

SOCIAL COGNITIVE PROCESS IN THE CONTEXT OF SELF-REGULATION AND WRITING SKILLS AMONG TERTIARY STUDENTS

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Abstract

Filipino students experience difficulties in organizing and developing ideas, applying appropriate language, and sustaining motivation in writing tasks. These highlight the need to consider the internal processes and environmental factors that shape students' learning behaviors. Thus, this study explored the role of social cognitive processes in the context of self-regulated learning, focusing on how students' personal beliefs, behaviors, and learning environments contribute to their writing practices. Participants from Surigao Del Sur were randomly selected to participate in the survey, while selected students took part in one-on-one interviews. Pearson product-moment correlation was utilized to determine the relationship between self-regulation strategies and writing skills, while qualitative data were analyzed to understand students' strategies and perceptions in managing writing tasks. The findings revealed that students had high levels of self-regulation based on method, social environment, ability, physical environment, motivation, and time management. However, they reported only moderate levels of writing skills in terms of attitude towards writing, composition, revision, and process awareness, but high level in feedback and collaboration. Qualitative analysis showed that students' writing practices were shaped by the interaction of personal, behavioral, and environmental factors. Students engaged in cognitive regulation strategies such as planning, organizing ideas, monitoring progress, and revising written outputs. They also emphasized the influence of motivational and emotional factors, where confidence, persistence, and emotional regulation affected their willingness to engage in challenging writing tasks. However, there are still factors that were not identified in this study, which may further explain variations in students' writing performance and self-regulatory behaviors.

Keywords: learning behavior, self-regulated learning, self-regulation, social cognitive theory, writing skills

Introduction

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Social cognitive processes are essential aspects of learning because they explain how students' personal beliefs, cognitive activities, behaviors, and environmental experiences interact to influence academic development. However, the application of social cognitive processes in academic settings remains relatively limited, particularly in understanding how learners actively regulate their own learning experiences (Chou et al., 2024). Specifically, there is a need for greater emphasis on the role of the self, as learners' beliefs, perceptions, motivation, and cognitive processes significantly influence how they approach, manage, and respond to academic tasks (Gao et al., 2025; Owunna et al., 2025).

The purpose of this study was to apply the social cognitive perspective in examining how self-regulation processes can be linked to the development of writing skills among tertiary students. Specifically, the study explored how students' personal factors, behavioral strategies, and learning environments interact to shape their writing experiences and performance.

The challenges of Filipino students in writing involve difficulties in organizing and developing ideas, applying appropriate language, and sustaining motivation, reflecting both cognitive and affective factors that influence writing performance (Salvador, 2026). Writing is a fundamental competency, particularly among students preparing for professional fields such as teaching and communication. It serves not only as a medium for academic expression but also as a tool for critical thinking and knowledge construction. Despite its importance, many students continue to experience difficulties in organizing ideas, maintaining coherence, and producing effective written outputs. These challenges suggest that writing development extends beyond linguistic competence and involves complex cognitive and strategic processes.

According to social cognitive theory, learning environments that support students' basic psychological needs, including autonomy, competence, and social connection, contribute to the development of intrinsic motivation and encourage greater engagement and persistence in academic activities (Huang & Liu, 2025). Meanwhile, the quality of the learning environment and the relationships established within it serve as important influences in shaping students' emotional, cognitive, and behavioral responses toward learning (Van Viersen et al., 2026). A supportive classroom climate characterized by positive interactions among teachers and peers can strengthen students' interest, confidence, and willingness to participate. Such meaningful relationships also influence how students perceive their capabilities and approach academic tasks, allowing them to develop adaptive behaviors and stronger commitment toward achieving learning goals.

Self-regulation is considered a fundamental component of social cognitive theory because it explains how individuals' thoughts, beliefs, and behaviors influence their actions across various contexts, including learning and decision-making (Chou et al., 2024). Self-regulation strategies are described as learners' active efforts to manage their own learning processes by setting goals, monitoring progress, evaluating performance, and intentionally adjusting their behaviors and strategies. Through self-regulation, learners become active participants in their learning experiences as they control cognitive, motivational, and behavioral processes to achieve desired outcomes.

