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Exploring South African Higher Education Academics' Use of Generative AI Tools in Optimizing Self-Regulation in Writing for Publication

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Abstract. Since the launch of ChatGPT in November 2022, Artificial Intelligence (AI) tools have become increasingly embedded in higher education academic writing, providing support that ranges from grammar and stylistic refinement to advanced content analysis and automated feedback. Grounded in Self-Regulated Learning (SRL) and Sociocultural Theory, this study explores how AI tools influence higher education academics' self-regulation when writing for publication. SRL refers to the processes through which individuals plan, monitor, and evaluate their learning strategies, and it is fundamental to digital literacy, academic autonomy, and scholarly success. As AI tools continue to expand across academic contexts, understanding their interaction with SRL processes has become increasingly important. This qualitative study employed an autoethnographic approach in which researchers integrated AI tools, namely ChatGPT, Perplexity, and Grøk, throughout the research process. Reflective questions guided the systematic recording and analysis of personal experiences, with particular attention to self-regulation, autonomy, agency, and ethical considerations. Thematic analysis revealed that AI tools improve linguistic quality, offer structured feedback, and enhance revision efficiency, but they also require sustained cognitive engagement and can create tensions between traditional academic writing identities and AI-assisted practices. The study concludes by emphasising that effective AI use depends on balancing technological affordances with self-efficacy, academic integrity.

Keywords: Academic writing; Generative AI tools; auto-ethnography; Open Distance e-Learning; higher education; academic self-regulated

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1. Introduction

South Africa's higher education sector is undergoing accelerated digital transformation, shaped by global technological developments and national imperatives for innovation, efficiency, and equity. Within this shifting landscape, universities are required to respond simultaneously to international research expectations and deeply rooted socio-economic inequalities that continue to affect access, participation, and knowledge production. Institutions such as the University of South Africa (UNISA), operating within Open Distance e-Learning (ODeL) frameworks, exemplify this tension. Academics working in such contexts are increasingly expected to demonstrate advanced digital competence, sustained research productivity, and adaptability to emerging technologies, while maintaining scholarly rigour and ethical integrity.

Central to navigating these demands is Self-Regulated Learning (SRL), understood as the processes through which individuals actively plan, monitor, and evaluate their learning and performance (Zimmerman, 2002). In academic work, SRL enables scholars to manage complex tasks such as research design, scholarly writing, peer review, and publication under conditions of time pressure and accountability. Prior research has consistently shown that strong SRL skills are associated with academic success, persistence, and professional growth, particularly in technology-mediated environments (Anthonysamy et al., 2020). As digital tools increasingly mediate scholarly work, SRL has become even more critical in supporting academics' agency, autonomy, and reflective practice.

Artificial Intelligence (AI) has emerged as a significant feature of this digital transformation. AI is broadly defined as the capacity of computer systems to perform tasks that typically require human intelligence, including reasoning, learning, pattern recognition, and language generation (Korteling et al., 2021; Widiati et al., 2023). Scholars increasingly acknowledge AI's potential to support academic writing by enhancing linguistic clarity, reducing cognitive load, and facilitating iterative revision processes (Marzuki et al., 2023).

The convergence of AI capabilities with SRL principles has generated growing scholarly interest. If SRL foregrounds learners' active control over cognitive, motivational, and behavioural processes, how might AI tools mediate or reshape these processes for academics engaged in high-stakes scholarly writing? Can AI function as a scaffold that strengthens metacognitive awareness and strategic decision-making, or does it risk undermining authorship, self-efficacy, and academic identity? These questions are particularly salient in contexts where publication output is closely linked to institutional funding, career progression, and professional credibility.

The emergence of advanced generative AI platforms such as ChatGPT, Perplexity, and Grok has further transformed the dynamics of academic writing. These tools can assist with brainstorming research ideas, synthesising complex bodies of literature, structuring arguments, and refining drafts. For time-pressed academics, particularly in ODeL institutions with heavy teaching and administrative workloads, such affordances are attractive (Black & Tomlinson,

2025; Van Wyk, 2025 a). Their integration aligns with Sustainable Development Goal 4, which promotes inclusive, equitable, and quality education supported by innovation and technology (UNESCO, 2015).

