

Exploring Academic Writing Through the Social Cognitive Theory

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ABSTRACT

Academic writing remains a key challenge for many tertiary learners, shaped not only by linguistic ability but also by cognitive, behavioural, and social factors. Drawing on Bandura's Social Cognitive Theory, this study explores how students' beliefs about their abilities, their use of writing strategies, and their interactions with peers and instructors influence their academic writing development. Writing is viewed here not as a solitary act, but as a socially constructed and self-regulated process that evolves through experience and feedback. This quantitative study involved 177 diploma students from a Malaysian public university. Data were collected using the Writing Strategies Inventory, a validated survey instrument comprising seven sections that captured students' use of cognitive, metacognitive, social, and affective strategies related to writing tasks. Findings reveal that students who demonstrated stronger writing self-efficacy and engaged in self-regulation strategies reported greater confidence, focus, and perceived writing success. Social influences, such as learning through peer modelling, collaborative writing, and constructive feedback, also emerged as significant in supporting students' writing development and motivation. The study highlights the importance of integrating socio-cognitive principles into writing instruction. By fostering self-awareness, strategic thinking, and socially enriched learning environments, educators can help students develop into more confident, autonomous, and effective academic writers. These findings offer valuable insights for curriculum designers and writing instructors seeking to enhance student engagement and long-term writing competence.

Keywords: Academic writing, Social Cognitive Theory, writing strategies, self-efficacy, self-regulation, peer learning, tertiary education, student writers

INTRODUCTION

Academic writing continues to be one of the most challenging components of higher education for many students, especially at the diploma level. Despite years of language instruction, learners often struggle to produce well-organised, coherent, and academically appropriate written work. These difficulties suggest that challenges in academic writing extend beyond linguistic competence, involving deeper cognitive, behavioural, and social factors.

This growing concern has sparked interest in examining academic writing through the lens of Social Cognitive Theory (SCT), introduced by Bandura. SCT emphasises the dynamic interaction between personal beliefs, behavioural practices, and environmental influences. Within this framework, constructs such as self-efficacy (belief in one's ability to perform a task), self-regulation (the capacity to plan, monitor, and reflect on one's actions), and observational learning (learning by watching others) offer a useful perspective for understanding how students approach academic writing.

Framing writing as a socially influenced and self-managed process allows for a deeper understanding of the psychological and social elements that contribute to writing performance. In this context, students' confidence, strategic awareness, and engagement with peers and instructors all play a significant role. This study sets out

to investigate how social cognitive factors influence students' use of writing strategies, with the broader aim of informing writing instruction and supporting student development in academic writing tasks.

For university students, academic writing still presents many difficulties, particularly for those writing in a second or foreign language. Social Cognitive Theory (SCT) is one of the numerous theoretical frameworks that help us understand how writing develops, and it presents an especially interesting viewpoint. Based on Bandura's (1986) research, SCT emphasizes how crucial self-efficacy, self-regulation, social modeling, and goal-setting are in influencing students' academic behaviors and results.

SCT has been used more and more in recent years by researchers to study how students tackle the challenging assignment of academic writing. For instance, Zhang and Zhang (2024) broke down Chinese university students into three different self-efficacy profiles in their extensive study. They discovered that students who had higher writing self-efficacy were more likely to use self-regulated learning (SRL) techniques and produce better writing results. According to Yang and Kim (2023), writing self-efficacy, which in turn improved the ability of Korean undergraduates to self-regulate their writing process, was significantly predicted by their perceptions of feedback. These studies highlight how behavior, motivation, and belief are all intertwined in writing performance, particularly in L2 circumstances.

There are still certain gaps in the literature despite the increased interest in writing research guided by SCT. Notably, a large number of research conducted to date have used one-dimensional or inconsistent self-efficacy measures, cross-sectional quantitative methods, and predominantly focused on students in Anglophone or English-medium situations. According to a thorough analysis by Mitchell et al. (2023), the majority of postsecondary writing self-efficacy research takes place in English-dominant situations, frequently ignoring the language and sociocultural diversity of multilingual learners. Furthermore, Zhang and Zhang (2024) emphasize that if self-efficacy is treated as a single concept, it may be possible to ignore the variety of how students approach writing assignments. Furthermore, Zhang, Bai, and Shen (2024) contend that the relationship between writing self-efficacy and feedback engagement in discipline-specific or ESL/EFL contexts is not well covered in research.

