How Does Social-Affective Strategies Influence Other Strategies in Academic Writing?

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ABSTRACT

Academic writing is a multifaceted process that requires students to engage with various cognitive, metacognitive, and social-affective strategies. While much emphasis has been placed on individual strategies, there is a growing interest in how these strategies interact with one another, particularly the influence of social-affective strategies. This study aims to investigate the relationship between social-affective strategies and other writing strategies (metacognitive, cognitive, and effort regulation) among Malaysian university students. Employing a quantitative approach, data were collected via an adapted Writing Strategy Inventory from 42 undergraduate and postgraduate students across various disciplines. The instrument, which consists of four main sections, was measured for internal consistency using Cronbach's Alpha. Findings revealed notable patterns in how students perceive and apply social-affective strategies in conjunction with other strategies during academic writing tasks. The study offers insight into the dynamic interplay of writing strategies and highlights the importance of social interaction, emotional regulation, and strategic thinking in shaping successful writing outcomes. Future research should explore how social-affective strategies interact with other writing strategies across varied tasks and learners, ideally through mixed-methods or longitudinal studies for deeper insight.

Keywords: academic writing, effort regulation strategies, metacognition regulation, social-effective strategies, writing strategies

INTRODUCTION

Academic writing, especially when second language (L2) learners are involved, includes more than mere language correctness. Its mentally and emotionally exhausting process, often requires the students to approve and maneuver their daily interactions with others. Students have become aware of the fact that the achievement of writing is not only the ability to write correctly but also the emotional aspect of writing, like how to deal with anger and other feelings and the social aspect, interrelations among peers and instructors (Che Mat, 2020). In addition, Teng and Zhang (2021) and Lee and Lee (2023) report that strategic thinking writing is combined with self-control of emotions and interpersonal communication. Those results imply that composing these strategies is an integral measure of the management of writing itself, of several parts of it at the same time.

Consequently, these strategies are basically classified into four types, namely, cognitive, metacognitive, effort-regulation, and social-affective strategies (Raoofi et al., 2017). On the other hand, social-affective strategies are also necessary, even if cognitive and metacognitive strategies are given more attention. It includes thoughts and actions that can help a person cope and have, for example, anger control, perseverance, and connections to others. However, these methods seem to derive their insufficient teaching and learning in the field of writing. Meanwhile, research suggests that they serve the students in constructing clarity in their thinking, eliminating the anxieties, and developing the confidence needed for the completion of writing tasks (Rahimi & Zhang, 2022; Teng et al., 2023). According to Rahimi and Zhang (2022), these strategies are advantageous. Their investigation has demonstrated that towards this, students are emotionally self-aware and utilizing peer

feedback proficiently. This clearly shows that students' feelings when writing and how they interact with their peers can have direct consequences on the quality of what they produce. Therefore, one should not consider the managing of emotions and the building of peer connections simply as extra skills, but also as the building blocks of academic writing.

The work of Flower and Hayes (1981) led to an early writing model that was also one of the first that attempted to realize and explain the process involved in writing. They imagined that writing is serrated in the way that it has to be planned, translated into thoughts, and revised the written text that has been written before. More recently, Rahmat and Whanchit (2024) put forward the idea of writing within the framework of social and cultural perspective of the society one lives in. It is these elements such as feelings, biographies, and social circles that define the way how the text is formed. In addition, this is aptly demonstrated in heterogeneous educational environments like Malaysia, where students with different intellectual and cultural experiences apply different problem-solving techniques to writing assignments (Che Mat, 2020; Rahmat & Whanchit, 2024). It is proven that these students who did not merely bypass their emotional hurdles but partnered with others are inclined to deal with the stressful writing assignment more persistently than others. Teng et al. (2023) also found out that there is a direct link between the quality of their writing and the degree of independence and thoughtfulness they exhibit when they are taught social and emotional awareness in writing instruction.

In a nutshell, all the recent studies point out a deeper understanding of what is involved in writing. Ideally, academic writing instruction should consist of more than teaching grammar rules and writing an essay. Students need to be shown how to work with their feelings, control their disappointment, and be amidst their social groups. Providing targeted support on these social-affective skills, teachers can develop students' learning in the line of increasing their self-competence, knowledge construction, and resilience in the writing field.

Statement of Problem

Over the past decade, research on academic writing has provided considerable insight into how learners approach the writing process, particularly through cognitive and metacognitive strategies. However, strategies that deal with emotional regulation and social interaction, often referred to as social-affective strategies, have not received the same level of attention. This is surprising, considering how often students report feeling anxious, isolated, or overwhelmed when faced with writing tasks, especially in second language contexts (Che Mat, 2020; Zhang & Zhang, 2021). While models like the one proposed by Raoofi et al. (2017) present writing strategies as interconnected cognitive, metacognitive, effort-regulating, and social-affective, most empirical work tends to isolate these elements. The result is a somewhat incomplete picture. For example, a student may be proficient in planning and revising using metacognitive skills, but without confidence or emotional regulation, those skills may not translate into effective writing (Teng & Zhang, 2021). Similarly, students may benefit from peer feedback or writing support groups, but hesitation, fear of judgment, or limited social trust can prevent them from engaging (Che Mat, 2020).