However, effective engagement with AI is not automatic. Meaningful and responsible use requires deliberate SRL strategies, including goal setting, self-monitoring, critical evaluation, and reflective judgement (Zimmerman, 2002; Boekaerts & Corno, 2005). Without such strategies, AI risks being used as a shortcut rather than a cognitive partner, raising concerns about over-reliance, surface-level engagement, and erosion of scholarly voice. Ethical challenges further complicate AI adoption, including issues of accuracy, bias, transparency, authorship, and academic integrity. Consequently, there have been increasing calls for empirical research that moves beyond technical capabilities to examine how academics experience, negotiate, and regulate AI use in their writing practices.

Existing literature demonstrates that AI-assisted tools can enhance writing quality across a range of educational contexts, particularly in English as a Foreign Language (EFL) setting. Studies report improvements in vocabulary use, grammatical accuracy, coherence, and confidence among students using AI-supported writing tools (Gültekin et al., 2023; Marzuki et al., 2023; Widiati et al., 2023). In postgraduate contexts, tools such as Grammarly have been associated with increased confidence and perceived writing competence (Van Wyk, 2025 a), while undergraduate students report strategic engagement with generative AI for research and composition tasks (Black & Tomlinson, 2025). From an SRL perspective, AI has been shown to support metacognitive regulation, motivational control, and strategic action through real-time prompts, organisational scaffolding, and targeted feedback (Kong et al., 2024; Wambsganss et al., 2024). Despite these promising findings, the literature remains heavily skewed towards student populations, with far less attention given to academics lived experiences of AI-supported scholarly writing.

Insights from other knowledge-intensive domains, such as the digital preservation of languages in southern Africa (Mawela, 2021; Sundani, 2023), illustrate how technology can support complex intellectual work when guided by contextual sensitivity and critical oversight. These parallels suggest that while AI holds potential for academic writing, its effectiveness depends on how users regulate, contextualise, and ethically integrate it into existing scholarly practices.
Research on AI in South African higher education remains emergent. Most existing studies focus on student engagement, learning outcomes, and digital literacy (Alzubi, 2024; Tran, 2025), with limited examination of how academics self-regulate during AI-supported writing tasks. This omission is significant, given that academics operate under distinct pressures, including publication targets, competitive funding environments, and expectations to contribute to global knowledge production. These pressures intersect with infrastructural inequalities, uneven access to professional development, and evolving institutional policies on AI use.

A deeper understanding is therefore required of how academics plan, monitor, and adapt their writing processes when collaborating with AI tools in such contexts. Without this knowledge, the potential of AI to enhance scholarly productivity may be unevenly realised, reinforcing rather than mitigating existing inequalities in research output and academic participation. The motivation for this study arises from the need to strengthen research capacity, enhance writing quality, and build sustainable digital competence among South African academics working in technology-mediated environments. Generative AI has the capacity to support idea development, argumentation, and linguistic precision; however, these benefits are only realised when integrated with intentional and reflective SRL practices (Zimmerman & Martinez-Pons, 1986; Kong et al., 2024).

Understanding how academics adopt, adapt, and critically evaluate AI-assisted writing can inform professional development initiatives, institutional policy, and ethical guidelines for responsible AI use. Such understanding is also crucial for enabling academics to support students in developing AI literacy and self-regulated writing practices. This study is further informed by the researchers' own experiences of using generative AI tools in writing for publication. These experiences revealed both practical advantages and significant tensions related to ethics, authorship, and academic autonomy, prompting deeper reflection on how AI reshapes scholarly practice. To address these concerns, the study adopts an autoethnographic approach to explore academics lived experiences of AI-supported writing.

Accordingly, the study is guided by the following research questions:
Main Research Question:
How does the integration of AI tools in academic writing influence higher education academics' self-regulation, as revealed through autoethnographic reflection?

Sub-Research Questions:
1. In what ways do AI tools enhance or challenge academics' self-regulated learning processes, such as goal setting, monitoring, and self-assessment, during writing for publication?
2. How do academics perceive and navigate the ethical, cognitive, and identity-related tensions arising from AI-assisted academic writing?
3. What reflective strategies can academics develop, based on their own experiences, to support students in cultivating AI literacy and self-regulated writing practices?