Research on academic writing has continuously evolved, offering important perspectives on the impact of individual learner variables like writing self-efficacy and self-regulated learning (SRL), especially when considered in the context of Bandura's Social Cognitive Theory (SCT). However, a significant issue with this body of work is its overwhelming reliance on data from Western Anglophone or English-medium institutions. This brings up important issues regarding the relevance and transferability of these conclusions to instructional settings that are more culturally and linguistically diverse. One such scenario is Malaysian higher education, where English is commonly used as a second language in academic environments. However, both teaching methods and student profiles differ markedly from those usually observed in Western classrooms.

Malaysian university students frequently negotiate intricate linguistic environments, where English is used for academic purposes alongside rich multilingual repertoires and culturally ingrained learning preferences. In this context, students' attitudes toward writing, motivation, and involvement with feedback and revision are influenced not just by individual cognition but also by peer interactions, institutional assessment practices, and cultural norms. For example, exam-oriented education and collectivist mindsets may affect students' attitudes toward seeking assistance, autonomy, and risk-taking in writing which are crucial to SCT concepts like self-efficacy and self-regulation.

There is still a dearth of longitudinal, context-aware studies on how Malaysian ESL students gradually develop and implement writing self-efficacy and SRL techniques, despite the growing awareness of these sociocultural factors. The majority of studies that are currently accessible have used cross-sectional designs, which provide just a glimpse of students' attitudes and actions instead of reflecting the changing paths of change throughout the writing process or instructional interventions. Additionally, little consideration has been given to how students understand and react to writing feedback in such situations, as well as how their changing views about their writing skills may influence those responses.

As a result, this research is situated at the crossroads of practical significance and theoretical improvement. The study seeks to offer a more detailed insight into the interaction between students' self-beliefs, strategy usage, and their sociocultural and educational context by placing SCT in a Malaysian tertiary ESL setting. This aim is both theoretically productive and pedagogically feasible.

Research Gap

The need for more inclusive, theory-driven, and contextually situated research in the field of academic writing has been underlined repeatedly in recent literature. In a comprehensive scoping assessment of 50 empirical research on writing self-efficacy in postsecondary education, Mitchell et al. (2023) discovered some prevalent methodological and conceptual errors. The review specifically draws attention to the dearth of research that looks at longitudinal or developmental trends and the preponderance of studies that utilize unidimensional, self-reported self-efficacy measures that are not sufficiently verified. In response, the authors support further studies that employ multidimensional frameworks that have been validated and investigate how writing self-efficacy evolves over time in connection to writing experiences, feedback, and instruction.

By developing unique learner profiles based on writing self-efficacy and emphasizing how these profiles predict learners' engagement with SRL methods and their writing outputs, Zhang and Zhang (2024) further advance this conversation. The authors stress the need for more research in a variety of linguistic and cultural contexts, especially in places where English is not the primary language of instruction, even if their study offers strong evidence of the predictive power of self-efficacy. They contend that in the absence of such diversity, our knowledge of SCT-informed writing development is still lacking and may be skewed in favor of Western learner models.

The relationship between students' beliefs and their involvement with instructor feedback is another understudied subject in this field, according to Zhang, Bai, and Shen (2024). Their research indicates that although feedback is frequently seen as a teaching tool, learners' motivational beliefs and self-confidence in their writing skills act as a mediating factor in its efficacy. In understudied ESL situations, where institutional and cultural factors may affect both the type of feedback and students' responsiveness to it, the authors specifically call for more research on how feedback practices function.

The gap highlighted in recent studies warrants a study that follows the growth of writing self-efficacy and SRL tactics in a setting that is seldom investigated in the literature. The instructional methods and cultural norms that Malaysian ESL students in higher education encounter may influence how they engage with academic writing.

Research Objectives (RO):

1. To investigate how Malaysian ESL undergraduates' writing self-efficacy and use of self-regulated learning (SRL) strategies change throughout an academic semester.
2. To investigate how SCT components (self-efficacy, goal-setting, and SRL strategies) are related to academic writing performance.

Objective of the Study and Research Questions

This study is done to explore perception of learners on their thoughts, behaviour and writing environment for academic writing. Specifically, this study is done to answer the following questions;

- How do writers perceive their thoughts in academic writing?
- How do writers perceive their behaviour in academic writing?
- How do writers perceive the environment in academic writing?
- Is there a relationship between all components in academic writing?