Rahmat and Whanchit (2024) noted that many learners recognise the value of collaborative writing practices yet hesitate to participate. Their reluctance often stems from anxiety, lack of exposure to constructive peer interaction, or previous negative experiences. Teng & Zhang (2021) also point out that students are not always taught how to cope with writing related stress or how to reflect on their emotional responses during the writing process. Instead, most writing instruction focuses heavily on output such as grammar, structure, and coherence, while overlooking the internal struggles learners face behind the scenes.

What emerges from this context is a disconnect between theory and practice. Though the literature acknowledges that writing is a complex, emotionally charged task, there is limited empirical investigation into how social-affective strategies function alongside or in support of other writing strategies. This gap is particularly important to address in culturally diverse classrooms, where emotional, linguistic, and interpersonal challenges intersect. This study responds to that need. By examining how social-affective strategies relate to metacognitive, cognitive, and effort-regulation approaches, the research aims to offer a more complete understanding of how students navigate academic writing not just on the page, but also within

themselves and their learning communities.

Aim and Research Questions

This study is done to explore the relationship between social-affective strategies and all other strategies in academic writing. Specifically, this study is done to answer the following questions:

i. How do learners perceive the use of social-affective strategies in academic writing?

ii. How do learners perceive the use of metacognitive strategies in academic writing?

iii. How do learners perceive the use of effort regulation strategies in academic writing?

iv. How do learners perceive the use of cognitive strategies in academic writing?

v. Is there a relationship between social-affective strategies and all other strategies in academic writing?

LITERATURE REVIEW

Writing Strategies

Writing strategies are purposeful techniques that learners adopt to plan, execute, and refine their written work. These strategies go beyond linguistic competence and reflect how students navigate the cognitive, emotional, and social demands of academic writing (Che Mat, 2020). In academic contexts, particularly L2 writers, the ability to manage writing through well-chosen strategies can determine not only the quality of the writing products but also influence the writer's confidence and motivation. Oxford (1990) described learning strategies of language acquisition, which may also be useful for writing, as the specific actions learners employ to make the process of learning to be more efficient, motivating, individual-oriented, effective, and applicable to various situations. Since then, this core insight into writers' behavior has been developed further, moving gradually to the notion of scientists employing various approaches in a flexible and adaptive manner, in particular when they are assigned challenging academic papers either as part of a college course or for personal knowledge acquisition (Teng & Zhang, 2021; Bakry & Alsamadani, 2020; Ruan, 2022).

Raoofi et al. (2017) laid out a widely referenced classification, identified four types of strategies: metacognitive, cognitive, effort regulatory, and socio-emotional. Metacognitive strategies, moreover, are conscious of the advance planning, ongoing monitoring, and self-assessment of the writer's writing development. Cognition, however, deals with the action part, such as applying grammatical rules and making sentences in addition to using transitions. Effort regulation thus involves the persistence of their attention and inspiration particularly when the writing is getting difficult, whereas social-affective strategies determine the emotional stability of a person; they do this by collaborating with others who are also writing and seeking help.

More recent investigations have reinforced and extended these classifications. Teng and Zhang (2021) gave an indication of the correlation between cognitive flexibility and awareness of one's metacognition, and the resulting academic writing performance. Ruan (2022) revealed that paraphrasing and summarizing were the necessary conditions for self-monitoring, hence there is interdependence between strategies, and they cannot simply be used freely without knowledge of how they interact. On the other hand, Khoo et al. (2023) also stated that students who can employ flexible strategies based on changes in task difficulty succeed in meeting various academic targets with ease.