2. Theoretical framework

This study is grounded in two complementary theoretical frameworks: Sociocultural Learning Theory and Zimmerman's theory of Self-Regulated Learning (SRL). Together, these frameworks provide a coherent and analytically robust lens for examining the use of Artificial Intelligence (AI) in academic writing, particularly within Open Distance e-Learning (ODeL) environments. Their integration allows for an understanding of learning as both socially

mediated and individually regulated, which is essential when investigating AI-supported academic writing practices.

Sociocultural Learning Theory, derived from the work of Vygotsky, conceptualizes learning as an inherently social process mediated through interaction, language, and cultural artefacts. Central to this theory is the Zone of Proximal Development (ZPD), defined as the distance between what a learner can accomplish independently and what can be achieved with guidance from a more knowledgeable other. Learning occurs when appropriate mediation and scaffolding enable movement within this zone. A fundamental premise of sociocultural theory is that higher-order mental functions—such as intentional attention, voluntary memory, logical reasoning, and problem-solving—are mediated by culturally constructed tools (van Compernolle & Kinginger, 2013). Language occupies a central role in this mediation process, as Vygotsky regarded it as the most powerful symbolic tool shaping thought and enabling self-regulation (Duffy & Cunningham, 1996; Lantolf & Poehner, 2014). This theoretical positioning is particularly relevant for generative AI, which operates primarily through language-based interaction.

Within this framework, AI tools are conceptualized not merely as technical utilities, but as mediating artefacts that can function as a 'more expert other'. Through prompts, feedback, modelling of academic discourse, and dialogic interaction, AI can scaffold writing development in ways that parallel human mediation. This reconceptualization is critical for understanding AI as an active participant in learning rather than a passive support mechanism. While sociocultural theory explains how learning is mediated through interaction and tools, it does not fully account for how individuals internalize these processes and exercise agencies. For this reason, Zimmerman's theory of Self-Regulated Learning (SRL) is employed as a complementary framework. SRL refers to learners' capacity to plan, monitor, and evaluate their own learning processes (Zimmerman, 2011), and is especially significant in ODeL contexts where autonomy and independent engagement are essential.

Academic writing represents a complex cognitive task requiring goal setting, strategic planning, sustained motivation, self-monitoring, and reflective evaluation. Zimmerman's SRL model is particularly suitable for analysing such tasks because it conceptualizes learning as a cyclical process consisting of three interrelated phases: forethought, performance, and self-reflection (Zimmerman, 2013; see Figure 1). These phases are iterative and interactive, with each phase influencing subsequent learning behaviors and motivational beliefs.

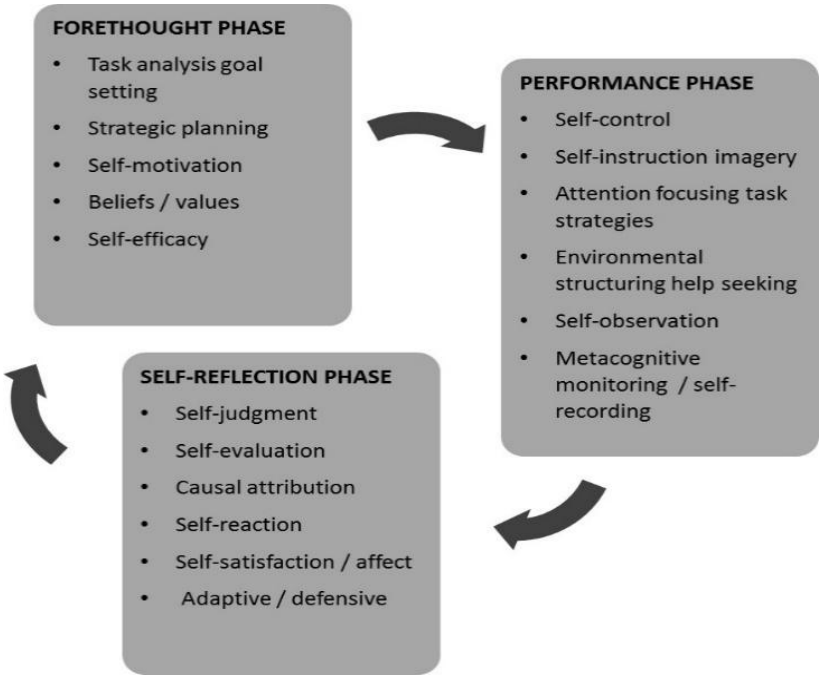

Figure 1: Phases and sub-processes of self-regulation (Zimmerman, 2013:142)