LITERATURE REVIEW

Theoretical Framework

The Social Cognitive Theory serves as a thorough framework that emphasises the interaction among three key components: personal factors such as cognitive and emotional elements, social and environmental influences like the classroom environment and teacher feedback, and behavioural aspects related to school attendance and homework completion, all of which play a significant role in shaping human learning, development, and behaviour (Bandura, 1986). Every group of elements affects each other and is also influenced in return. Individuals' thinking processes can impact their behaviour, which may result in changes to their environment. In the context of academic writing, this theory offers a useful framework for grasping how individuals cultivate their writing abilities by engaging in cognitive thinking, self-regulation, and reflective practice.

Applied to academic writing, this theory helps explain how learners develop writing competence not only through cognitive processes like planning and revising, but also through social interaction and reflective self-regulation. Writing in an academic context, particularly for ESL learners, involves not just mental effort but also the impact of social interactions. Social cognitive theory posits that learning is a result of an ongoing interaction among personal, behavioural, and environmental factors (Meihami et al., 2013; Woo et al., 2023). It also suggests that individuals develop writing strategies and conventions by observing, imitating, and modelling behaviours, which are significantly shaped by their social surroundings (Zaheer & Shehzad, 2020). The social context significantly influences L2 writers' grasp of writing, affecting their motivation, viewpoints, and, in the end, their writing outcomes (Khadawardi, 2022).

To summarise, Social Cognitive Theory provides a useful lens for understanding the intricacies of academic writing, particularly among ESL students. Therefore, this theory is especially relevant for Malaysian ESL undergraduates, whose academic writing experiences are shaped by both linguistic and contextual challenges.

Writing Strategies

Writing strategies refer to the various techniques that ESL learners use to improve their writing skills. Studies indicate that writers often employ various strategies throughout the writing process to enhance the quality of their work (Cer, 2019; Zhang & Qin, 2018). The strategies include various cognitive, metacognitive, and social strategies aimed at enhancing effective communication in written English (Marhaban et al., 2021). One of the initial studies on writing strategies was conducted by Arndt (1987), in which she recognised eight categories of strategies: planning, global planning, rehearsing, repeating, re-reading, questioning, revising, and editing based on her observation of Chinese postgraduate students writing in both L1 and English. Building on this, Wend (1991) introduced strategies for writing that focus on both metacognitive and cognitive aspects. Wend identifies three primary types of metacognitive strategies in writing: planning, evaluating, and monitoring. Cognitive strategies like clarification, retrieval, resourcing, deferral, avoidance, and verification serve as supportive strategies that enhance the application of metacognitive strategies.

More recent studies continue to emphasise the importance of metacognitive strategies in the writing process. For instance, De Silva and Graham (2015) emphasise the significance of metacognitive writing strategies in the writing process for L2 student writers, highlighting how they can leverage metacognitive knowledge to effectively plan, monitor, and evaluate their writing. Teng et al. (2022) support this idea, concluding that students who lack awareness of metacognitive strategies might face challenges in their writing. Mello et al. (2023) note that writing is a cognitively intensive process in which writers must constantly reflect on both content and form. Given writing is an active process that requires writers to read, change, and produce material, cognitive strategies such as note-taking, summarising, and synthesising references with the writer's added observations can considerably improve the quality of a written work. In addition to cognitive and metacognitive strategies, social-affective strategies play a vital role in fostering the writing process. From both

social and affective viewpoints, writers may seek feedback and critiques from their peers or teachers, thereby alleviating their anxiety. (Bui et al., 2023).

Cognitive, metacognitive, and social-affective perspectives collectively offer a thorough comprehension of the writing process. These strategies are consistent with Social Cognitive Theory (Bandura, 1986), which sees learning as the outcome of interactions between personal variables, behaviour, and the social environment. This theoretical framework offers a basis for exploring how Malaysian ESL undergraduates view and employ different writing strategies, particularly from the perspective of Social Cognitive Theory.

Past Studies on Writing Strategies

Over the past few years, a growing interest has emerged in understanding how students approach academic writing through the use of various strategies. Much of this interest has been driven by the recognition that writing is not simply a matter of linguistic competence, but also involves a wide range of cognitive, metacognitive, and social behaviours. Researchers have investigated how these strategies are used by learners at tertiary level, particularly in English as a Second or Foreign Language (ESL/EFL) settings.

One such study was carried out by Sun and Wang (2020), who explored how Chinese undergraduates' writing self-efficacy and self-regulated learning (SRL) strategies related to their English writing performance. Using a quantitative survey involving 319 students, they found that learners with higher self-efficacy and more frequent use of SRL strategies performed better in writing. Their findings highlight the importance of nurturing students' confidence and awareness of effective writing behaviours in academic settings.