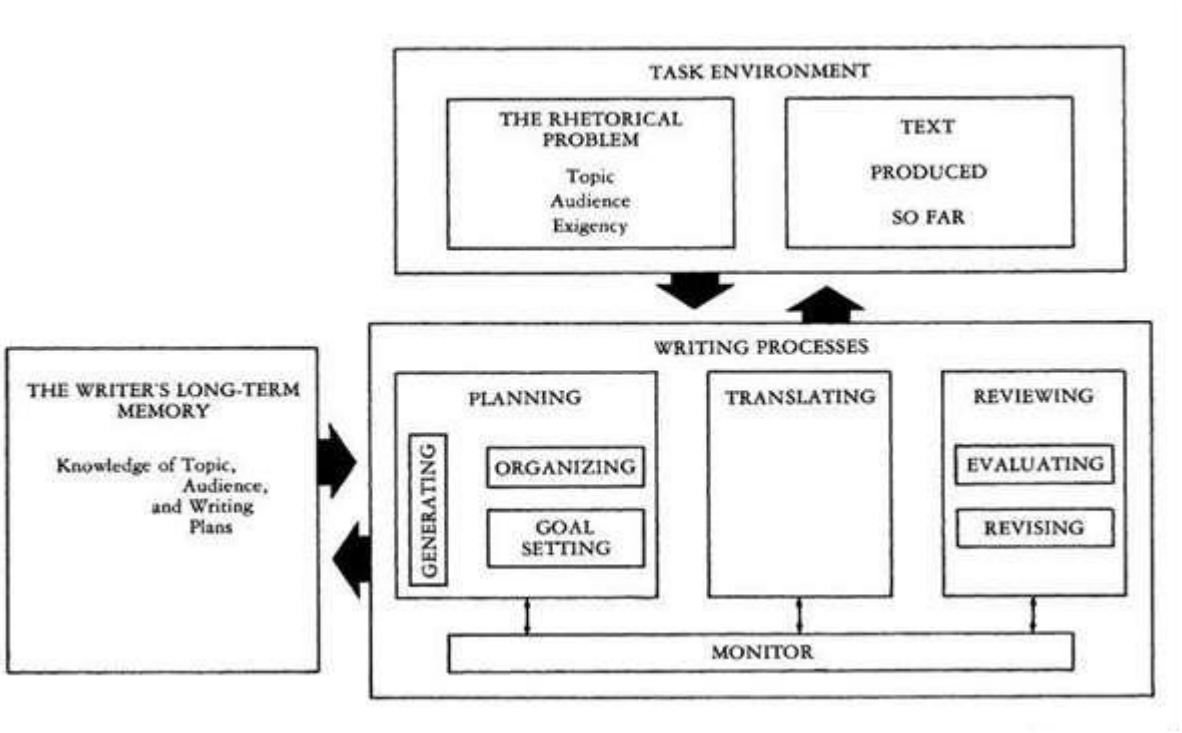
Interestingly, the role of social-affective strategies has gained more attention in post-pandemic academic environments, where online learning and increased student isolation have reshaped writing habits. Lee and Lee (2023) conducted research and declared that students who actively looked for commentary from peers and participated in online communities of academic writers reduced their fear of writing and gained a high amount of self-efficacy. This is consistent with an important insight raised by Rahmat and Whanchit (2024), which they call writing as socially embedded, and happens to be particularly relevant in multilingual classrooms that appeal to students of different cultures. In the same vein, Zhang & Zhang (2020) pointed out a discrepancy

between quality and frequency of applying strategies: The latter are not of exceptional value at all. Using metacognitive strategy, a student could improve several times but without clear goals or feedback, the revisions may not improve clarity or argumentation. Likewise, social strategies may be counterproductive if peer input lacks academic depth or misleads the writer. The salient point common to these research findings is that academic writing success relies on a strategic ecosystem where cognitive effort, emotional resilience, social interaction, and self-awareness work in tandem.

Writing Theory

Writing is a complex process experienced by the writer and the surrounding elements that supports the writing content. Figure 1 below reveals the composing process of a writer by Flower & Hayes (1981). The process involves three connecting components; the Writing Process, the Writer's Long-term Memory and the Task Environment.

Fig. 1 The composing process



To begin with, upon receiving the writing task, the writer starts with the Task Environment. This is the stage where the writer thinks of the rhetorical problems pertaining to the writing task This involves the writer thinking about the topic of the writing task, the audience who will read the completed text and the exigency (demands) of the writing task; or instance how much depth is required or what aspect of the topic is to be discussed. The next stage is Writer's long-term memory. This involves the writer's background knowledge or schemata. Writers are more comfortable to write on topics they are familiar with. The familiarity helps writers make connections from past knowledge to new knowledge. The last stage is the Writing Process. A good writer does not just sit down and write. He/she goes through the planning stage where he/she organizes, generates ideas and sets goals for writing. Then the writer translates his/her oral thoughts into written thoughts. Finally, the writer reviews the text by evaluating and revising. The writing process is a complex one. Writers need to use different writing strategies to get through each stage of the process successfully.