The forethought phase involves goal setting, strategic planning, and the development of self-efficacy. In the context of AI-supported writing, this phase may be observed when academics or students use AI tools to clarify writing goals, generate outlines, or formulate prompts that articulate intentions and strategies. The performance phase focuses on task execution, monitoring, and self-control. Here, interaction with AI can support drafting, revising, and maintaining task focus through feedback and iterative engagement. The self-reflection phase involves evaluation of outcomes and self-reactions, where AI tools may assist with accuracy checking, coherence analysis, and reflective review, prompting further metacognitive regulation.

The explicit articulation of these phases provides a strong justification for selecting Zimmerman's model, as it allows for systematic analysis of how AI aligns with and potentially reshapes self-regulatory processes. This is particularly important given Zimmerman's (2013) observation of a persistent gap in research addressing how learners assume responsibility for their learning within socially mediated contexts.

The integration of sociocultural theory and SRL strengthens the conceptual framework by linking external mediation with internal regulation. Sociocultural theory explains how AI operates as a mediating tool within the ZPD, while SRL explains how this mediation is internalized, leading to autonomy, agency, and ethical judgement. This theoretical complementarity is especially pertinent in the South African context, where Ubuntu emphasises relationality and collective learning, yet ODeL environments may limit direct social interaction and increase reliance on mediated tools.

The role of AI tools supporting writing is therefore not an adjunct to this framework but conceptually embedded within it. Research on AI in EFL, postgraduate, and higher education writing contexts demonstrates that AI is used for both lower-order tasks (such as proofreading) and higher-order tasks (such as idea development and argumentation), with implications for SRL (Nguyen et al., 2024b; Black & Tomlinson, 2025). However, debates persist regarding over-reliance, erosion of authorial voice, and ethical integrity, underscoring the need for critically grounded theoretical analysis.

By retaining Figures 1 and 2 as representations of Zimmerman's SRL model and the integrated AI-supported SRL process, this study situates its analysis within an established yet evolving theoretical tradition. The combined framework provides a rigorous foundation for interpreting autoethnographic data and for examining how AI mediates, supports, and challenges self-regulated academic writing in a South African ODeL institution.

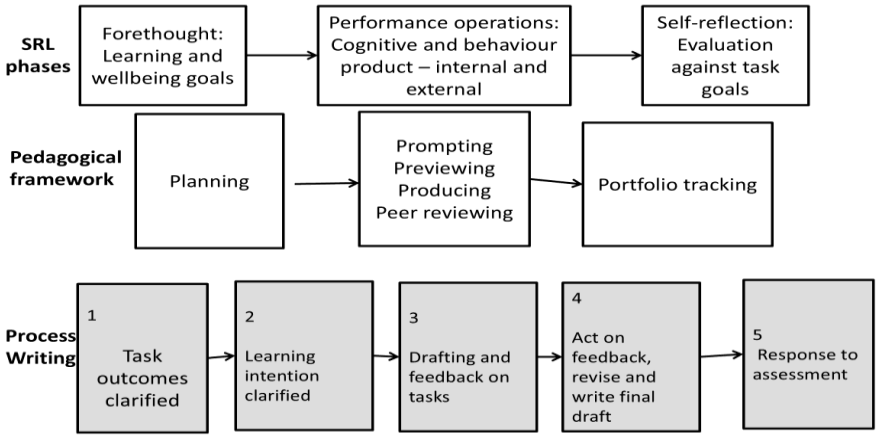

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Figure 2: Integrated SRL process with pedagogical framework and process approach

3. Methodology

This study adopts a qualitative, provocative autoethnographic methodology to explore academics' engagement with Artificial Intelligence (AI) tools in academic writing within higher education ODeL contexts. The researchers' choice of methodology is deliberately justified by the emergent and disruptive nature of AI in academic practices, where its influence on self-regulated learning (SRL) and writing processes remains underexplored (Akram, 2022; Tarisayi, 2023). Autoethnography enables an in-depth examination of lived experience and provides an analytic lens to understand how researchers themselves interact with AI tools, and by extension, how students might use these tools to regulate their learning.