Hilmi and Rozimela (2021) looked specifically at what writing strategies were most commonly used by successful EFL learners in Indonesia. Drawing data from 30 undergraduates identified for their strong writing skills, the study found that metacognitive strategies such as planning, monitoring, and revising were used most often. These learners also demonstrated a consistent use of social strategies, including peer feedback and consultation. Their results suggest that good writers do not rely solely on solitary effort, but actively seek support and input from others.

A similar focus was adopted by Rochmah (2021), who examined the relationship between SRL strategy use and writing achievement among 72 English majors. The study showed a positive correlation between strategy use and writing scores, with social and behavioural strategies standing out as particularly helpful. This reinforces the idea that writing development can be strengthened when learners are encouraged to interact, collaborate, and reflect.

Further attention has been given to refining the tools used to measure writing strategies. Teng and Zhang (2022), for instance, validated the Writing Strategies for Self-Regulated Learning Questionnaire (WSSRLQ) with over 500 advanced EFL learners in China. Their study confirmed the reliability of the instrument and supported the idea that strategy use is best understood through multiple lenses, including cognitive, metacognitive, motivational, and social dimensions.

Most recently, Zhang and Qin (2024) conducted a longitudinal study to explore how metacognitive strategy use, self-efficacy, and writing anxiety are interrelated. Their research, involving 301 learners across different learning modes, revealed that students with strong metacognitive habits experienced lower levels of anxiety. Furthermore, self-efficacy appeared to be a key influence on both strategy use and emotional responses to writing tasks.

Taken together, these studies offer a consistent message: writing strategies matter. They not only support the development of language skills but also shape how learners view themselves as writers and how they engage with the writing process. From planning and monitoring to seeking feedback and managing emotions, effective strategy use appears to be one of the defining traits of confident and competent student writers. As such, educators are encouraged to design writing instruction that goes beyond language mechanics and incorporates guided strategy training within supportive, interactive learning environments.

Conceptual Framework

Figure 1 shows the conceptual framework of the study. This study explores the concept of social cognitive theory in academic writing. According to Bandura (1977), learning occurs through the interaction between a person's thoughts, behaviour and the environment. Social cognitive theory in writing refers to a perspective view that writing is influenced by the writers' thoughts, behaviours and these are shaped by the environment that the writer is put in for the writing task. Writing begins with the writer's thoughts. Interestingly, writing activity mirrors the thinking process (Rahmat, 2020). In the context of this study, the writer's thoughts can be portrayed through the use of metacognitive strategies. Next, the writer's behaviour can be interpreted through the portrayal of effort regulation and use of cognitive strategies. In the context of this study, behaviour of the writer is portrayed through social and affective strategies. This study also explores the relationship between all factors in the social cognitive theory related to writing.

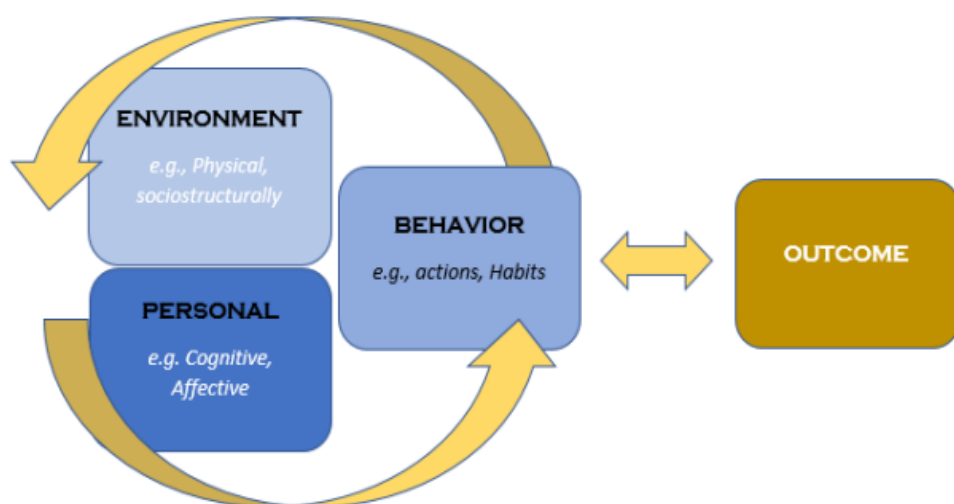


Figure 1- Conceptual Framework of the Study

Conceptualizing Writing Strategies with Social Cognitive Theory

METHODOLOGY

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 177 participants responded to the survey. Data is collected online via google form. The instrument used is a 5 Likert-scale survey. The scales (table 1) used are never, rarely, sometimes, often and always.