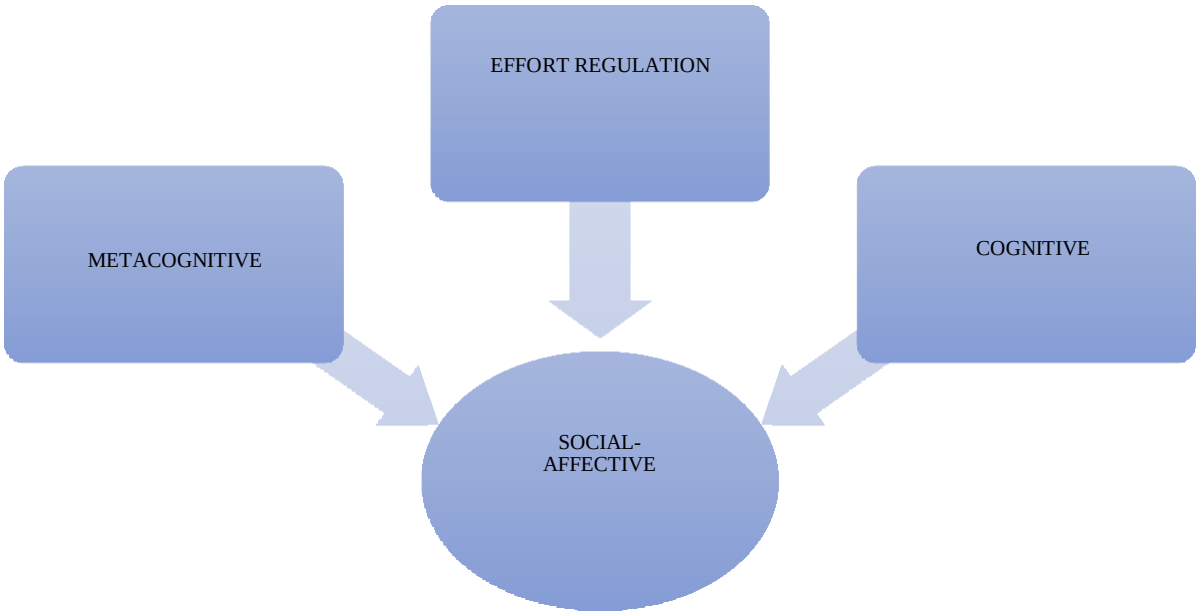
Conceptual Framework

This study is done to explore Figure 2 below shows the conceptual framework of the study. This study explores the influence of social affective strategies on other writing strategies by Raoofi et al. (2017) in academic writing. The conceptual framework guiding this study is illustrated in Figure 2 below. Contrary to what we see, writing is not a solitary process (Rahmat & Whanchit, 2024). The writing process begins with the thinking

process of the writer. It is translated from the written text through the writer's effort regulation and cognitive process. The writer gains more insights through his/her social interaction using social-affective strategies.

This study also explores the relationship between social affective and metacognitive strategies. It also looks at social affective strategies and effort regulation strategies. Lastly, this study also investigates the relationship between social affective strategies and cognitive strategies in academic writing.

Fig 2 Conceptual Framework of the Study



Past Studies on Writing Strategies

Many studies were executed to investigate the impact of social affective strategies on other writing strategies in scholarly settings. These studies examine the interaction between social affective strategies and cognitive, metacognitive and self-regulation strategies in defining academic writing performance. Baharudin et al. (2024) undertook a quantitative study exploring the perception of ESL learners towards five writing strategies particularly metacognitive, cognitive, social, affective and self-regulation. The focus was to investigate the interrelationship of these strategies in academic writing. The findings indicated that metacognitive strategies were the most commonly employed among the five strategies, followed by cognitive, self-regulation, affective and social strategies. Significantly, the study determined a substantial relationship between all five strategies, indicating social and affective strategies synergizing with other strategies to improve students' writing performance. These results emphasize the integration of writing strategy instruction, facilitating students' cognitive and affective dimensions towards generating competent academic writers.

Similarly, a study by Sun and Zhang et al. (2022) examined the metacognitive experiences underwent by 760 Chinese EFL learners during the pre-writing activities, drafting and post-writing evaluation and discovered four dimensions of metacognitive engagement particularly metacognitive feelings, use of strategy, task-specific knowledge and judgements. This dimension demonstrated a significant predictive effect on writing performance which reflected emotional and evaluative responses concurrent with affective strategy use. This affirms the perspective that affective elements found in confidence, anxiety control and self-awareness parallel with strategic behavior as well as define learners' capacity to manage and deploy writing strategies efficiently across the writing process.

Collectively, these studies acknowledge the salient influence of social- affective strategies in academic writing. While Baharudin et al. (2024) revealed the statistical interconnection between social and affective strategies and technical strategies, Sun and Zhang et al. (2022) highlight the psychological and experiential significance of the strategies. Both indicate the value of social interaction and emotional regulation could incur an indirect powerful impact to enhance learners' cognitive and metacognitive strategy use resulting in effective outcomes in academic writing.

Prihatini and Pangesti (2023) investigated the relationship between self-regulated learning strategies and writing performance among EFL university students. The research concentrated on the impact of metacognitive, cognitive, affective and social strategies on students' writing performance. The empirical evidence discovered a positive correlation between metacognitive and social-affective strategies which elevated quality of writing. Students who consistently applied the strategies exhibited improved writing outcomes than their counterparts. The findings emphasized the critical need of imparting students with systematic tools to cultivate self-regulation strategies that could assist students to plan, monitor, manage emotions and participate in social interactions during the writing process.

In parallel, Kurniawati (2022) examined the function of peer feedback as a social-affective strategy in developing students' writing skills in composing recount texts utilizing an adapted open-ended questionnaire from prior framework in Horverak (2016) and Huisman et al. (2020) supported by semi-structured interview carried out on 7 selected participants. The study uncovered peer feedback was generally regarded as instrumental in their writing proficiency. Peer interactions and feedback were specifically highlighted to boost the confidence, critical thinking skills, grammatical conventions and structure. The process ignites substantial engagement in cognitive growth and emotional development. Despite the positive outcomes, the study acknowledged challenges in time constraints and peer feedback inconsistencies. While acknowledging the drawbacks, the results displayed the crucial existence of pedagogical value in incorporating peer feedback to writing instruction as a means to cultivate social-affective learning and facilitate self-regulated learning in ESL classrooms.