The socio-cultural theoretical foundation of autoethnography aligns directly with this study's theoretical framework, emphasising relational and contextually mediated learning processes. Drawing on Vygotsky's concept of the Zone of

Proximal Development (ZPD), AI is positioned as a mediating "more expert other," enabling the study to explore how interaction with AI supports cognitive scaffolding, SRL strategies, and reflective academic practices (van Compernolle & Kinginger, 2013; Ellis et al., 2011).

The study adopts an evocative autoethnographic design, privileging personal narratives and reflexive engagement to illuminate the relational, cognitive, and ethical dimensions of AI use. This approach was selected over analytic autoethnography because it foregrounds the lived experience of academics in navigating AI-mediated research and teaching, rather than prioritising abstraction or solely theoretical generalization (Brion, 2022; Ellis et al., 2011).

Key elements considered in the study included the centrality of personal experience, the dual acknowledgment of subjective and objective roles, and systematic reflection. To facilitate structured reflection, the researchers employed AI tools Perplexity, Copilot, Microsoft 365 Copilot, and Grok/X to generate reflective questions based on prompts contextualized to academic writing and SRL. The AI-generated prompts were critically analyzed, synthesized, and refined by the researchers to produce ten themes, each supported by four to five reflection questions, creating a structured yet flexible framework for reflection.

3.1 Data Collection

The primary data consisted of thick, descriptive self-reflections recorded by the researchers over six months (April–September 2025) and artefacts of AI interactions. The data synthesis process followed a systematic three-stage procedure:

1. **Open coding:** Each reflection was coded using ATLAS.ti, capturing key phrases and concepts related to SRL, AI engagement, autonomy, agency, and ethical considerations (Saldaña, 2003).
2. **Categorisation:** Codes were grouped into categories based on thematic similarity, allowing patterns across reflections to emerge without imposing a pre-existing theoretical structure.
3. **Theme development:** Categories were then consolidated into overarching themes that represented the core aspects of the researchers' engagement with AI tools and their impact on SRL. Each theme was explicitly linked to empirical evidence from self-reflections and documented AI interactions to distinguish personal interpretation from observed data.

To ensure inter-reviewer reliability, each researcher independently coded the reflections and cross-checked the coding against their colleagues' coding. Discrepancies were discussed and resolved through consensus, strengthening internal validity and reliability.

3.2 Study Quality Assessment

A rigorous study quality assessment was conducted using criteria adapted from Le Roux et al. (2017) and Stewart et al. (2023):

- **Subjectivity:** The self was made visible as part of the data.
- **Self-reflexivity:** The researchers critically examined their biases and positionality.

- **Resonance:** Reflections were presented to allow readers to engage intellectually and emotionally.
- **Credibility:** The use of structured reflection questions, AI artefacts, and systematic coding enhanced trustworthiness and replicability.
- **Contribution:** The study provides new insights into AI-mediated SRL processes in higher education.

Procedures to ensure validity and replicability included transparent documentation of all AI-generated prompts, coding procedures, categorization decisions, and theme development. AI interactions and reflection journals were saved to provide an audit trail.

3.3 Research Context and Participants

The study was conducted in the authors' ODeL university work environment, focusing on teaching, research, and engagement with AI tools. Participants comprised the three researchers, each with expertise in language teaching, self-directed learning, and music education. Their shared engagement in South African indigenous storytelling traditions made autoethnography methodologically and culturally appropriate.

3.4 Data Analysis

Inductive thematic analysis was employed to allow patterns and themes to emerge naturally from the self-reflection data, complemented by artefacts from AI tool interactions. The analysis followed a three-cycle process (Saldaña, 2003): open coding, categorization into conceptual groups, and theme development, linking each theme explicitly to empirical reflections and AI artefacts. This structured approach allows the differentiation of personal interpretations from empirical observations, addressing reviewers' concerns about clarity and data grounding.