TABLE 1 LIKERT SCALE USED

1	Never
2	rarely
3	Sometimes
4	Often
5	Always

The design of the instrument is rooted from the concept of writing difficulties and writing strategies by Raoofi,et.al. (2017) and Bandura's (1977) category to reveal the variables in table 2 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 10 items on Person's Thoughts. Section C has 11 items on Behaviour. Section D has 7 items on Environment.

TABLE 2 DISTRIBUTION OF ITEMS IN THE SURVEY

SECTION	CATEGORY IN SOCIAL COGNITIVE THEORY	WRITING STRATEGY	ITEMS	TOTAL ITEMS	Cronbach Alpha
B	PERSON'S/WRITER'S THOUGHTS	Metacognitive		10	.917
C	BEHAVIOUR	Effort Regulation	4	10	.885
		Cognitive	6		
D	ENVIRONMENT	Social	4	7	.821
		Affective	3		
	27				.949

Table 2 also shows the reliability of the survey. The analysis shows a Cronbach alpha of .91 for writer's thoughts, .885 for behaviour and .821 for environment. The overall Cronbach alpha for all 27 items is .949; thus, revealing a good reliability of the instrument chosen/used. Further descriptive analysis using SPSS is done to present findings to answer the research questions for this study.

FINDINGS

Findings for Writer's Thoughts

This section presents the data addressing Research Question 1: How do writers perceive their thoughts during academic writing? In this study, writers' thoughts are measured through their use of metacognitive strategies, which reflect their awareness, control, and regulation of the writing process.

TABLE 4 MEAN FOR METACOGNITIVE (MWS)

ITEM	MEAN	SD
MWSQ1 I organize my ideas prior to writing.	3.5	.75471
MWSQ 2I revise my writing to make sure that it includes everything I want to discuss in my writing.	3.7	.77108
MWSQ 3I check my spelling.	4	.80410
MWSQ 4I check my writing to make sure it is grammatically correct.	3.8	.84075
MWSQ 5I evaluate and re-evaluate the ideas in my essay.	3.6	.82128
MWSQ 6I monitor and evaluate my progress in writing.	3.6	.77932
MWSQ 7I revise and edit an essay two or more times before I hand it in to my teacher.	3.8	.82022
MWSQ8 I go through the planning stages in my writing.	3.4	.76733
MWSQ9 I go through the drafting stages in my writing.	3.3	.84945
MWSQ10 I go through the revising and editing stages in my writing.	3.6	.76908

Table 4 presents the descriptive statistics for students' perceptions of their metacognitive writing strategies, as measured through ten questionnaire items. The item with the highest mean score is "I check my spelling" (M = 4.00, SD = 0.80), suggesting this is one of the most regularly utilised metacognitive strategies among students.

Other highly rated strategies include "I check my writing to make sure it is grammatically correct" and "I revise and edit an essay two or more times before I hand it in to my teacher", both with a mean of 3.8, indicating a strong tendency toward revision and editing before submission. Conversely, it is noted that the mean scores were lower for aspects associated with the initial phases of the writing process. These include "I go through the drafting stages in my writing" (M = 3.3) and "I go through the planning stages in my writing" (M =

3.4). This indicates that although students typically recognise the significance of reviewing and refining their work, they might feel less involved or less assured during the early phases of writing, such as idea development and content organization.

Findings for Behaviour

This section presents the findings related to Research Question 2: How do writers perceive their behaviour in academic writing? In this study, behavioural aspects are examined through two key dimensions: effort regulation and cognitive strategies.

TABLE 5 MEAN FOR (I) EFFORT REGULATION(ERS)

ITEM	MEAN	SD
ERSQ 1I write a lot to develop my writing skills.	3.1	.76145
ERSQ 2I often work hard to do well in my writing even if I don't like English writing tasks.	3.7	.84033
ERSQ 3Even if the writing activities are difficult, I don't give up but try to engage in them.	3.9	.81378
ERSQ 4I concentrate as hard as I can when doing a writing task.	4.1	.78450

The data in Table 5 illustrates how students perceive their ability to regulate effort in academic writing, as gathered from four specific questionnaire items. Item number 4, "I concentrate as hard as I can when doing a writing task" received the highest mean score ($M = 4.1$, $SD = 0.78$), suggesting that students typically show a strong level of focus and mental effort while engaged in writing activities. This is followed by item number 3, "Even if the writing activities are difficult, I don't give up but try to engage in them" ($M = 3.9$), which highlights the strong determination of students when confronted with challenging writing tasks. In contrast, the item "I write a lot to develop my writing skills" received the lowest mean score ($M = 3.1$, $SD = 0.76$), suggesting that while students tend to persist through tasks, they may not engage in extended writing for the purpose of long-term skill improvement.