Thus, the findings from Prihatini and Pangesti (2023), Kurniawati (2022), Baharudin et al. (2024) and Sun and Zhang et al. (2022) deliver strong empirical grounding that social-affective strategies constitute a pivotal component in facilitating effective academic writing. While Prihatini acknowledged the contribution of social-affective strategy in enhancing writing outcomes via emotional regulations and social interactions, Kurniawati revealed the positive impact of peer feedback which is deemed as clearly defined social-affective domain that could elevate students' linguistic awareness, reflection and confidence. These findings resonate with Baharudin et al. (2024) who identified that apart from being less frequently used as opposed to metacognitive and cognitive strategies, social-affective strategies were significantly associated with all other strategies. This implies the possibility of social-affective strategies to function as supportive enablers, empowering students to optimize their higher-order writing strategies. In the same vein, Sun and Zhang et al. (2022) emphasized the pertinent use of metacognitive feelings and judgements that profoundly impacted students' writing competency. These studies underscore that nurturing emotional engagement, peer collaboration and self-awareness amplify the impact of cognitive and metacognitive strategy use. Thus, social-affective strategies need to be integrated as one of the primary features into pedagogical approach in academic writing instruction to encourage strategic, reflective and emotionally attuned writing strategies among ESL/EFL students.

METHODOLOGY

This quantitative study is done to explore the use of strategies in academic writing among students in a Malaysian university. A convenient sample of 42 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is replicated from Raoofi et.al. (2017) to reveal the variables in table 3 below. Table 1 below shows the categories used for the Likert scale; 1 is for Strongly Disagree, 2 is for Disagree, 3 is for Undecided, 4 is for Agree and 5 is for Strongly Agree.

Table 1 Likert Scale Use - Frequency

1	Never
2	rarely
3	Sometimes
4	Often
5	Always

Table 2 Distribution Of Items In The Survey

Section	Writing Strategy	No of Items	Cronbach Alpha
B	Metacognitive	10	.880
C	Effort Regulation	4	.789
D	Cognitive	6	.881
E	Social/Affective	7	.769
	Total Items	27	.922

Table 2 shows the distribution of items in the survey. Jackson (2015) states that Cronbach's alpha is the most common measure of reliability for the survey. The analysis shows a Cronbach alpha of .880 for Metacognitive strategies, .789 for Effort Regulation strategies, .881 for Cognitive Strategies and .767 for social/Affective strategies. The overall Cronbach 's alpha for all 27 items is .922; thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Table 3 below shows the method of data analysis for this study. Research question 1,2,3 & 4 are analysed using descriptive statistics. Results are presented in the form of mean and standard deviation. The last research question is analysed using exploratory statistics using bivariate analysis. This is done to check for correlation between variables assigned. Since the number of respondents is 42, the results of this study cannot be generalized for other populations of academic writers.

Table 3 Method Of Data Analysis

No.	Research Questions	How is data collected?	Method of Data Analysis
1	How do learners perceive the use of social-affective strategies in academic writing?	Survey , replicated from Raoofi,et.al (2017). Data is collected online via Google form.	Descriptive Statistics, presentation of mean and standard deviation
2	How do learners perceive the use of metacognitive strategies in academic writing?		
3	How do learners perceive the use of effort regulation strategies in academic writing?		
4	How do learners perceive the use of cognitive strategies in academic writing?		
5	Is there a relationship between social-affective strategies and all other strategies in academic writing?		Exploratory Statistics-Bivariate Analysis-to check for correlation

FINDINGS

Demographic Analysis

our questions represent the demographic profile of the participants in this study. The data is presented in the form of percentages. Firstly, for gender, 26% are male students and 74% of the respondents are female

students. Secondly, 62% are studying at bachelor's degree while 38% are studying at postgraduate level. Thirdly, 7% are from the science & technology cluster while 93% are studying social science & humanities. Finally, the participants in this study reported their level of writing proficiency as low (7%), intermediate (60%) and high (33%).

Table 4 Percentage For Demographic Profile

Question	Demographic Profile	Categories	Percentage (%)
1	Gender	Male	26%
		Female	74%
2	Level	Bachelor	62%
		Post-Grad	38%
3	Cluster	Science & Technology	7%
		Social Sciences & Humanities	93%
4	Level of Writing Proficiency	Low	7%
		Intermediate	60%
		High	33%

Descriptive Statistics

1) Findings for Socio-Affective Strategies: This section presents data to answer research question 1- How do learners perceive the use of social-affective strategies in academic writing? In the context of this study, this is measured by (i) social and (ii) affective strategies in table 5 and 6 respectively.