4. Results and Findings

Academics reflected on their own use of AI tools to explore how the integration of these tools in academic writing influences higher education academics' self-regulation. Through the thematic analysis of the data, four themes emerged. The themes reflect an interplay of the academics' user behaviours and their researcher positionalities, their exploration of AI's strengths and shortcomings, managing their expectations, and, in light of underwhelming AI outputs, finding a balance between AI-assisted writing and maintained autonomy in writing. Table 1.1 below presents the themes that emerged from the analysis of data and the research questions they address.

Table 1.1: Mapping Of Themes to Research Questions

RESEARCH QUESTION	EMERGENT THEME
In what ways do AI tools enhance or challenge the self-regulated learning processes (such as goal setting, monitoring, and self-assessment) of academics during the writing for publication process?	**THEME 1: AI Task Delegation and Sustained Writer Autonomy**
How do academics perceive the ethical, cognitive, and identity-related tensions that arise from using AI in their writing, and how do these perceptions shape their academic writing practices?	**THEME 2: Balancing AI Capabilities and Constraints**
What strategies and reflective practices can academics develop, based on their own experiences, to support students in cultivating AI literacy and self-regulated learning in academic writing?	**THEME 3: Interplay of User Behavior and Researcher Positionality**
How do academics perceive the ethical, cognitive, and identity-related tensions that arise from using AI in their writing, and how do these perceptions shape their academic writing practices?	**THEME 4: Writer Concerns Amidst Underwhelming AI Output**

The researchers aimed to determine in what ways AI tools enhance or challenge the self-regulated learning processes (such as goal setting, monitoring, and self-assessment) of academics during the writing for publication process.

4.1 THEME 1: AI Task Delegation and Sustained Writer Autonomy emerged as the first theme from the data analysed

Across the three reflections, data revealed that academics acknowledged the supportive role of AI in their writing processes while consistently emphasising the importance of maintaining their own academic voices. AI Task Delegation and Sustained Writer Autonomy emerged as a central theme, reflecting the balance academics strike between leveraging AI tools and preserving intellectual ownership (Zimmerman, 2002; Nguyen et al., 2024a). Academics described how AI provided assistance in various aspects of writing, particularly for idea generation, language refinement, and reference management.

One participant explained, "*I have a concept idea, and I allow AI to suggest ways I could improve it*", illustrating the use of AI as a cognitive aid that complements, rather than replaces, critical thinking. Others noted strategies for structuring their work, with one stating, "*I still use articles as examples I analyse the articles and form a mental checklist of what is needed*", reflecting an iterative engagement with source material while using AI to enhance clarity and efficiency (Marzuki et al., 2023).
Tools such as Grammarly and Zotero were also highlighted: "*Grammarly for language polishing and reference managers such as Zotero to complement AI suggestions*", demonstrating the integration of AI-assisted technologies in

supporting writing mechanics (Widiati et al., 2023). Additionally, academics used AI for targeted feedback on drafts, for example, "*I have asked AI to check my language and to evaluate an abstract wrote*", underscoring its role in formative evaluation. While AI offered significant support, the data also emphasised the deliberate measures academics took to maintain autonomy.

One participant reflected, "*AI could provide a starting point, but the intellectual ownership and critical engagement were responsibilities I chose to hold onto*" (Kong et al., 2024). Critical writing tasks including argument development, contextualisation, citation integration, and shaping the final voice were intentionally performed manually: "*I always did the critical tasks manually, including developing arguments, adding cultural and contextual depth, integrating citations, and shaping the final voice of the paper*". Others highlighted that routine research practices, such as source selection and annotation, remained unchanged: "*My writing, in how I approach it, finding and filing sources, according to date and author, then reading and highlighting text to making notes did not change*".