TABLE 6 MEAN FOR (I) COGNITIVE (CWS)

ITEM	MEAN	SD
CWSQ1 I use memorized grammatical elements such as singular and plural forms, verb tenses, prefixes and suffixes, etc, in my writing	3.5	.80569
CWSQ 2I put newly memorized vocabulary in my sentences.	3.4	.78829
CWSQ 3In order to generate ideas for my writing, I usually engage myself in brainstorming.	3.6	.76687
CWSQ 4I use different words that have the same meaning.	3.2	.84623
CWSQ 5I use my experiences and knowledge in my writing.	4	.73846
CWSQ 6I try to use effective linking words to ensure clear and logical relationship between sentences or paragraphs	3.6	.76582

The data in Table 6 outlines the descriptive statistics regarding students' self-reported use of cognitive writing strategies. The item with the highest mean was "I use my experiences and knowledge in my writing" ($M = 4.0$, $SD = 0.74$). This suggests that students frequently incorporate their personal background and life experiences to enhance their writing. Other relatively high mean value were recorded for statement number 6, "I try to use effective linking words to ensure a clear and logical relationship between sentences or paragraphs" ($M = 3.6$) and number three, "In order to generate ideas for my writing, I usually engage myself in brainstorming" ($M = 3.6$). These results indicate that many students actively apply strategies to enhance the flow of their writing and to organize their ideas during the pre-writing stage. The lowest mean value is recorded for item number 4, "I use different words that have the same meaning" ($M = 3.2$). This implies that students are less confident or consistent in vocabulary variation.

Findings for Environment

This section presents data to answer research question 3- How do writers perceive the environment in academic writing? In the context of this study, this is measured by (i) social and (ii) affective strategies.

TABLE 7 MEAN FOR (I) SOCIAL (SWS)

ITEM	MEAN	SD
SWSQ1 In order to generate ideas for my writing, I usually discuss the writing topic with a friend or classmate.	3.6	.84349
SWSQ 2After revising and editing my essay thoroughly, I ask a friend or my classmate to read and comment on it.	3.4	.97592
SWSQ 3I try to identify friends or classmates whom I can ask for help in my writing.	3.8	.86614
SWSQ 4When I have trouble writing my essay, I try to do it with my classmates or friends.	3.8	.85465

The results in Table 7 suggest that students generally value social interaction when it comes to improving their writing. Many of them seem comfortable discussing writing topics with friends or classmates to generate ideas (Mean = 3.6), and a notable number actively seek peers for help when facing difficulties in writing (Mean = 3.8). They also show a strong tendency to identify helpful peers for writing support (Mean = 3.8). Although slightly fewer students ask for feedback after revising their essays (Mean = 3.4), the overall pattern highlights the importance of peer collaboration in their writing process. These findings reflect a learning environment where students see their classmates not just as peers but as valuable resources in developing their writing skills.

TABLE 8 MEAN FOR (II) AFFECTIVE (AWS)

ITEM	MEAN	SD
AWSQ1I try to write an essay in class with confidence and ease..	3.4	.76031
AWSQ2I try to relax whenever I feel afraid of writing.	3.7	.84786
AWSQ3I encourage myself to write even when I am afraid of making mistakes	3.9	.77809

Table 8 presents mean values related to students' use of affective strategies in academic writing. Item number 3, "I encourage myself to write even when I am afraid of making mistakes" received the highest mean score (M = 3.9, SD = 0.78), indicating that a significant number of students demonstrate resilience and self-motivation, even in the face of their fear of making mistakes. Conversely, item number 1, "I try to write an essay in class with confidence and ease" garnered the lowest mean value (M = 3.4, SD = 0.76), implying that although students may try to manage writing-related anxiety, not all feel totally confident when writing under time or classroom pressure.

Findings for Relationship between all components in academic writing

This section presents data to answer research question 4- Is there a relationship between all components in academic writing? To determine if there is a significant association in the mean scores between all components in academic writing ,data is analysed using SPSS for correlations. Results are presented separately in table 9.10 and 11 below.

TABLE 9 CORRELATION BETWEEN WRITER'S THOUGHTS AND BEHAVIOUR

		WRITER'S THOUGHTS	BEHAVIOUR
WRITER'S THOUGHTS	Pearson (Correlation	1	.833**
	Sig (2-tailed)		.000
	N	177	177

BEHAVIOUR	Pearson (Correlation	.833**	1
	Sig (2-tailed)	.000	
	N	177	177

Table 9 shows there is an association between writer's thoughts and behaviour. Correlation analysis shows that there is a high significant association between writer's thoughts and behaviour ($r=.833^{**}$) and ($p=.000$). 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 writer's thoughts and behaviour.

