Metacognitive Writing Strategies of Master Students in the Departments of English at Yemeni Universities

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Abstract

This study investigates the use of metacognitive writing strategies among master's students in the English departments at Yemeni universities, focusing on their role in enhancing academic writing proficiency. Using a quantitative descriptive design, data were collected from 30 master's students at Sana'a and Aden universities through a validated questionnaire. The findings reveal that while students demonstrate strong awareness of metacognitive strategies in planning, monitoring, and evaluating their work, they face challenges in applying advanced cohesive devices such as ellipsis, substitution, and collocations. Gender and specialization were found to have no significant impact on the use of these strategies. The study recommends the need for targeted interventions to address these challenges, emphasizing reflective practices, structured training, and the integration of digital tools to foster self-regulation and continuous improvement. These findings contribute to the growing literature on metacognitive strategies and offer practical insights for educators and policymakers in higher education.

1. INTRODUCTION

Writing is a fundamental academic skill; however, many master's students encounter significant challenges in producing effective writing. As advanced learners, they are often required to engage in complex writing tasks such as research papers, theses, and critical essays. This not only demands subject knowledge but also the ability to organize and articulate ideas effectively.

According to Graham (2006) and Teng and Zhang (2022), students must follow strategies that involve reflecting on and understanding one's own writing processes. This self-awareness enables students to identify barriers and adopt approaches to overcome them (Sato, 2022). Effective use of these strategies often distinguishes skilled writers from less experienced

ones, highlighting their importance in advanced academic contexts (Sato, 2022). By applying these strategies, students not only improve their writing but also build critical thinking skills and independence, which are essential for academic success at the master's level.

Therefore, it is recommended to use metacognitive strategies for master's students since they are suitable and useful in addressing a range of writing challenges. Moreover, they assist students in enhancing organization, improving clarity, and refining argumentation while fostering adaptability and confidence.

Despite the recognition of the effectiveness of these strategies, there is a noticeable gap in the literature regarding the specific application of metacognitive strategies by Yemeni master's students in overcoming writing challenges. This gap highlights the need for research that explores how these strategies are utilized in Yemeni academic settings. This study aims to fill this gap by investigating how master's students in Yemeni universities employ these strategies to enhance their academic writing and address common challenges they face.

1.1. Questions of the Study

The study strives to answer the following questions:

1. What are the metacognitive writing strategies used by master's students in the Departments of English at Yemeni universities?
2. To what extent do the metacognitive writing strategies differ according to master's students with respect to gender and specializations?

2. LITERATURE REVIEW

2.1. Importance of Writing Strategies

Writing strategies are essential for helping learners achieve effective and high-quality written communication. They not only facilitate the organization of thoughts and the management of writing tasks but also enhance the clarity and coherence of the final output, making them indispensable in the development of writing proficiency. Numerous scholars, including Victori (1999), Blaya (1997), and Sadi and Othman (2012), highlighted the importance of writing strategies in improving writing proficiency. Similarly, Murray and Moore (2006) emphasized that writing strategies help produce successful patterns and improve communication. Employing such strategies enables writers to organize their thoughts, manage the writing process, and create clearer, higher-quality texts, underscoring their role in achieving writing effectiveness.

2.2. Writing Strategies and Metacognitive Writing Strategies

Writing strategies encompass the techniques, procedures, and approaches writers use to achieve their objectives (Baker & Boonkit, 2004; Bai, Hu, and Gu, 2014). Researchers explored these strategies from various perspectives, leading to multiple classification systems, such as those by Baker & Boonkit (2004), Cabrejas Peñuelas (2008), and Mu (2005). Among these, Mu's (2005) classification identified five core types of writing strategies: rhetorical, metacognitive, cognitive, communicative, and social/affective.

Rhetorical strategies focus on persuading or informing readers using techniques such as emotional appeals or logical arguments. Metacognitive strategies involve planning, monitoring, and evaluating the writing process to maintain organization and reflection. While cognitive strategies include generating ideas, structuring thoughts, and revising drafts. For communicative strategies, they ensure clarity and engagement with the audience. Finally, social/affective strategies involve seeking feedback and managing emotions during writing.