This study was interested in understanding the role of social cognitive processes to students' writing skills. However, despite the recognized contribution of self-regulation to learning processes, students' writing development remains varied and does not always reflect the expected benefits of strategy use. Previous studies have indicated that learners continue to experience difficulties in fundamental components of writing, including idea generation, organization, revision, and maintaining coherence in written outputs (Dela Cruz & Angel, 2025). This suggests that the mere presence of self-regulation strategies may not automatically translate into improved writing performance, as the effectiveness of these strategies may depend on how learners apply, monitor, and adapt them during actual writing activities.

Literature Review

Self-regulated learning strategies play a significant role in writing development by allowing students to establish goals, monitor progress, evaluate their work, and make necessary adjustments throughout the writing process (Hwang, 2025). Learners who actively apply these strategies tend to demonstrate stronger self-regulated writing abilities and achieve better writing outcomes.

Therefore, writing development involves more than language proficiency; it also depends on students' beliefs about their capabilities and their ability to regulate cognitive, motivational, and behavioral processes during writing tasks. These findings emphasize the importance of integrating self-regulation strategies into writing instruction to support students' confidence, engagement, and overall writing performance.

Social Cognitive Theory emphasizes that learning is shaped through the continuous and reciprocal interaction among individual factors, behaviors, and environmental influences (Feraco et al., 2023). The theory explains that students' motivation, beliefs, behaviors, and learning experiences are constantly influenced by the contexts in which they participate (Prananto et al., 2025). When students experience supportive environments that satisfy their psychological needs, they are more likely to develop confidence, motivation, and active engagement in learning activities (Chavez et al., 2026; Ruospo et al., 2023).

Writing achievement is shaped by the interaction of cognitive, emotional, environmental, social, and feedback-related factors. Cognitive aspects, including writing self-efficacy, vocabulary knowledge, background knowledge, and self-regulated learning strategies, influence students' ability to plan, organize, monitor, and improve their written outputs. Learners who possess stronger confidence in their writing abilities and apply effective self-regulatory strategies are more likely to demonstrate persistence and produce better-quality writing (Zhou & Hiver, 2022).

Beyond cognitive factors, emotional and psychological conditions also affect writing performance. Motivation, emotional regulation, and writing anxiety influence students' engagement, creativity, and willingness to persist in writing tasks. Likewise, environmental conditions, including learning spaces, available resources, and social contexts, contribute to how students approach writing activities (Myhill et al., 2023).

Within the framework of self-regulated writing, learners' confidence in their writing abilities is closely associated with their use of strategies such as planning, monitoring, revising, evaluating, and seeking feedback (Hwang, 2025). These strategies enable students to manage cognitive and behavioral processes during writing, helping them maintain focus and improve the quality of their written outputs. Research further indicates that writing self-efficacy is positively related to self-regulation, metacognitive strategy use, feedback engagement, and writing performance (Zhou & Hiver, 2022).

Feedback serves as an important social and environmental influence in writing development because it guides students in identifying weaknesses, refining strategies, and improving performance (Hwang, 2025). From a social cognitive perspective, feedback shapes learners' beliefs, behaviors, and self-regulation by providing information that helps them evaluate progress and adjust their writing approaches (Bandura, 1997). However, the effectiveness of feedback depends on students' perceptions, motivation, self-efficacy, and emotional responses.

Learning also involves challenges, setbacks, and negative experiences that can influence students' persistence and engagement. Students who receive encouragement, feedback, and recognition from teachers and peers are more likely to strengthen their confidence and sustain positive learning behaviors. In contrast, repeated failures and negative emotional experiences may reduce self-belief and discourage continued participation.

Research Questions

This study explored the role of social cognitive process in writing skills of tertiary students. It emphasized the role of self, behavior, and environment in strengthening and refining the writing skills of students.