Table 5 Mean For Social Strategies

Item	Mean	SD
SWSQ1 In order to generate ideas for my writing, I usually discuss the writing topic with a friend or classmate.	3.4	0.9
SWSQ 2 After revising and editing my essay thoroughly, I ask a friend or my classmate to read and comment on it.	3.5	1.0
SWSQ 3 I try to identify friends or classmates whom I can ask for help in my writing.	3.5	1.1
SWSQ 4 When I have trouble writing my essay, I try to do it with my classmates or friends.	3.4	1.1

The data in Table 5 reflects a moderate use of social strategies among students when completing academic writing tasks, with mean scores ranging from 3.4 to 3.5. Notably, items related to seeking help from peers, such as asking classmates for feedback after editing (M = 3.5) and identifying supportive friends for writing assistance (M = 3.5), received the highest ratings. These findings suggest that students value peer input during the writing process, particularly at the revision stage. On the other hand, strategies such as discussing writing topics with peers (M = 3.4) and working through difficult tasks with classmates (M = 3.4) received slightly lower, though still moderate, scores. This implies that while students are open to collaborative writing practices, such Behaviour may not be fully embedded in their writing routines. The standard deviations, ranging from 0.9 to 1.1, suggest some variability in how these strategies are applied. This could be due to differences in personality, confidence levels, or prior experiences with peer support. These variations indicate

the importance of encouraging a supportive and collaborative classroom culture where peer interaction is normalized as part of the writing process.

Table 6 Mean For Affective Strategies

Item	Mean	SD
AWSQ1I try to write an essay in class with confidence and ease..	3.6	1.0
AWSQ2I try to relax whenever I feel afraid of writing.	3.6	1.0
AWSQ3I encourage myself to write even when I am afraid of making mistakes	3.9	0.8

Table 6 reveals that students generally show a positive use of affective strategies to manage their emotions during academic writing. The mean scores, ranging from 3.6 to 3.9, suggest that many students consciously encourage themselves, particularly when facing fear of making mistakes (M = 3.9). The consistent scores for writing with confidence and trying to relax when anxious (both M = 3.6) indicate that while not all students feel fully at ease, many are actively working to regulate their emotions. The standard deviations show a degree of variation, suggesting that individual comfort levels with emotional strategies differ. Some students may have stronger self-motivation, while others might still struggle with writing-related anxiety. These findings point to the need for writing instruction that includes emotional support, through reassurance, confidence-building tasks, and low-pressure writing activities, alongside language development.

2) Findings for Metacognitive Strategies: This section presents data to answer research question 2- How do learners perceive the use of metacognitive strategies in academic writing?

Table 7 Mean For Metacognitive Strategies

Item	Mean	SD
MWSQ1 I organize my ideas prior to writing.	3.9	0.8
MWSQ 2I revise my writing to make sure that it includes everything I want to discuss in my writing.	4.2	0.8
MWSQ 3I check my spelling.	4.3	0.9
MWSQ 4I check my writing to make sure it is grammatically correct.	4.5	0.8
MWSQ 5I evaluate and re-evaluate the ideas in my essay.	4.1	0.8
MWSQ 6I monitor and evaluate my progress in writing.	3.9	0.9
MWSQ 7I revise and edit an essay two or more times before I hand it in to my teacher.	4.1	1.0
MWSQ8 I go through the planning stages in my writing.	3.7	0.8
MWSQ9 I go through the drafting stages in my writing.	3.8	0.9
MWSQ10 I go through the revising and editing stages in my writing.	4.1	.8

Table 7 indicates that learners actively engage in metacognitive strategies, with most mean scores above 4.0. The highest score was for checking grammar (M = 4.5), followed by spelling (M = 4.3) and content revision (M = 4.2). This suggests that students' priorities accuracy and completeness in their writing. Other strategies like evaluating ideas, multiple rounds of editing, and going through the full writing process scored between 3.7 and 4.1. While students clearly recognise writing as a process, slightly lower means for planning (M = 3.7) and drafting (M = 3.8) suggest these earlier stages may receive less attention. The small spread in standard deviation implies a consistent use of these strategies across students. Overall, while students show a strong

metacognitive approach, more structured support in early-stage planning could help them write more effectively from the outset.

3) Findings for Effort Regulation Strategies: This section presents data to answer research question 3- How do learners perceive the use of effort regulation strategies in academic writing?