Metacognitive strategies are particularly significant as they enable learners to consciously and independently regulate their writing process, fostering lifelong learning skills (Boghian, 2016; Bouirane, 2015). Xiao (2016) explained that metacognitive strategies are techniques for monitoring the writing process and evaluating the effectiveness of actions. According to Wenden's (1998) taxonomy, Mu (2005) categorized metacognitive strategies into three stages. First, planning involves setting objectives, identifying the audience, and selecting strategies before and during writing. Second, monitoring entails regularly assessing progress during the writing process. Last, evaluating focuses on reviewing and revising the text to make necessary improvements. It can be said these strategies are essential since they enhance linguistic skills and promote organized, reflective writing practices, which are vital for writing success.

3. METHOD

This study adopted a quantitative descriptive design to explore metacognitive writing strategies employed by master's students. Questionnaires are widely recognized as an important instrument in research due to their effectiveness in data collection. Therefore, a quantitative research method was used to collect data for this study. Johnson and Turner (2003) asserted that questionnaires are the most efficient means of gathering data, primarily because researchers do not need to be physically present during the completion of the questionnaire.

3.1. Participants

The participants in this study were from the English departments in the higher education programs at Sana'a University and Aden University from 2023 to 2024. The participants

consisted of 30 master's students who were selected using purposive sampling techniques. Among the respondents, there were 19 females and 11 males.

3.2.Instruments

The researcher designed a questionnaire as a research instrument to collect data from the participants. Before distributing and administering it, the researcher consulted experts in English departments to ensure its validity and standard. Following the assessment of the questionnaire's content validity, a pilot study was conducted to evaluate its internal consistency. This pilot test not only helped improve the wording and clarity of the questionnaire but also assessed its reliability. Reliability is an important aspect of research, ensuring that the collected data is trustworthy and consistent. By calculating Cronbach's alpha coefficient, the researchers obtained a high value (0.861), indicating a reliable questionnaire. Subsequently, the questionnaire was distributed to master's students at Sana'a University and Aden University.

3.3.Data Analysis

To answer the questions of this study, the collected data was analyzed using descriptive statistics such as mean, frequency, and percentage. The scales were utilized to assess the perceived extent of the strategies by master's students. These scales are presented in Table 3.1.

Table (3.1) Approximate Scale for Strategies Used by Master's Students

Response	Mean (Range)	Rank	Extent
Never	From 1 to 1.79	1	Very Low
Rarely	From 1.80 to 2.59	2	Low
Occasionally	From 2.60 to 3.39	3	Moderate
Often	From 3.40 to 4.19	4	High
Always	More than 4.20	5	Very High

Jalagat and Al-Habsi (2017, p.5134). Macfie and Nufrio (2006, p.70).

4. RESULTS AND DISCUSSIONS

The questionnaire covered the metacognitive strategies used by master's students. After collecting the responses of master's students', scores were analyzed in frequency, standard deviations, percentages, and rank by using SPSS.

The first question of this study is, "*What are the metacognitive writing strategies used by master students in the Departments of English at Yemeni universities*?" To answer this question, the researcher analyzed the data to understand the metacognitive writing strategies employed by master's students. This analysis involved comparing the perspectives of all participants and identifying the most and least frequently used metacognitive writing strategies by master's students. Frequency analysis was employed to determine the importance of each metacognitive strategy.

Table (4) General Assessment of All Participants for the Questionnaire

Questionnaires' Statements	Dimensions	Mean	Std. deviation	%	Rank
28 Statements	First: Planning	3,67	0,53	73.40	high
	Second: Monitoring	3,61	0,47	72.20	high
	Third: evaluation	3,52	0,60	70.40	high
Overall Average		3,59	0,44	71.74	high

It is clear from Table (4) above that the use of metacognitive writing strategies among master's students in English departments at Yemeni universities received a high overall rating. This is reflected in the general mean of (3.59), the standard deviation of (0.44), and the percentage of (71.74%), indicating a notable interest among the sample members in applying metacognitive writing strategies. Based on these results in the questionnaire, each dimension will be presented as follows:

4.1. Planning

The results of the first dimension, planning, were analyzed by calculating the means, standard deviations, and percentages, along with reviewing the students' responses to the statements of this dimension. These results are presented in detail in Table (4.1).