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1. What is the level of self-regulation of tertiary students based on their method, social environment, ability, physical environment, motivation, and time management?
2. What is the level of writing skills of tertiary students based on attitude towards writing, composition, revision, feedback, collaboration, and process awareness?
3. Is there a significant correlation between self-regulation and writing skills?
4. What are the key strategies and aspects in self-regulation and writing based on the experiences of tertiary students?

Methodology

This study employed a convergent parallel mixed methods design, wherein quantitative and qualitative data were collected concurrently, analyzed independently, and subsequently integrated during the interpretation phase. This design is widely recognized for its strength in triangulation and complementarity, allowing the validation and enrichment of findings across data sources (Creswell & Plano Clark, 2018).

The study was conducted in a higher education institution in Surigao Del Sur, Philippines. Quantitative data were obtained from a representative sample of tertiary students selected through random sampling, a technique that ensures adequate representation of individuals within a population (Ahmed, 2024), while qualitative data were generated from purposively selected participants to provide in-depth insights into their experiences (Russell, 2017).

Data were collected using a validated questionnaire adapted from established studies on self-regulated learning, particularly in academic writing contexts (Abadikah et al., 2018), alongside in-depth interviews and focus group discussions, which are widely used to capture participants' lived experiences and shared perspectives (Creswell & Poth, 2018; Cortini et al., 2019). Quantitative data were analyzed using descriptive statistics, Pearson correlation analysis to determine the level of self-regulation strategies and their relationship with writing skills, consistent with established practices in educational research. Qualitative data were analyzed through thematic analysis, involving systematic coding and theme development to identify patterns within participants' narratives (Braun & Clarke, 2006).

To ensure methodological rigor, credibility was established through member checking, while dependability and confirmability were maintained through systematic documentation and transparent analytical procedures. The integration of quantitative and qualitative findings was conducted during interpretation to identify points of convergence and divergence, thereby strengthening the validity of the results.

The study was conducted in accordance with ethical standards, with informed consent obtained from all participants, voluntary participation ensured, and strict confidentiality maintained throughout the research process.

Results

Question 1. What is the level of self-regulation of tertiary students based on their method, social environment, ability, physical environment, motivation, and time management?

Table 1. Level of self-regulation

Indicators of self-regulation	Mean	SD	Descriptive Level
Method	3.81	0.51	High
Social Environment	4.04	0.56	High
Ability	4.04	0.52	High
Physical Environment	3.74	0.59	High
Motivation	3.72	0.50	High

Time Management	4.20	0.83	Very High
Overall	3.93	0.58	High

Note: The mean scores were interpreted using the following descriptive scale: 4.20–5.00 = Very High Self-Regulation; 3.40–4.19 = High Self-Regulation; 2.60–3.39 = Moderate Self-Regulation; 1.80–2.59 = Low Self-Regulation; and 1.00–1.79 = Very Low Self-Regulation. These descriptors were used to determine the extent to which respondents employed self-regulation strategies.

In **Table 1**, the sampled tertiary students presented a high level of self-regulation ($M=3.93$, $SD=0.58$). Among the indicators, time management obtained the highest rating, showing a very high level of self-regulation ($M=4.20$, $SD=0.83$), indicating that students effectively manage their time when completing writing tasks. Meanwhile, social environment ($M=4.04$, $SD=0.56$) and ability ($M=4.04$, $SD=0.52$) were also rated high, suggesting that students utilize available support and recognize their capabilities in performing writing activities. Method ($M=3.81$, $SD=0.51$), physical environment ($M=3.74$, $SD=0.59$), and motivation ($M=3.72$, $SD=0.50$) were likewise rated high, indicating that students generally apply strategies, experience supportive learning conditions, and demonstrate academic motivation.