TABLE 10 CORRELATION BETWEEN BEHAVIOUR AND ENVIRONMENT

		BEHAVIOUR	ENVIRONMENT
BEHAVIOUR	Pearson (Correlation	1	.678**
	Sig (2-tailed)		.000
	N	177	177
ENVIRONMENT	Pearson (Correlation	.678**	1
	Sig (2-tailed)	.000	
	N	177	177

Table 10 shows there is an association between behaviour and environment. Correlation analysis shows that there is a high significant association between behaviour and environment ($r=.678^{**}$) and ($p=.000$). 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 behaviour and environment.

TABLE 11 CORRELATION BETWEEN ENVIRONMENT AND WRITER'S THOUGHTS

		ENVIRONMENT	WRITER'S THOUGHTS
ENVIRONMENT	Pearson (Correlation	1	.698**
	Sig (2-tailed)		.000
	N	177	177
WRITER'S THOUGHTS	Pearson (Correlation	.698**	1
	Sig (2-tailed)	.000	
	N	177	177

Table 11 shows there is an association between environment and writer's thoughts. Correlation analysis shows that there is a high significant association between environment and writer's thoughts ($r=.698^{**}$) and ($p=.000$). 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 environment and writer's thoughts.

Overall, the data indicate that while most students reported minimal environmental interference during writing tasks, a notable minority still experienced moderate challenges, suggesting that contextual factors cannot be entirely overlooked in fostering self-regulated writing strategies.

CONCLUSION

Summary of Findings and Discussions

The findings of this study reveal that student writers are generally aware of and actively engage with a range of metacognitive and cognitive writing strategies. Participants demonstrate a clear tendency to monitor and evaluate their writing through activities such as checking grammar and spelling, revising drafts, and using prior knowledge and experience to inform their content. However, there appears to be less emphasis on the early stages of the writing process, such as planning and drafting, suggesting that while learners are reflective during revision, they may not be equally strategic during idea generation and content organisation.

This aligns with prior research by Teng and Zhang (2022), who highlight that students often associate writing success with surface-level revision strategies rather than deeper planning or ideational development. Similarly, the underutilisation of vocabulary variation strategies, as indicated by the lower engagement with synonym use, resonates with findings by Raoofi et al. (2017), which pointed out that vocabulary expansion is often overlooked in student-driven strategy use.

Importantly, the strong positive correlation between thoughts and behaviour reinforces the theoretical grounding of Bandura's Social Cognitive Theory (1986), particularly the reciprocal determinism between cognitive processing and behavioural enactment. Students who think strategically about their writing tend to also act strategically, a relationship that affirms the centrality of metacognitive awareness in successful writing performance.

Behaviour of writers

From a behavioural standpoint, the data suggest that students exhibit persistence, focus, and resilience when faced with writing tasks. Most notably, their ability to sustain concentration and persevere through difficulties indicates a strong sense of writing self-efficacy, as conceptualised by Bandura (1986). These behavioural patterns reflect what Sun and Wang (2020) describe as productive self-regulated learning behaviours, particularly among learners with a belief in their writing capabilities.

Despite this, the findings also indicate a somewhat utilitarian view of writing practice: students engage with tasks when necessary but may not pursue extended writing activities to develop proficiency over time. This echoes earlier concerns raised by De Silva and Graham (2015) that without structured strategy instruction, students may not see the value in writing beyond assessment contexts.

The observed significant correlation between behaviour and environment further illustrates how external factors such as peer support, classroom culture, and instructional practices can either reinforce or inhibit strategic writing behaviours. This finding again supports Bandura's triadic reciprocal model, suggesting that behavioural engagement is not formed in isolation but is continually shaped by environmental feedback and reinforcement.

Environment for writing

This study explored how student writers engage with their thoughts, behaviours, and the environment in relation to their writing practices. The findings reveal that most participants demonstrate a strong awareness of metacognitive strategies, particularly during the revision stage. They tend to focus on correcting spelling and grammar and often revise their work before submission. However, there appears to be less emphasis on the early phases of writing, such as planning and idea development. This pattern is consistent with observations by Teng and Zhang (2022), who reported that students often apply metacognitive strategies more frequently during the later stages of writing rather than during the initial planning and drafting.