Table 4.1: Descriptive Statistics of Master's Students' Perspectives Related to Planinng

					Planning					
Statements	Al	Of	Oc	Ra	Ne	Mean	Std. deviation	%	Average Grade	Rank
1 I easily select a topic.	2	1	3	9	15	4.13	1.17	82.60	High	2

Item	Al	Of	Oc	Ra	Ne	M	Std.	%	Level	R
2. I clearly identify my audience before starting my writing.	0	4	5	11	10	3.90	1.03	78.00	High	3
3. I determine the purpose of the writing.	0	1	2	12	15	4.37	0.76	87.40	Very High	1
4. I organize the information I have collected before starting to write.	2	5	5	8	10	3.63	1.30	72.60	High	4
5. I decide what strategies to use to complete the writing task.	5	6	5	7	7	3.17	1.44	63.40	Moderate	5
6. I make up a writing timetable to manage my writing tasks.	7	7	4	8	4	2.83	1.42	56.60	Moderate	6
Overall Average						3.67	0.53	73.40%	High	

Note: Al = always; Of = Often; Oc = Occasionally; Ra = Rarely; Ne = Never; M = Mean; Std. = Std deviation; % = Percentage; R = Rank

It is clear from Table (4.1) above that the strategies related to planning in metacognitive writing showed variation in evaluation levels, ranging from very high to moderate. The overall mean is (3.67), with a standard deviation of (0.53), and a percentage of (73.40%), reflecting a notable interest among the students in planning stage.

Based on the results, the items of the planning dimension within the second section of the Metacognitive Writing Strategies Questionnaire were analyzed. They were arranged to highlight three highest student' responses, and three items with the lowest student' responses as outlined below:

The students' responses reveal notable strengths in their writing process, as shown by the highest-ranked items. Item three, *"I determine the purpose of the writing,"* was ranked first, with a mean of (4.37), a standard deviation of (0.76), and a percentage of (87.40%). Item one, *"I easily select a topic,"* was ranked second, with a mean of (4.13), a standard deviation of (1.17), and a percentage of (82.60%). Finally, item two, *"I clearly identify my audience before starting my writing,"* was ranked third, with a mean of (3.90), a standard deviation of (1.03), and a percentage of (78.00%).

In contrast, the responses reflect greater challenges with organizing and managing writing tasks. Item four, "I organize the information I have collected before starting to write," was ranked fifth, with a mean of (3.63), a standard deviation of (1.30), and a percentage of (72.60%). Item five, "I decide what strategies to use to complete the writing task," was ranked fourth, with a mean of (3.17), a standard deviation of (1.44), and a percentage of (63.40%). Lastly, item six, "I make up a writing timetable to manage my writing tasks," was ranked sixth, with a mean of (2.83), a standard deviation of (1.42), and a percentage of (56.60%).

In summary, the students demonstrated strong skills in planning strategies that related to metacognitive writing, with high levels of awareness and proficiency in setting writing goals, choosing suitable topics, and knowing the target audience. These skills reflect individuals' ability to organize their thoughts and direct their writing effectively to achieve clear goals.

However, some weak areas were observed in the use of advanced planning strategies, such as effective time management, selecting specific strategies to complete writing tasks, and organizing information systematically. These areas indicate gaps in the practical application of certain strategies of metacognitive that enhance writing efficiency and contribute to improving the overall writing workflow.

4.2. Monitoring

The results of monitoring dimension were analyzed by calculating the means, standard deviations, and percentages, along with reviewing the sample's responses to the items in this section. These results are presented in detail in Table (3..4).