In social cognitive process, students continuously interact with their personal beliefs, behaviors, and learning environments. The high level of self-regulation implies that students are capable of developing strategies such as planning, monitoring, and managing resources. From a social cognitive perspective, this reflects students' capacity to exercise self-control and strategically organize their actions to achieve desired writing outcomes. However, motivation obtained the lowest mean among the indicators, suggesting that sustaining engagement and interest in assigned writing activities remains relatively challenging for some.

Question 2. What is the level of writing skills of tertiary students based on attitude towards writing, composition, revision, feedback, collaboration, and process awareness?

Table 2. Level of writing Skills

Indicators of writing skills	Mean	SD	Descriptive Level
Attitude toward Writing (STP)	2.85	0.62	Moderate
Composition (PAG)	2.70	0.65	Moderate
Revision (PAW)	2.79	0.60	Moderate
Feedback (PAP)	3.75	0.58	High
Collaboration (PAK)	3.78	0.61	High
Process Awareness (KPP)	2.59	0.67	Moderate
Overall	3.08	0.62	Moderate

Note: The mean scores were interpreted using the following descriptive scale: 4.20–5.00 = Very High Writing Skills; 3.40–4.19 = High Writing Skills; 2.60–3.39 = Moderate Writing Skills; 1.80–2.59 = Low Writing Skills; and 1.00–1.79 = Very Low Writing Skills. These descriptors were used to determine the extent of students' writing skills in terms of their attitude toward writing, composition, revision, feedback, collaboration, and process awareness.

In **Table 2**, tertiary students demonstrated a moderate level of writing skills across the identified indicators ($M=3.08$, $SD=0.62$). Among the dimensions, collaboration obtained the highest rating, reflecting a high level of writing skills ($M = 3.78$, $SD = 0.61$), followed by feedback ($M=3.75$, $SD=0.58$). Students demonstrate stronger writing development when engaging in collaborative activities and utilizing feedback from others to improve their written outputs. Meanwhile, attitude toward writing ($M=2.85$,

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$SD=0.62$), revision ($M=2.79$, $SD=0.60$), and composition ($M=2.70$, $SD=0.65$) were rated at a moderate level, suggesting that students possess developing skills in generating ideas, improving written drafts, and maintaining positive engagement toward writing tasks. Process awareness obtained the lowest rating among the indicators ($M=2.59$, $SD=0.67$), indicating that students may experience challenges in consistently applying systematic approaches throughout the writing process.

Writing development is understood as a dynamic outcome of the interaction between learners' cognitive abilities, behavioral practices, and social learning experiences. Writing requires learners to engage in planning, organizing, monitoring, and evaluating their outputs, which are influenced by their confidence, motivation, and prior writing experiences. In this sense, improvements in writing skills depend not only on technical competence but also on students' capacity to regulate their own learning behaviors. Developing awareness of planning, drafting, revising, and reflecting allows learners to become more active participants in their own learning.

Question 3. Is there a significant correlation between self-regulation and writing skills?

Table 3. Correlation between self-regulation and writing skills using Pearson's r

Self-regulation Indicators	r-value	p-value	Interpretation
Method	0.508	<0.001	Significant
Social Environment	0.388	<0.001	Significant
Ability	0.532	<0.001	Significant
Physical Environment	0.264	<0.001	Significant
Motivation	0.623	<0.001	Significant
Time Management	0.483	<0.001	Significant
Overall	0.567	<0.001	Significant

Note: Pearson's r was used to determine the relationship between variables, with significance tested at the 0.05 level after satisfying the required assumptions.

In **Table 3**, the results revealed a significant positive relationship between self-regulation and writing skills ($r=0.567$, $p<0.001$), indicating that students with higher levels of self-regulation tend to demonstrate stronger writing skills. Among the indicators, motivation showed the strongest relationship with writing skills ($r=0.623$, $p<0.001$), suggesting that students' persistence, interest, and willingness to engage in writing activities contribute to improved writing performance. Similarly, ability ($r=0.532$, $p<0.001$) and method ($r=0.508$, $p<0.001$) demonstrated significant relationships with writing skills, implying that students' perceived competence and use of appropriate strategies could support their capacity to produce effective written outputs. Time management also showed a significant association ($r=0.483$, $p<0.001$), indicating that organizing and allocating time effectively may contribute to the completion and improvement of writing tasks. Lastly, social environment ($r=0.388$, $p<0.001$) and physical environment ($r=0.264$, $p<0.001$) were also significantly related to writing skills, suggesting that external conditions and available support systems may influence students' writing development.