Table 8 Mean For Effort Regulation (Ers)

Item	Mean	SD
ERSQ 1I write a lot to develop my writing skills.	3.2	1.0
ERSQ 2I often work hard to do well in my writing even if I don't like English writing tasks.	3.7	1.0
ERSQ 3Even if the writing activities are difficult, I don't give up but try to engage in them.	4.0	0.8
ERSQ 4I concentrate as hard as I can when doing a writing task.	4.0	0.8

Effort regulation strategies denote students' ability to focus consistently in dealing with challenges in academic writing. The analysis of students' responses to the effort regulation items demonstrated a relatively significant high level of engagement and persistence. Table 8 shows the highest mean score recorded for the following items: ERSQ 3: *"Even if the writing activities are difficult, I don't give up but try to engage in them."* (M = 4.0, SD = 0.8) and ERSQ 4: *"I concentrate as hard as I can when doing a writing task."* (M = 4.0, SD = 0.8). These results highlight that the majority of the students displayed strong commitment and focus in their writing tasks, despite the strenuous efforts in completing the activities. The moderately low standard deviations for both proposed that, the results showed consistency across participants, with majority of the students reporting similar behaviours. Meanwhile, the lowest mean score can be seen in ERSQ 1: *"I write a lot to develop my writing skills."* (M = 3.2, SD = 1.0) that revealed students are unlikely to participate in frequent writing practice independently. The higher standard deviation recorded for this item indicated greater variability across the responses showing inconsistencies for engagement in practice writing.

4) Findings for Cognitive Strategies: This section presents data to answer research question 4- How do learners perceive the use of cognitive strategies in academic writing?

Table 9 Mean For Cognitive (Cws) Strategies

Item	Mean	SD
CWSQ1 I use memorized grammatical elements such as singular and plural forms, verb tenses, prefixes and suffixes, etc, in my writing	3.8	1.0
CWSQ 2I put newly memorized vocabulary in my sentences.	3.8	0.9
CWSQ 3In order to generate ideas for my writing, I usually engage myself in brainstorming.	3.9	0.9
CWSQ 4I use different words that have the same meaning.	4.1	0.9
CWSQ 5I use my experiences and knowledge in my writing.	4.4	0.7
CWSQ 6I try to use effective linking words to ensure clear and logical relationship between sentences or paragraphs	4.2	1.0

Cognitive strategies attributed to the mental process utilized by students in order to employ language skillfully and purposely in academic writing. In this study, the analysis of students' responses highlighted a significant high level of engagement in several cognitive strategies during the writing process.

The highest rated item was CWSQ5: *"I use my experience and knowledge in my writing."* (M= 4.4, SD=0.7). This indicates that students frequently leverage on their prior knowledge to complement and engage in academic writing. The comparatively low standard deviation shows consistent responses among participants. The second highest rated items were CWSQ6: *"I try to use effective linking words to ensure clear and logical relationship between sentences or paragraphs."* (M=4.2, SD=1.0) and CWSQ4: *"I use different words that have the same meaning."* (M=4.1, SD=0.9). These responses signify students' awareness of the necessity to have cohesion and lexical variety to ensure effective writing. Meanwhile, the slightly higher standard deviation for CWSQ6 could indicate that some students still struggle with coherence despite the ability to apply linking strategies. Other particular strategies like brainstorming to generate ideas (CWSQ3, M=3.9, SD=0.9) and the use of memorised vocabulary and grammar (CWSQ1 and 2, both M=3.8) also recorded moderately high scores. These reveal that cognitive strategies such as memorization and idea generation are broadly adopted with student approaches varying across individuals.

Exploratory Statistics

This section presents data to answer research question 5- Is there a relationship between social-affective strategies and all other strategies in academic writing? To determine if there is a significant association in the mean scores between social-affective strategies and all other strategies in writing, data is analysed using SPSS for correlations. Results are presented separately in table 10,11 and 12 below.

Table 10 Correlation Between Social Affective And Metacognitive Strategies

		Social Affective	Metacognitive
Social Affective	Pearson (Correlation	1	.413**
	Sig (2-tailed)		.007
	N	42	42
Metacognitive	Pearson (Correlation	.413**	1
	Sig (2-tailed)	.007	
	N	42	42

** Correlation is significant. At the .01 level (2-tailed)

Table 10 shows there is an association between social affective and metacognitive strategies. Correlation analysis shows that there is a moderate significant association between social affective and metacognitive strategies (r=.413**) and (p=.007). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a moderate positive relationship between social affective and metacognitive strategies.

Table 11 Correlation Between Social Affective And Effort Regulation Strategies

		Social Affective	Effort Regulation
Social Affective	Pearson (Correlation	1	.345*
	Sig (2-tailed)		.025
	N	42	42
Effort Regulation	Pearson (Correlation	.345*	1
	Sig (2-tailed)	.025	
	N	42	42

* Correlation is significant. At the .01 level (2-tailed)

Table 11 shows there is an association between social affective and effort regulation strategies. Correlation analysis shows that there is a moderate significant association between social affective and effort regulation strategies (r=.413**) and (p=.025). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a moderate positive relationship between social affective and effort regulation strategies.

Table 12 Correlation Between Social Affective And Cognitive Strategies

		Social Affective	Cognitive
Social Affective	Pearson (Correlation	1	.508**
	Sig (2-Tailed)		.001
	N	42	42
Cognitive	Pearson (Correlation	.508**	1
	Sig (2-Tailed)	.001	
	N	42	42

** Correlation is significant. At the .01 level (2-tailed)

Table 12 shows there is an association between social affective and cognitive strategies. Correlation analysis shows that there is a strong significant association between social affective and cognitive strategies (r=.508**) and (p=.001). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between social affective and cognitive strategies.