Table 4.2: Descriptive Statistics of Master's Students' Perspectives Related to Monitoring

Monitoring										
Statements	Al	Of	Oc	Ra	Ne	Mean	Std. deviation	%	Average Grade	Rank
1. I check the content of my writing as I go.	0	4	5	8	13	4.00	1.08	80.00	High	4

	Al	Of	Oc	Ra	Ne	M	Std.	%		R
2. I make sure my writing is well-organized as I work on it.	2	3	6	9	10	3.73	1.23	74.60	High	7
3. I make sure my writing flows coherently as I go along.	1	6	3	9	11	3.77	1.25	75.40	High	6
4. I use substitution to avoid repetition in my writing.	8	10	5	3	4	2.50	1.36	50.00	Weak	10
5. I use ellipsis to maintain cohesion.	9	9	4	5	3	2.47	1.36	49.40	Weak	11
6.I utilize related words and phrases to link my ideas within sentences.	0	0	8	10	12	4.13	0.82	82.60	High	2
7.I use words that commonly go together (collocations) to create a smooth flow in my writing.	5	6	5	7	7	3.17	1.44	63.40	Moderate	9
8.I use synonyms to avoid repetition and add variety to my writing as I write.	0	2	3	12	13	4.20	0.89	84.00	High	1
9.I check my grammar, including sentence structure, while writing.	1	2	4	11	12	4.03	1.07	80.60	High	3
10.I pay attention to punctuation and spelling while I am writing.	0	4	10	7	9	3.70	1.06	74.00	High	8
11.I use precise and accurate vocabularies to convey my ideas while writing.	0	2	7	11	10	3.97	0.93	79.40	High	5
Overall Average						3.61	0.47	72.20	High	

Note: Al = always; Of = Often; Oc = Occasionally; Ra = Rarely; Ne = Never; M = Mean; Std. = Std deviation; % = Percentage; R = Rank

Table (4.2) revealed that the monitoring strategies related to metacognitive writing exhibited noticeable variation in response levels among the participants, ranging from "high" to "weak". The overall mean for all items was (3.61), with a standard deviation of (0.47) and a percentage of (72.20%). Based on the results, three items were ranked according to the highest student responses, as detailed below.

The students' responses reveal notable strengths in their ability to use cohesive devices in writing. Leading the list, item eight, with the statement, *"I use synonyms to avoid repetition and add variety to my writing as I write,"* was ranked first, with a mean of (4.20), a standard

deviation of (0.89), and a percentage of (84%). This suggests a strong capability in employing synonyms to enhance variety and avoid redundancy. Following this, item six, *"I utilize related words and phrases to link my ideas within sentences,"* was ranked second, with a mean of (4.13), a standard deviation of (0.82), and a percentage of (82.60%), reflecting students' proficiency in connecting ideas cohesively. Lastly, item nine, *"I check my grammar, including sentence structure, while writing,"* was ranked third, with a mean of (4.03), a standard deviation of (1.07), and a percentage of (80.60%). These results demonstrate the students' awareness of foundational cohesive devices that contribute to the clarity and effectiveness of their writing.

On the other hand, significant weaknesses were evident in certain areas, pointing to a need for further skill development. Item seven, with the statement, *"I use words that commonly go together (collocations) to create a smooth flow in my writing,"* was ranked ninth, with a mean of (3.17), a standard deviation of (1.44), and a percentage of (63.40%). This reflects a gap in knowledge or practice in using collocations effectively, which are crucial for improving fluency and the natural flow of texts. Similarly, item four, *"I use substitution to avoid repetition in my writing,"* was ranked tenth, with a mean of (2.50), a standard deviation of (1.36), and a percentage of (50%). This indicates a deficiency in the application of substitution, a technique that can significantly enhance text quality by reducing monotony. Both of these areas highlight the need for practical, example-based training to build students' confidence and proficiency.

The most significant weakness was found in item five, *"I use ellipsis to maintain cohesion,"* which was ranked eleventh and last, with a mean of (2.47), a standard deviation of (1.36), and a percentage of (49.40%). This low ranking indicates difficulties in applying ellipsis effectively, likely due to difficulties in identifying appropriate places for omission without disrupting meaning. Addressing this difficulty requires targeted training that demonstrates when and how ellipses can be used to enhance textual cohesion. Together, these findings emphasize the importance of balancing students' strengths with focused interventions to address their weaknesses, ensuring more cohesive and impactful writing.

Overall, these results underscore the importance of monitoring strategies in improving the quality of metacognitive writing. However, the gaps in certain skills require organized educational interventions focusing on developing the weak aspects to ensure a balanced improvement in skills and enhance the overall performance of the students.

