metacognitive strategies for writing according to gender that students can employ to improve their ESL writing skills. It is because students are different and they use various strategies depending on their consideration of which strategies can help them write. Thus, the researcher tries to seek methods that will assist and encourage ESL students in writing, particularly young students who are having difficulty writing. In light of this, the researcher plans to investigate whether students' gender influences their metacognitive writing strategies before, during, and after writing. Specifically, this study is done to answer the following questions;

RQ 1. Is there a significant difference in the use of overall metacognitive writing strategies among ESL students according to gender?

RQ 2. Is there a significant difference in the use of metacognitive writing strategies by ESL students before writing according to gender?

RQ 3. Is there a significant difference in the use of metacognitive writing strategies by ESL students during writing according to gender?

RQ 4. Is there a significant difference in the use of metacognitive writing strategies by ESL students after writing according to gender?

2. Literature Review

This study employed metacognitive writing strategies to enhance students' writing in ESL classes. The notion of the writing process and metacognitive writing strategies proposed by Mu (2005) and Diaz (2013), as well as the impact on gender differences in writing (Aripin & Rahmat, 2019; Reilly et al., 2019), are introduced. This section also provides a relevant literature review and a research gap.

2.1 Writing Process

Writing stages are very important to students, as they help scaffold writing processes for them. The library research conducted by Ikawati (2020) concluded that scaffolding, another evidence-based writing practice, helps improve students' writing skills by integrating the writing process. As well as that, her research also made the inference that by providing a scaffolded writing process, students learn the skills and concepts of writing better, which leads them to become strong, successful writers.

Alber-Morgan et al. (2007) found that when students feel connected to their writing and feel that they have the freedom to express themselves more, even with formal writing, they will be more motivated and engaged with and/or by their writing, which inspires them to not only do well on it but to complete it to the best of their ability.

However, the past decade has seen the diversification of writing process research. Harris (2023) stated that whether from embracing or accommodating different approaches, techniques, and styles in the act of writing, it recognizes that writers have diverse background, experiences, preferences and cultural influences that shape their writing process. This is in accordance with Moses's (1959) classification of writing process that promotes inclusivity, celebrate individuality and encourage writers to explore and experiment with different approaches. To ensure an appropriate writing process is implemented, personalized approaches are introduced in this study to encourage the students to find their own methods and techniques that work best for them, such as brainstorming, outlining, or using visual aids, as the writers have individual preferences and strengths.

2.2 Metacognitive Writing Strategies

In the realm of education and learning, metacognitive writing strategies have emerged as one of the most hotly debated topics, particularly in the context of ESL classes, as a result of several studies indicating that ESL writing is a difficulty for students. Pitenoe et al. (2017) examined a variety of ways in which the cognitive and metacognitive strategies in writing that Iranian students used not only affected the topics but also the structures of their writing. Students were instructed in both writing strategies prior to data collection. The intervention demonstrated that cognitive and metacognitive writing strategies enhanced the structure and quality of student writing.

It is interesting to note that a study by Rahmat and Ismail (2014) discovered that ESL students must be conscious of the writing methods they use. They also provided suggestions for how teachers may make use of paired writing activities to foster the development of students' cognitive and metacognitive writing skills. Similarly, teachers might utilize these strategies to instruct students in order to enhance their writing skills and refrain from using strategies that impede the writing process. Teaching cognitive and metacognitive writing strategies as part of the writing process helps enhance students' writing abilities over time.

In a manner similar to this, Azizi et al. (2017) evaluated potential links regarding the overall usage of metacognitive strategies in writing and writing achievement and found a high and positive correlation between the two variables. According to their findings, Iranian EFL students lacked metacognitive writing strategies while approaching writing. They also discovered that successful students used metacognitive writing skills more often than unsuccessful ones.

In recent research on the usage of writing strategies from the viewpoint of language competency and gender, Maharani et al. (2018) found that students used six Oxford methods: memory, cognitive, compensatory, metacognitive, emotive, and social. The memory method was the most prevalent writing strategy among male students, while the metacognitive writing strategy was the most prevalent among female students. Additionally, students with poor writing output tended to use compensatory strategies, while those with strong writing output tended to use metacognitive writing strategies.