CONCLUSION

Summary of Findings and Discussions

This study set out to explore how social-affective strategies relate to and influence other key academic writing strategies among Malaysian university students. Drawing from a validated survey adapted from Raoofi et al. (2017), the analysis across four dimensions; social-affective, metacognitive, cognitive, and effort regulation revealed several important trends.

The findings reported that students experience moderate positive engagement with social-affective strategies, especially when seeking peer feedback during the revision process or when emotionally self-regulating through affirmations and self-encouragement. These findings are in line with the research findings of Lee and Lee (2023), that students writing with peers experience reduced anxiety and higher self-efficacy. In a similar vein, Rahmat and Whanchit (2024) point out that writing, especially in L2 contexts, involves social and cultural systems and thus enriches their interpersonal and emotional awareness.

In terms of metacognitive strategies, students showed strong use of techniques such as proofreading for grammar and editing to improve clarity of the text. As noted in Teng and Zhang (2021), academic performance also improves substantively with improved metacognitive awareness. The present study demonstrates the relationship even more clearly, especially during the period of planning and revision. When it comes to effort regulation, students showed high levels of persistence, with a large proposition feeling that some tasks involve more perseverance on their part than others, especially when dealing with difficult writing tasks. Many indicated a strong commitment to staying focused, though a lower frequency was reported for voluntary practice writing. This echoes the concerns raised by Ruan (2022), who highlighted that while students may demonstrate perseverance under supervision, their independent initiative often requires additional motivational support. The data here suggest that emotional encouragement, either internal or socially sourced may play a

role in sustaining effort.

The analysis of cognitive strategies showed that the most common strategies were brainstorming, prior knowledge, and cohesive linking devices to strengthen their writing. The highest scores were associated with applying personal experience and using synonyms to create lexical variation. Supporting these claims are the assertions of Khoo et al. (2023), which indicated that flexibility and adaptation in the use, are also the key traits among high-performing multilingual students. Clearly, the correlation analysis of the strategies revealed that two out of the three strategy types were meaningfully related to social-affective strategies. The strongest correlation was observed between social-affective and cognitive strategies followed by metacognitive, and effort regulation strategies. These results are consistent with the theoretical framework set forth by Flower and Hayes (1981), which views writing as recursive and interconnected drawing on both internal cognitive activity and external influences, including emotional and social factors.

In conclusion, this study substantiates that the academic writing process is not a solitary skill. The studies in this area by Che Mat (2020) and Rahimi and Zhang (2022), concluded that teaching writing should not just be merely done as technical, but as a holistic approach to the practice, where emotional resilience, social engagement, and strategic planning foster together. This approach, particularly relevant in culturally diverse and multilingual settings like Malaysia, calls for a more integrated pedagogy that values the affective and interpersonal dimensions of academic writing conventions.

Implications

Theoretically, the findings affirm that academic writing involves more than isolated cognitive tasks. It suggests their central role in enabling learners to effectively apply more advanced writing strategies. It is, instead, a strategic activity shaped by a range of internal and external factors. Based on the theoretical framework introduced by Raoofi et al. (2017), as well as the process model by Flower and Hayes (1981), this study emphasizes the significant relationship between social-affective strategies and other key domains, in particular metacognitive, cognitive, and effort regulation strategies.

Conceptually, the findings lend strong support to the need of socio-cognitive approaches in writing research. Rather than considering writing strategies in isolation, this study urges one to examine how they interact within broader learning contexts. The observed correlations ranging from moderate to strong indicate that students' use of writing strategies is influenced by a combination of cognitive skills, emotional regulation, and social engagement. Future theoretical developments in this field may benefit from giving greater prominence to social-affective components, positioning them as central features of writing development rather than peripheral elements.

In terms of pedagogy, these findings suggest the need to rethink how writing is taught in academic settings. By giving priority to product-based outcomes including grammar, structure, and formatting can often overshadow the other aspects of writing development. In addition, teaching students how to manage writing anxiety, give and receive feedback constructively, and remain motivated during setbacks can foster long-term confidence. These practices are especially valuable for those who, lacking confidence or feeling excluded during writing tasks.

Suggestions for Future Research

Notably, this study is able to provide findings that serve as the basis for determining the direction of the future research. For instance, the next research may choose to incorporate the mixed-methods approach, which will involve building on already done surveys and interviewing students or reflections. This could provide deeper insights into how students actually apply social-affective strategies while writing, to help capture the nuance often missed by quantitative data alone.

In addition, future studies could also consider including participants from a wider range of academic institutions, proficiency levels, and cultural settings. Doing so would offer a more comprehensive view of how these strategies operate across contexts. Given that this study drew from a relatively smaller size of sample,

increasing the number of participants will certainly help yield the generalizability of future outcomes.

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