4.3.Evaluation

The results for evaluation were analyzed by calculating the means, standard deviations, and percentages, with a detailed review of the responses to the items in this dimension. These results are presented in Table (4.4).

Table 4.3: Descriptive Statistics of Master's Students' Perspectives Related to Evaluation

Statements	Al	Of	Oc	Ra	Ne	Mean	Std. deviation	%	Average Grade	Rank
Evaluation										
1. I review the content of my writing after completing it.	0	2	5	9	14	4.17	0.95	83.40	High	1
2. I check the organization of my writing after finishing it.	1	3	4	10	12	3.97	1.13	79.40	High	3
3. I examine the coherence of my writing after it is done.	2	3	5	9	11	3.80	1.24	76.00	High	5
4. I mainly focus on checking the substitutions that I have used in my writing.	9	11	3	4	3	2.37	1.33	47.40	Weak	9
5. I pay close attention to examining the ellipsis I have made.	11	10	2	3	4	2.30	1.42	46.00	Weak	10
6. I assess the use of related words and phrases to ensure that they effectively link my ideas within sentences after completing my writing.	2	5	5	8	10	3.63	1.30	72.60	High	7
7. I examine the use of words that commonly go together in my writing.	5	5	5	7	8	3.27	1.46	65.40	Moderate	8

	Al	Of	Oc	Ra	Ne	M	Std.	%		R
8. I evaluate the appropriateness and variety of my synonyms.	2	4	6	9	9	3.63	1.25	72.60	High	7
9. I focus on ensuring my grammar is accurate.	1	1	6	10	12	4.03	1.03	80.60	High	2
10. I review my punctuation and spelling after I finish writing.	0	5	7	10	8	3.70	1.06	74.00	High	6
11. I examine the precision and accuracy of the vocabularies of my writing.	1	2	6	12	9	3.87	1.04	77.40	High	4
Overall Average						3.52	0.60	70.40	High	

Note: Al = always; Of = Often; Oc = Occasionally; Ra = Rarely; Ne = Never; M = Mean; Std. = Std deviation; % = Percentage; R = Rank

It is clear from Table (4.3) that the metacognitive writing strategies related to evaluation received high to very high ratings across all items in this dimension. The overall mean score was (3.52), with a standard deviation of (0.60), and the percentage for the responses was (70.40%). According to the results, the items of the third dimension (evaluation) were ranked based on the three highest students' responses, as follows:

The students' responses indicate notable strengths in their metacognitive writing strategies, particularly in reviewing and refining their work. Item one, with the content *"I review the content of my writing after completing it,"* was ranked first, with a mean score of (4.17), a standard deviation of (0.95), and a percentage of (83.40%). This suggests that students prioritize reviewing their content as an essential part of their writing process. Similarly, item nine, *"I focus on ensuring my grammar is accurate,"* was ranked second, with a mean score of (4.03), a standard deviation of (1.03), and a percentage of (80.60%). This reflects a strong emphasis on grammatical accuracy in their writing. Additionally, item two, *"I check the organization of my writing after finishing it,"* was ranked third, with a mean score of (3.97), a standard deviation of (1.13), and a percentage of (79.40%).

Conversely, three items received the lowest responses. Item seven, *"I examine the use of words that commonly go together in my writing,"* was ranked ninth, with a mean score of (3.27), a standard deviation of (1.46), and a percentage of (65.40%). The low ranking suggests a lack of experience or training in using collocations effectively, as well as limited awareness of their role in enhancing text quality. Item four, *"I mainly focus on checking the substitution that I have used in my writing,"* was ranked tenth, with a mean score of (2.37), a standard deviation of (1.33), and a percentage of (47.40%). This indicates a need for students to improve their mastery of substitution as a cohesive device to avoid repetition and improve text quality. Finally, item five, *"I pay close attention to examine the ellipsis I have made,"* was ranked eleventh and last, with a mean score of (2.30), a standard deviation of (1.42), and a percentage of (46.00%). The low ranking highlights a lack of awareness of the importance of ellipsis as a device for enhancing cohesion, suggesting the need for targeted training in this area.