From the perspective of the social cognitive process, this suggests that writing development may be influenced by students' ability to regulate their thoughts, behaviors, and learning environments while engaging in academic writing tasks. This highlights the role of internal cognitive processes in sustaining effort and encouraging students to actively participate in the writing process. Students who can establish goals, monitor their progress, and evaluate their own performance may develop effective writing behaviors and improve their written outputs. Hence, writing competence may shaped through the interaction between personal factors (motivation and self-beliefs), behavioral strategies (planning and revision), and environmental influences (feedback and academic support).

Question 4. What are the key strategies and aspects in self-regulation and writing based on the experiences of tertiary students?

Theme 1: Planning and Organization

In one-on-one interviews, students reported that they engage in planning and organizing their ideas before writing. They described practices such as *outlining*, *drafting*, and *reviewing their work* to ensure clarity and coherence. Students also emphasized the use of self-monitoring strategies, such as *rereading their drafts*, *checking the flow of ideas*, *revising unclear statements*, and *making improvements* based on their own evaluation. These show their awareness of the importance of preparing before producing a written output, allowing them to establish logical structures and maintain focus throughout the writing process. Some participants perceived planning as a way to reduce difficulty in writing because it provides direction and helps them manage complex tasks. Students actively regulate their cognitive processes and writing behaviors through applying strategic approaches to improve the quality of their academic outputs.

Theme 2: Control of External Stimuli

Students emphasized the need to create a conducive learning environment by *minimizing distractions*, particularly from social media and external interruptions. They reported *choosing quiet spaces* to maintain focus during writing. Participants perceived that having an organized and comfortable environment supports their concentration and allows them to devote greater attention to developing their ideas. Some students described strategies such as *turning off notifications*, *limiting access to distracting applications*, *preparing necessary materials before writing*, and *establishing a specific time and place* dedicated to academic tasks. They also recognized that environmental conditions influence their ability to sustain attention, manage their effort, and complete writing activities effectively. Students had clear sense of awareness regarding the importance of regulating external factors as part of their writing process. They believed that self-regulation involves not only managing personal behaviors but also adapting the learning environment to support academic performance.

Theme 3: Emotional Regulation

Participants also reported the use of strategies to manage their emotions and maintain motivation, such as *listening to music* or *taking short breaks*. However, they acknowledged experiencing difficulty in sustaining motivation, especially when writing assigned topics. Some participants described regulating their emotional state by *creating personal routines*, *setting small writing goals*, *rewarding themselves* after completing tasks, and taking brief pauses to avoid mental fatigue. Others emphasized the importance of finding *personal relevance* in writing topics and *connecting tasks with their interests* to maintain engagement. Students actively attempt to manage their internal conditions to sustain participation in writing activities. Nevertheless, challenges in maintaining motivation indicate that writing performance may be affected by students' perceptions of task difficulty, level of interest, and confidence in their ability to complete writing requirements.

Theme 4: Time Management

Participants highlighted the importance of managing time when completing writing tasks. They reported *allocating specific time for writing* and *prioritizing tasks* to meet deadlines. This suggests that time management is a crucial component of their self-regulation practices. Participants described strategies such as *creating schedules*, *setting personal deadlines*, *breaking writing tasks* into manageable steps, and *avoiding last-minute completion* of academic requirements. They perceived that organizing their time allows them to maintain focus, reduce pressure, and produce better-quality written outputs. Some students also emphasized the importance of balancing writing activities with other academic responsibilities by identifying urgent tasks and establishing priorities. These practices reflect their ability to regulate their

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behaviors and resources in response to academic demands, demonstrating that effective time management supports persistence, task completion, and continuous improvement in the writing process.