In terms of behaviour, students generally show a high level of persistence and effort in completing writing tasks, especially when they are challenging. Many students report staying focused and not giving up easily,

which reflects a strong sense of self-regulation. However, there is less evidence of them engaging in frequent writing beyond what is required, which may suggest that while they are motivated to complete assignments, they do not always write voluntarily to improve their skills over time. This echoes Bandura's notion of self-efficacy, where individuals may exert effort when they believe in their ability to succeed, but sustained behavioural engagement often requires deeper, intrinsic motivation.

The social aspect of writing is another prominent feature of this study. Participants frequently turn to their peers for support, whether to share ideas, seek help when encountering difficulties, or receive feedback. Although fewer students seek feedback after revising their essays, there is a general pattern of positive peer collaboration. This finding aligns with Hilmi and Rozimela (2021), who highlighted the value of social learning strategies among successful writers. It suggests that students not only rely on their own strategies but also benefit significantly from interactions within a collaborative learning environment.

Furthermore, the strong associations found between thoughts, behaviours, and environmental support reflect the interdependence of these dimensions. A positive and encouraging learning environment appears to foster greater cognitive reflection and behavioural engagement among students. This supports Bandura's Social Cognitive Theory, which emphasises the dynamic relationship between personal factors, behaviours, and environmental influences. Similarly, Zhang and Qin (2024) noted that learners who feel supported by their teachers and peers are more likely to engage in deeper levels of reflection and strategy use. Taken together, the findings suggest that writing development does not occur in isolation but is shaped by a complex interplay of internal processes and external social contexts.

Implications and Suggestions for Future Research

Theoretical and Conceptual Implications

This study reinforces the relevance of Bandura's Social Cognitive Theory in understanding student writing practices. The data highlight how thoughts, behaviours, and environmental influences do not function in isolation but rather interact dynamically throughout the writing process. The findings show that students' metacognitive engagement is strongly shaped by both their belief in their own abilities and the support they receive from their surroundings. This mutual influence affirms the triadic reciprocal model proposed by Bandura, where personal factors, behaviour, and environment are constantly shaping and being shaped by one another.

In addition, the study lends support to Zimmerman's framework on self-regulated learning, particularly in the context of academic writing. Many participants demonstrated key indicators of self-regulation such as goal-setting, effort regulation, and the ability to revise their work critically. However, the lower engagement during planning stages and the relatively passive writing outside of academic requirements indicate that self-regulation remains uneven across phases. These insights add nuance to our understanding of how self-regulatory processes function across different components of writing and in varying educational environments.

Pedagogical Implications

The findings carry several implications for the teaching of writing. First, there is a need to emphasise metacognitive awareness from the early stages of writing. Students appear to focus more on correcting surface-level errors and less on content planning and idea organisation. Therefore, writing instruction should include explicit teaching of strategies for pre-writing, such as brainstorming, outlining, and setting writing goals. These are essential for fostering a more complete and effective writing process.

Second, the strong influence of peer support highlights the importance of incorporating collaborative learning activities into writing classrooms. Teachers might consider structured peer review sessions, group brainstorming tasks, and writing workshops to tap into the social dimension of learning. Such practices not only promote deeper cognitive engagement but also help students feel supported in their writing journey.

Finally, while students demonstrate perseverance, many do not appear to engage in writing for long-term improvement. This suggests that writing tasks should go beyond assignments for grading and include low stakes writing opportunities such as journals, blogs, or reflective pieces, which can help build fluency and confidence over time. Teachers should also help students connect writing to personal interests and lived experiences, making it more meaningful and sustainable practice.

Suggestions for Future Research

Future research should explore how different types of feedback, including those from teachers, peers, or digital platforms, influence the development of students' metacognitive writing strategies. It would also be valuable to investigate how these strategies evolve over time, particularly in students who are exposed to consistent self-regulation training or scaffolded writing support.

Moreover, future studies could adopt a longitudinal approach to track changes in students' writing behaviour across semesters or academic years. Such work would offer deeper insight into how self-regulation and environmental support interact in the long term. Additionally, it may be helpful to examine how individual differences such as motivation, writing anxiety, or prior writing experiences mediate the relationship between thought, behaviour, and environment. Researchers could also explore how these dynamics play out across disciplines. Since writing conventions and expectations vary across academic fields, comparative studies might reveal whether certain strategies are more transferable or effective in particular contexts.

Collectively, these avenues of inquiry would not only broaden the theoretical understanding of metacognitive writing strategies but also inform the development of more targeted, context-sensitive interventions to support students' growth as self-regulated writers.

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