These findings reveal both the students' strengths and areas for growth in their metacognitive writing strategies. While they demonstrate proficiency in reviewing, organizing, and ensuring grammatical accuracy, there are clear gaps in their use of collocations, substitution, and ellipsis. Addressing these weaknesses through focused training and practice could significantly enhance their overall writing cohesion and quality. Overall, the findings suggest that the highest difficulty items are related to fundamental aspects of writing, namely collocations, substitution, and ellipsis. This analysis focuses on some of the weak areas, which emphasizes how students could use training to improve these areas and assist them in developing better cohesive writing.

This study builds upon prior research on metacognitive writing strategies by focusing on their practical applications in writing instruction. Goctu (2017) and Razı (2012) highlighted that fewer than half of their participants were aware of or utilized metacognitive strategies, despite teacher efforts to introduce them. Furthermore, Dülger (2007)also showed that metacognitive strategies have an important role in students' writing achievement. Taking these foundations further, this study broadens the reach of metacognitive strategies by incorporating linguistic features like cohesive devices in its application. This paper extends the nexus between the theory and practice of metacognitive strategies through monitoring and evaluating dimensions across a specific linguistic setting. Not only is this in line with previous research on the effectiveness of metacognitive strategies but it also highlights for the first time cohesion as particularly ripe for applied use.

The second question of this study is "*To what extent do the metacognitive writing strategies differ according to master students with respect to gender and specializations?*" To answer this question, A T-Test analysis was conducted on the results from questionnaires. The analysis considered gender and qualifications as variables to determine if there are differences in the metacognitive strategies used.

The table below presents the results of the Independent Samples T-Test conducted to determine whether there are significant differences in metacognitive writing strategies between male and female master students. The data includes the mean, standard deviation, t-value, degrees of freedom (df), and significance level (Sig.) for each strategy dimension: Planning, Monitoring, Evaluation, and the Total score. This analysis aims to explore gender-based variations in the use of these strategies.

Table 4.4 Inferential Statistics for T-test by Gender on Metacognitive Strategies

T-test by Gender							
Dimension	Gender	N	Mean	Std. Deviation	df	t	Sig.
Planning	Male	11	3.57	0.64	0.769	28	0.449
	Female	19	3.73	0.46			
Monitoring	Male	11	3.45	0.43	1.441	28	0.161
	Female	19	3.70	0.48			
Evaluation	Male	11	3.28	0.56	1.718	28	0.097
	Female	19	3.66	0.59			
Total	Male	11	3.41	0.45	1.724	28	0.096
	Female	19	3.69	0.42			

Table (4.4) presents the results regarding the mean scores and standard deviations of male and female master students in their use of metacognitive writing strategies. The overall mean score for males was (3.41), with a standard deviation of (0.45), while females had a higher mean score of (3.69), with a standard deviation of (0.42). The T-test result indicated a value of (1.724) with a probability of (0.096), which is greater than the significance level ($\alpha = 0.05$). This suggests that there are no statistically significant differences between the overall mean scores of males and females in the use of metacognitive writing strategies.

The table also reveals that there are no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the mean scores of males and females across the individual dimensions of metacognitive writing strategies. The significance levels for these dimensions— Planning, Monitoring, and Evaluation—were (0.449, 0.161, and 0.097), respectively, all of which exceeded the specified significance level ($\alpha \leq 0.05$). For the Planning dimension, males scored a mean of (3.57) with a standard deviation of (0.64), while females scored (3.73) with

a standard deviation of (0.46). In the Monitoring dimension, males had a mean score of (3.45) with a standard deviation of (0.43), while females scored (3.70) with a standard deviation of (0.48). Similarly, in the Evaluation dimension, males scored a mean of (3.28) with a standard deviation of (0.56), while females scored (3.66) with a standard deviation of (0.59).

In conclusion, the results indicate that gender does not significantly influence the use of metacognitive writing strategies among master students. None of the dimensions—Planning, Monitoring, or Evaluation—nor the overall score show statistically significant differences, as all p-values exceed the significance level ($\alpha \leq 0.05$).