Theme 5: Social support

Participants emphasized the importance of social support in strengthening their learning experiences and improving their writing practices. They described how assistance from teachers, classmates, and peers provided encouragement, guidance, and constructive input that helped them overcome difficulties in completing writing tasks. Students perceived that receiving feedback and suggestions from others allowed them to recognize areas for improvement and develop better approaches to writing. Participants also reported using strategies such as *consulting classmates*, *seeking clarification from instructors*, *participating in group discussions*, and *sharing drafts with peers* to obtain different perspectives. These interactions helped them refine their ideas, improve organization, and increase confidence in expressing their thoughts through writing. Some students viewed collaboration as a source of motivation, particularly when they experienced challenges or uncertainty during the writing process.

Discussion

Social cognitive theory by Bandura (1986, 1991) posits self-regulation is developed through the continuous interaction of environmental influences, cognitive processes, and individual behaviors. These factors operate in a reciprocal manner, creating a dynamic relationship where each element affects and is affected by the others (Chou et al., 2024). Likewise, the findings of this study suggested that students' writing skills are associated with various social cognitive factors, including their use of self-regulation strategies, learning environment, perceived capabilities, and motivation. These elements may contribute to explaining the processes through which students approach, manage, and accomplish academic writing tasks. Students who are able to regulate their behaviors, maintain positive beliefs about their abilities, and utilize available environmental support may be more capable of sustaining effort and improving their writing performance.

An essential aspect of social cognitive process is how it influences others' emotions and perceptions toward certain behavior. For example, Bandura explained that self-efficacy develops through four major sources: personal experiences of success and failure, observations of others' experiences, social encouragement and feedback, and the ability to regulate emotions and maintain psychological balance (Low et al., 2025). In this study, tertiary students utilized emotional regulation strategies to manage their feelings and maintain engagement in academic writing activities. Participants described practices such as taking short breaks, creating a comfortable writing routine, listening to music, and using positive self-talk to reduce pressure and sustain focus. These strategies allowed students to manage frustration, overcome difficulties, maintain confidence, and build self-efficacy when completing writing requirements. Emotions serve as an important self-regulatory aspect that supports students' persistence and willingness to engage in challenging academic tasks.

In social cognitive theory, there is a reciprocal relationship among personal attributes, behavioral patterns, and environmental conditions, where each factor continuously influences and shapes the others (Prananto et al., 2025). For example, a student who receives support and positive reinforcement from teachers and peers during the learning process is more likely to develop stronger motivation and productive learning behaviors (Chavez et al., 2024; Wang et al., 2024). This was consistent in this study, as participants emphasized that interactions with teachers and classmates contributed to their confidence, persistence, and engagement in academic writing tasks. The availability of guidance, constructive feedback, and encouragement helped students recognize areas for improvement and adjust their writing tone and style. Students were able to improve their ideas, overcome writing difficulties, and sustain their effort in completing writing activities through social interactions with their peers and teachers.

Expanding the concept of the social cognitive process (see **Figure 1**), this study suggests that the center of learning is the self, where students' personal beliefs, cognitive processes, emotions, and motivation influence how they approach academic writing tasks. The self functions as the regulating mechanism that enables learners to set goals, evaluate their progress, manage challenges, and select appropriate strategies to improve their writing performance. Students' perceptions of their abilities and their confidence in completing writing activities shape their willingness to engage, persist, and improve.