In separate research by Raoofi et al. (2017), ESL Malaysian students reported employing writing methods at a level between moderate and high. They asserted that students with high writing abilities reported much greater utilization of writing strategies than those with intermediate or poor writing skills. Students with better writing skills reported employing considerably more metacognitive, cognitive, emotional, and effort regulation strategies than students with lower writing abilities.

Recent study findings also show that ESL teachers should emphasize the significance of metacognitive writing strategies to improve students' writing abilities. According to Surat et al. (2014), secondary school students from low-income urban communities lacked the use of metacognitive knowledge, including declarative, conditional, and procedural knowledge, in their metacognitive writing strategies. Specifically, they did not use declarative knowledge, such as making an essay outline before writing, identifying keywords that represent the question's requirements, and expanding ideas. Regarding conditional knowledge, they discovered that students were still unable to determine when and why certain techniques should be used. In contrast, in terms of procedural knowledge, they discovered that none of the students demonstrated the use of crucial essay-writing stages.

In their study of English writing strategies among Chinese students, Mu and Carrington (2007) revealed that in experiments with metacognitive writing strategies, low-proficient students seldom employ planning strategies, do not often plan their writing, and frequently begin writing immediately. They came to the conclusion that students do not properly prepare for writing by planning not just the content but also the structure of their papers. They struggled to effectively utilize metacognitive writing strategies before writing to guide their English writing. Mu and Carrington (2007) also suggested that students may make use of metacognitive writing strategies, which are often thought to be learned by adults. By doing so, they believed that students were able to manage the whole writing process as mature writers of a second language.

Razi (2012) conducted research on university students in Cyprus to learn more about how they employ metacognitive writing strategies. According to Razi (2012), "lack of training in terms of strategy use" may be attributed to the fact that less than half of the students are familiar with metacognitive writing methods. However, students' grades were shown to be positively correlated with their use of metacognitive writing methods; higher-achieving students used more of these strategies than their less successful counterparts. For additional information, the researcher reached out to six teachers, who shared their concerns that students would be unable to fully internalize metacognitive strategies if they were only exposed to them for a short period of time. Then, they reported that a few students used a few planning and evaluation strategies, even though these strategies were explained to all the students in the classroom.

2.3 Impact of Gender Differences in Writing

In a series of studies on gender differences in writing, Mutar and Nimechisalem (2017) conducted a study with Iraqi high school students to examine the influence of gender and the degree of competence in the writing strategies that were used. Through purposive sampling, the students answered their questionnaire. They found that female students used a much different set of writing strategies than male students did, and this difference was statistically significant. They observed that female students used various writing methods while writing at a higher rate than their male counterparts.

Similarly, Liu (2015) discovered that female students had substantially higher writing strategy usage scores than male students in Chinese senior high schools. This was in relation to the fact that there are gender variations in the use of writing strategies among Chinese senior high school students. According to the findings of his research, female students used a wider variety of writing strategies in their English writing, had more robust motivations, and provided more precise attributions for their less-than-satisfactory writing performance. Furthermore, they used writing strategies significantly more effectively.

Other scholars restricted their focus on gender differences according to psychology context when following writing. Reilly et al. (2019) examined data from the National Assessment of Educational Progress, a nationally representative sample of standardized test results from more than 3.4 million children in the United States' fourth, eighth, and twelfth grades collected over a 27-year period. According to their findings, by the fourth grade, female students had surpassed male students in writing. While female students outscored male students in writing in the fourth grade, the disparity worsened in the eighth and twelfth years. Findings by Nair et al. (2018) indicated that male students make more errors than the female students in spelling, mechanics, grammar, coherence, structure and lexical items in descriptive essay writing.