Table (4.5) outlines the findings of the Independent Samples T-Test conducted to determine whether there are significant differences in the use of metacognitive writing strategies among master students specializing in Literature and Translation. The table includes detailed statistics for the overall score and individual dimensions—Planning, Monitoring, and Evaluation—including the mean, standard deviation, t-value, degrees of freedom (df), and significance level (Sig.) for each group. This analysis aims to identify any specialization-based variations in the use of these strategies.

Table 4.5 Inferential Statistics for T-test by Gender on Metacognitive Strategies

Dimension	Specialization	N	Mean	Std. Deviation	Df	t	Sig.
			T – test by Specializing				
Planning	Literature	11	3.70	0.43	0.187	28	0.853
	Translation	19	3.66	0.59			
Monitoring	Literature	11	3.74	0.52	1.163	28	0.255
	Translation	19	3.53	0.44			
Evaluation	Literature	11	3.59	0.76	0.397	28	0.697
	Translation	19	3.48	0.51			
Total	Literature	11	3.67	0.50	0.756	28	0.456
	Translation	19	3.54	0.42			

Table (4.5) presents the results regarding the mean scores and standard deviations of master students specializing in Literature and Translation in their use of metacognitive writing strategies. The overall mean score for Literature students was (3.67), with a standard deviation of (0.50), while the mean score for Translation students was slightly lower at (3.54), with a standard deviation of (0.42). The T-test result indicated a value of (0.756) with a probability of (0.456), which is higher than the significance level ($\alpha = 0.05$). This suggests that there are no

statistically significant differences between the overall mean scores of Literature and Translation students.

Furthermore, the table reveals no statistically significant differences at the significance level ($\alpha \leq 0.05$) in the mean scores of the two groups across the individual dimensions of metacognitive writing strategies. For the Planning dimension, the mean score for Literature students was (3.70) with a standard deviation of (0.43), compared to Translation students with a mean of (3.66) and a standard deviation of (0.59). The T-test value was (0.187), and the p-value was (0.853), indicating no significant difference.

In the Monitoring dimension, Literature students scored a mean of (3.74) with a standard deviation of (0.52), while Translation students scored (3.53) with a standard deviation of (0.44). The T-test value was (1.163), and the p-value was (0.255), which is greater than the threshold for significance. Similarly, for the Evaluation dimension, Literature students had a mean of (3.59) with a standard deviation of (0.76), and Translation students scored (3.48) with a standard deviation of (0.51). The T-test value was (0.397), and the p-value was (0.697), also exceeding the significance level.

In final analysis, the findings show no statistically significant differences in the use of metacognitive writing strategies between Literature and Translation students, either in the overall score or within the dimensions of Planning, Monitoring, and Evaluation, as all p-values were above the significance threshold of $\alpha \leq 0.05$.

5. CONCLUSIONS

This study underscores the pivotal role of metacognitive writing strategies in advancing the writing skills of master students in Yemeni universities. The findings reveal that while students demonstrate strong awareness and effective use of metacognitive strategies they face challenges in fully leveraging these strategies to address cohesion difficulties.

The study contributes valuable insights into the integration of metacognitive strategies with linguistic features, such as cohesion, and highlights the need for structured, targeted interventions to bridge existing gaps. By fostering a deeper metacognitive awareness, students can better regulate their writing processes, identify areas for improvement, and adopt strategies that promote both writing proficiency and independent learning.

5.1.Recommendations

This study addresses the research problem by proposing a set of recommendations for students in higher education. These recommendations aim to enhance the writing practices of master students.

1- Encourage students to reflect deeply on their academic writing processes through structured self-assessments, by using metacognitive strategies in their work.

2- Offer practical activities that help students set clear writing goals, assess their work critically, and improve through repeated practice.

3- Employ digital tools to facilitate students tracking their metacognitive strategies and noticing patterns in their writing process to improve them.

5.2. Limitations of the Study

It is important to note that there are limitations of this study related to sample size, scope of research, and intervening variables that could be newly studied in the future. The results depended on a certain size of the sample and were not able to be generalized to a larger population. Additionally, the scope of the study focused on a particular set of metacognitive writing strategies, hence future research is needed to include other variables that may affect the writing performance of master students. In conclusion, the findings from this study reiterate the importance of metacognitive writing strategies during the student's academic journey.

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