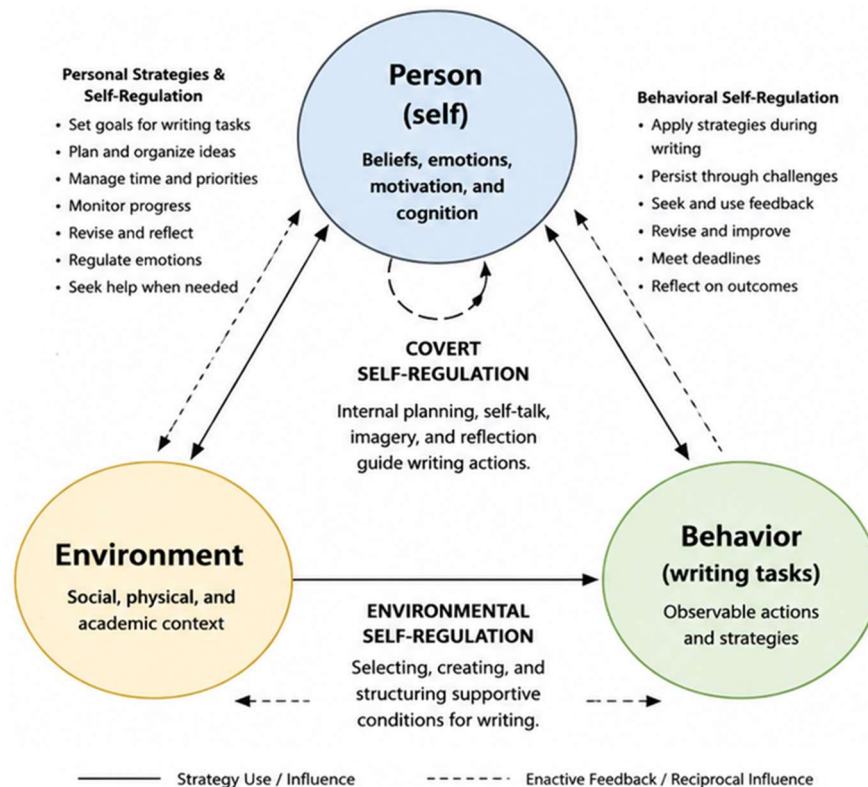


Figure 1. Self-regulated learning in writing skills based on social cognitive theory

A key element in this interaction is enactive feedback, which refers to the information individuals obtain from their own experiences and actions. In writing, enactive feedback occurs when students observe the outcomes of their strategies, recognize successes or difficulties, and make adjustments based on their experiences. For example, when students revise their drafts and notice improvements in clarity and organization, these successful experiences strengthen their confidence and encourage continued use of effective writing strategies. Conversely, difficulties encountered during writing tasks provide opportunities for reflection and strategy adjustment.

The development of writing skills is viewed as a continuous reciprocal process where students' personal factors, writing behaviors, and learning environments influence one another. Through self-regulation and enactive feedback, students become active agents in improving their writing abilities.

Conclusion

The study explored the role of self-regulation strategies in developing writing skills among tertiary students through a mixed methods approach. Students had a high level of self-regulation, particularly in managing their time and organizing academic tasks. However, their writing skills remained at a moderate

level, indicating that students continue to develop essential writing processes, including idea development, revision, and awareness of writing strategies.

Importantly, self-regulation and writing skills are related to each other, suggesting that students' writing performance can be linked to their ability to regulate their thoughts, behaviors, and learning conditions. Qualitative findings further showed that students applied various self-regulatory strategies, including planning, managing their environment, controlling emotions, seeking feedback, and monitoring their progress. However, sustaining motivation remained a challenge, particularly when students perceived writing tasks as demanding or externally assigned.

From the perspective of the social cognitive process, writing development occurs through the reciprocal interaction of personal factors, behavioral strategies, and environmental influences. Students' beliefs about their abilities, motivation, use of writing strategies, and access to social support collectively shape their engagement and performance in writing activities. Thus, writing proficiency is not solely determined by technical knowledge but also by learners' capacity to regulate their cognitive, emotional, and behavioral processes.

The study highlights the importance of embedding self-regulation practices within writing instruction by promoting goal-setting, reflection, strategy use, and feedback-based learning. Providing supportive learning environments and opportunities for collaboration may further strengthen students' confidence and motivation. Future research may examine interventions that develop self-regulatory skills to enhance writing performance across diverse learning contexts.

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