Reilly et al. (2019) also added another view when they found that when asked to complete a writing assignment, female students are more likely than male students to use both hemispheres of the brain. They concluded that a bilateral language function likely provides some advantages, which may account for the female writing advantage. Writing effectively involves not just strong reading abilities but also fluency in verbal fluency, spelling, and grammar, all of which may be more challenging for male students than for female students. However, much of the research in general, and within the pedagogical context in particular, involves genders other than the writing process and metacognitive writing strategies at before, during, and after writing. Thus, that creates the rationale for the current study.

3. Methodology

This study employs a descriptive research design to conduct a quantitative investigation. Consequently, purposive sampling was used for sampling. 480 Form Four students (16 years old) from 12 secondary schools in Melaka, Negeri Sembilan, and Selangor who had comparable demographic and academic characteristics made up the sample. They spoke Malay, Chinese, and Tamil as their native languages; the majority spoke Malay, while the rest spoke either Chinese or Tamil. Two gender groups were involved in this study: 240 males and 240 females. Students were given a questionnaire that consisted of 22 items.

The research relied only on self-reported data acquired through a questionnaire. The questionnaire measured metacognitive writing strategies according to gender. The questionnaire had 3 parts: Part A: Before Writing (7 items), Part B: During Writing (11 items), and Part C: After Writing (4 items). The questionnaire was adopted from previous studies, taken from Zhang and Qin (2018). The

accompanying questionnaire for the survey used a Likert scale with four points, ranging from 1 "strongly disagree" to 4 "strongly agree" for respondents' responses. The items were created in Google Forms and posted on the WhatsApp or Telegram app, and the students were alerted via their mobile phones to respond. The SPSS Version 25 statistical program was used to compare means and run a one-way ANOVA test on the quantitative data obtained from the questionnaire. A one-way ANOVA was employed to compare female and male means. The ANOVA test determines how much different levels or groups of an independent variable vary from one another (Nahass, 2022).

The questionnaire's reliability was examined using Cronbach's alpha, and each component's result was greater than 0.8, suggesting the questionnaire was very reliable (Jiang et al., 2023).

4. Result and Discussion

The one-way ANOVA test was designed to determine if there was a statistically significant difference in the usage of metacognitive writing strategies among ESL students based on gender in their overall mean scores. The one-way ANOVA test findings are as follows:

RQ1: Is there a significant difference in the use of overall metacognitive writing strategies among ESL students according to gender?

Table 4.1. Results of the one-way ANOVA on the use of overall metacognitive writing strategies among ESL students according to gender

One-way ANOVA					
Overall Metacognitive Writing Strategies According to Gender					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	128.133	1	128.133	12.683	.000
Within Groups	4828.992	478	10.102		
Total	4957.125	479			

Note: Level of significance is at $p < 0.05$

The results indicate the mean score of overall metacognitive writing strategies for female students ($M = 19.70, SD = 3.10$) was higher than for male students ($M = 18.57, SD = 3.26$). Findings in Table 4.1 show the use of overall metacognitive writing strategies among ESL students according to gender. The findings of the one-way ANOVA reveal that the use of overall metacognitive writing strategies among female students is significantly higher than among male students ($F = 12.68, df = 1, p = .000$). As such, it is obvious that the female students used more metacognitive writing strategies in ESL writing tasks compared to their male counterparts. These findings also answer Research Question 1.

These data provide credence to the conclusions reached by Maharani et al. (2018), who discovered that students made use of the following six Oxford strategies: memory, cognitive, compensatory, metacognitive, emotional, and social. Male students were more likely to approach writing using the memory technique, while female students were more likely to use the metacognitive writing strategy. Students who had difficulty producing quality writing used a compensatory technique as their primary mode of written expression, while students who produced quality writing made use of a metacognitive strategy in their written expression.

It is important to make a point of mentioning that the employment of overall metacognitive writing strategies by female students demonstrates that these students have strong writing talents. This finding is comparable to the one that was found in Raooifi et al.'s (2017) research, which found that ESL students in Malaysia used writing approaches at a level that was somewhere between moderate and high. They claimed that students who had high writing abilities reported using a great deal more writing techniques than students who had intermediate or low writing abilities. Students who had a higher level of writing ability reported using a much greater number of metacognitive, cognitive, affective, and effort regulation strategies than students who had a lower level of writing ability.

To summarize, the findings of Surat et al. (2014) indicate that students would greatly benefit from using metacognitive writing strategies in order to improve the quality of their essays. The analysis of the data for both genders in Table 4.1 lends credence to this. Students may benefit from using metacognitive strategies in writing essays since essay writing calls for the application of several kinds of knowledge, including declarative information, conditional knowledge, and procedural knowledge.

RQ2: Is there a significant difference in the use of metacognitive strategies by ESL students before writing according to gender?

Table 4.2. Results of the one-way ANOVA on the use of metacognitive strategies before writing according to gender

one-way ANOVA					
Before Writing According to Gender					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	129.131	1	129.131	12.794	.000
Within Groups	4726.883	478	10.114		
Total	4856.014	479			

Note: Level of significance is at $p < 0.05$

The results indicate that the mean score of the use of metacognitive strategies before writing among female students ($M = 20.80, SD = 4.20$) was higher than that of male students ($M = 19.68, SD = 4.37$). Findings in Table 4.2 show the use of metacognitive strategies before writing according to gender. The results of the one-way ANOVA indicate that the use of metacognitive strategies before writing among female students is significantly higher than among male students ($F = 12.79, df = 1, p = .000$). As such, it is obvious that the female

students used more metacognitive strategies before writing (the planning stage) compared to their male counterparts. These findings also answer Research Question 2.

These results show that female students were more considerate than their male counterparts in informing their readers that they were able to undertake rapid brainstorming and produce outlines (the planning stage) before completing their writing tasks. In particular, Reilly et al. (2019) observed that female students already outperform male students in writing; therefore, this study's findings are consistent with the literature reporting greater performance for female students compared to male students in writing. Female students, according to Reilly et al. (2019), utilize both hemispheres of the brain when given writing assignments, but male students are more likely to use one hemisphere. They reasoned that the presumed advantages of bilateral language function might account for the female advantage in writing. Writing effectively involves not just strong reading abilities but also fluency in verbal expression, spelling, and grammar, all areas in which male students may find themselves at a disadvantage compared to their female counterparts.

These findings provide more support to the study of Mutar and Nimechisalem (2017) on the issue of how gender and proficiency level affect high school students' writing styles in Iraq. They found that female students used a much different set of writing methods than male students did, and this difference was statistically significant. They made the observation that a greater proportion of female students than male students used various writing methods while writing. Their finding was quite similar to metacognitive writing strategies, where they noted that female students would plan the structure of essay writing and have a strategy for how they would arrange each paragraph in their essay.

According to Weisberg et al. (2011), one of the possible explanations for this disparity is that male and female students have fundamentally different personalities. According to Costa et al.'s (2001) research, female students do somewhat better than male students when it comes to conscientiousness measures like order, dutifulness, and discipline. Thus, the researcher was able to conclude that female students planned their writing in order to prevent the errors they had made in previous writing tasks. This strategy was one of the metacognitive writing strategies listed in the student questionnaire.

These results show, in general, that male students need more help than female students do in order to use metacognitive writing strategies before writing in order to achieve the same quality that female students do. Giving male students additional, focused instruction on how to use metacognitive writing strategies before writing through their teachers and peers can provide this support.

RQ3: Is there a significant difference in the use of metacognitive strategies by ESL students during writing according to gender?

Table 4.3. Results of the one-way ANOVA on the use of metacognitive strategies used by ESL students during writing according to gender

One-way ANOVA					
During Writing According to Gender					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	132.300	1	132.300	5.5059	.025
Within Groups	12501.025	478	26.153		
Total	12633.325	479			

Note: Level of significance is at $p < 0.05$

The results indicate that the mean score of the use of metacognitive strategies during writing among female students ($M = 33.19$, $SD = 5.39$) was higher than that of male students ($M = 32.14$, $SD = 3.26$). Findings in Table 4.3 show the use of metacognitive strategies during writing according to gender. The results of the one-way ANOVA indicate that the use of metacognitive strategies during writing among female students is significantly higher than among male students ($F = 132.3$, $df = 1$, $p = .025$). As such, it is obvious that female students used more metacognitive strategies during writing compared to their male counterparts. These findings also answer Research Question 3.

In their conclusion, Zhang et al. (2019) supported the idea that orderliness may be a contributing factor to a female's superior essay writing performance, which makes reference to Table 4.3. As a consequence, female students want to accomplish their ESL writing task in a more ordered manner via monitoring. Zhang et al.'s (2019) findings correspond to the data obtained by the researcher from the completed questionnaire. Many female students responded with "agree" and "strongly agree" that they should consider how well they are doing during a writing task in grammar, punctuation, appropriate phrasal verbs, vocabulary, and the points that they should make in the essay.

A study by Raoofi et al. (2017) advocated that highly effective writers use more monitoring and planning techniques than failed ones. This suggests that female students may be more likely than male students to use metacognitive writing strategies during writing. Furthermore, from a theoretical standpoint, students who employ metacognitive writing strategies during writing might consider the success of a strategy they utilize while writing (Mu, 2005).

Even though these findings are statistically significant, they may have practical implications for how teachers can guide and encourage female and male students differently when it comes to using metacognitive strategies in their own writing. A possible approach for encouraging male students to utilize metacognitive writing strategies during writing is to give them age-appropriate tools to use to examine their writing tasks. For example, COPS (capitalization, organization, punctuation, and spelling) is a simple approach for proofreading written material. Meanwhile, it's proposed that teachers provide female students with a list of questions to help them begin self-monitoring during writing, such as, "Am I clear on the point of the question?" and "Do I understand how that connects to what I've

already written?" As a result, they will be better able to plan ahead using metacognitive writing strategies during writing.

RQ4: Is there a significant difference in the use of metacognitive strategies by ESL students after writing according to gender?

Table 4.4. Results of the One-way ANOVA on the use of metacognitive strategies after writing according to genders

One-way ANOVA					
After Writing according to Gender					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.302	1	6.302	2.351	.026
Within Groups	1281.346	478	2.681		
Total	1287.648	479			

Note: Level of significance is at $p < 0.05$

The results indicate that the mean score of the use of metacognitive strategies after writing among female students ($M = 13.25, SD = 1.68$) was higher than that of male students ($M = 13.03, SD = 1.59$). Findings in Table 4.4 show the use of metacognitive strategies after writing according to gender. The results of the one-way ANOVA indicate that the use of metacognitive strategies after writing among female students is significantly higher than among male students ($F = 2.35, df = 1, p = .026$). As such, it is obvious that the female students used more metacognitive strategies after writing compared to their male counterparts. These findings also answer Research Question 4.

According to the data acquired to assess the metacognitive writing strategies employed by both genders after writing (the evaluating stage), female students use more strategies than their counterparts after the writing process is complete. According to Goctu (2017), throughout this stage of the process, students will assess and appraise the work in order to determine whether or not any adjustments are required. Goctu (2017) suggested introducing the students to the processes of self-editing and peer editing.

The results of this research are consistent with the findings that Liu (2015) discovered, which indicated that female students received substantially better evaluations on their use of writing strategies than male students did. According to the findings of his study, he discovered that when it came to English writing, female students used a larger diversity of writing strategies than male students did. His study's findings provided evidence in favor of this conclusion. The study by Liu (2015) noted that the writing strategies used by female students were comparable to the evaluating stage in metacognitive writing strategies after writing. He mentioned that female students evaluated their writing assignment by rereading it in terms of the thesis statement, organization, support and development of ideas, clarity, and exemplary mechanics. Thus, female students who are aware of the significance of employing metacognitive writing strategies after writing perform better on ESL writing tasks.

The results are in line with those of Aripin and Rahmat (2019), who indicated that female students who utilized metacognitive writing strategies performed well owing to the numerous ways that came after writing. They stated that female students understood the proper use of the phrases, were intrinsically motivated, and made an extra effort to evaluate their essays after the writing process. According to Croson and Gneezy (2009), female students have a tendency to be more particular in their preferences than do male students, which might be one of the reasons why female students have a higher performance than male students when it comes to evaluating work. Therefore, it's possible that female students have a tendency to read a work with more attention and specificity than their male counterparts do when it comes to providing feedback on it. Thus, the findings are compatible with those findings as they correspond to the data obtained by the researcher from the completed questionnaire. A significant number of female students gave responses of "agree" and "strongly agree," indicating that they had reread their essay and made certain that the language included within it was simple to read, clear, and fascinating for the reader.

According to these results, male students have a greater need than female students for help in adopting metacognitive writing skills after writing, namely in the form of requesting someone or a peer to read what they have written. As male students lack self-evaluation skills and one of the factors is time management in completing the writing, they might ask someone they trust who is happy to read their writing and offer honest feedback. By getting feedback, especially constructive feedback in writing, it is believed that it helps the writers be more objective about their own writing.

5. Conclusion

The quantitative data analysis findings above reveal that male and female students use metacognitive writing strategies in different ways at different stages of the writing process. In this study, the writing process typically involves several stages that students go through to plan, draft, revise, and finalize their written work. The research found that, as compared to male students, female students used more metacognitive writing strategies throughout the writing process. This means that students of various genders use distinct metacognitive writing strategies when it comes to planning, monitoring, and evaluating their thoughts and information in order to achieve their goal of writing. It is important to note that these stages are not strictly linear, and students may move back and forth between them as needed. Additionally, the writing process is highly individual, and students may adapt or modify these stages based on their personal preferences and the specific requirements of the writing task. By understanding and consciously engaging in each stage of the writing process, students can produce more polished, organized, and effective pieces of writing. Overall, metacognitive writing strategies may be one of the pedagogical instruments in teaching the English language, especially in teaching writing, if utilized and monitored effectively.

The findings of this study will have significant repercussions for pedagogy, theory, and practice. Pedagogically speaking, when teaching

metacognitive writing strategies, the significant repercussions are generally applicable to both male and female students especially for students' writing development and overall academic performance. Both male and female students can experience enhanced writing skills and overall performance through the application of metacognitive writing strategies. By developing awareness of their writing processes and employing effective strategies, students can produce more organized, coherent, and proficient written work (Pitenoe et al., 2017). It seems to imply, from a pedagogical point of view, that gender differences influence the use of metacognitive writing strategies before, during, and after the process of writing. Theoretically speaking, the results of this study support that some male students may find it more difficult than female students to master the writing skills necessary for success (Reilly et al., 2019). They came to the conclusion that the gender gap in writing ability may be explained by the benefits of a bilingual language function. Thus, it is suggested that metacognitive writing strategies for ESL writing tasks have to be applied in accordance with the student's gender in order to achieve an advanced level of performance. In terms of practical implications, this study recommends that ESL teachers be trained on how to use metacognitive writing strategies to improve students' writing and should encourage students to do self-evaluations of their written work so that they may identify problem areas, learn from their mistakes, and ultimately use more effective metacognitive writing strategies in writing tasks in ESL classes (Razi, 2012; Aripin & Rahmat, 2019).

When evaluating these data, nevertheless, a number of limitations must be considered. Initially, the data were obtained from Form 4 students only, and the sample may not be representative of all secondary school students in Malaysia. To verify and corroborate the major results of this research, it should be replicated with other populations of ESL students from different educational institutions, such as primary schools, secondary schools, and universities. Therefore, consideration is recommended when extrapolating the findings of this study to all Malaysian secondary school students. Secondly, writing strategies may also be investigated by contrasting metacognitive writing techniques with other ESL writing strategies. In a future study, these constraints must be addressed. It is also suggested that future studies should involve semi-structured interviews and observations which might provide more insight into the metacognitive writing strategies used by students throughout the writing process.

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