These reflections indicate that while AI facilitated efficiency and structural support, academics maintained central control over cognitive and creative aspects of their writing, preserving the integrity of their work. Overall, the data demonstrates that AI tools are used selectively and strategically, reinforcing rather than diminishing writer autonomy. Academics leveraged AI to reduce cognitive load, streamline tasks, and enhance precision, yet critical thinking, contextual analysis, and authorial voice remain firmly under their control. This balance supports the notion that AI functions as a mediating agent in scholarly work, enabling academics to enhance productivity without compromising self-regulated learning or academic independence (Zimmerman & Martinez-Pons, 1986; Nguyen et al., 2024b).

4.2 THEME 2: Balancing AI Capabilities and Constraints

The second theme emerged from academics' reflections, revealing a nuanced perception of AI as both a valuable resource and a tool with inherent limitations. Academics recognised several affordances of AI in their writing processes, particularly in supporting efficiency and accuracy.

One participant noted, "*it rewrote it in a much better way, and I felt inadequate, scared that I am not a good academic and my writing will not succeed*", highlighting the simultaneous assistance and intimidation AI can evoke. Another reflected, "*I also found it helpful to have a constant reviewer/language editor for my writing*", while a third described AI's role in structuring and summarising content: "*It was particularly helpful in identifying gaps in my writing, suggesting headings, and summarizing dense or repetitive information*". AI was also credited with streamlining workflow, as indicated by one academic: "*This reduced time spent on planning and allowed me to jump into analysis more quickly*". These reflections demonstrate that AI can act as a scaffolding tool, supporting cognitive processes such as planning, organisation, and language refinement, consistent with self-regulated learning frameworks (Zimmerman, 2002; Kong et al., 2024).

Despite these advantages, academics expressed concerns about the limitations of AI tools and the tensions these created in maintaining academic integrity and contextual relevance. One participant noted, *"it is trained on northern or western data/sources"*, while another highlighted the risk of flattening nuance: *"I considered it less effective when it flattened cultural nuance or provided generic statements that required significant reworking"*. Additional challenges included incomplete referencing, as noted: *"it answered without sources"*, and the use of questionable sources: *"Perplexity shows the process and I somehow got irritated when I saw it consulted LinkedIn as I do not rate it as a source"*. These reflections reveal the critical need for academics to exercise judgment and monitor AI outputs, aligning with the metacognitive and self-monitoring components of Zimmerman's SRL model (Zimmerman, 2011).

Academics also described mitigation strategies to address these limitations. For example, one reflected, *"I can tell it that the context is South African, but the integration of my context remained limited; I had to be very explicit and correct the tool and be vigilant"*, while another emphasised the need for detailed contextual input: *"I understood then that I had to provide detailed context and refine outputs significantly to prevent oversimplification"*. AI was used selectively to support tasks, rather than replace critical thinking: *"It could provide a comparison …but I had to find sources to support the comparison"*.

Finally, academics deliberately preserved authorial voice by controlling the degree of AI involvement. One participant reflected, *"Once I had sections drafted, I used AI to expand or rephrase certain parts while manually editing to ensure originality"*, while another described comparing outputs across tools: *"Grøk and Perplexity I would ask for summaries of comparisons and then I would compare the responses"*. These strategies illustrate a conscious balancing act between utilising AI's capabilities and acknowledging its constraints, ensuring autonomy, critical engagement, and integrity in scholarly writing (Black & Tomlinson, 2025; Nguyen et al., 2024b). Overall, Theme 2 highlights that while AI tools provide efficiency and support, academics actively negotiate their use, mitigating limitations and preserving control over their writing processes, demonstrating a deliberate integration of technology into self-regulated learning practices.

4.3 THEME 3: Interplay of User Behavior and Researcher Positionality

The third theme emerged from academics' reflections, highlighting the interplay between user behaviour and researcher positionality. Early interactions with AI tools were marked by a combination of curiosity, excitement, and skepticism, reflecting academics' commitment to academic integrity and authorship autonomy.

One participant explained, *"At the beginning, I felt curiosity and excitement, followed by skepticism and caution as I noticed AI's limitations"*, while another reflected, *"It was mixed, frustration at first, but as I adjusted my expectations, I accepted the AI tools' capabilities and limitations"*. A further reflection emphasised the tension between trust in AI and ownership of ideas: *"While I trusted AI to have better language than me, I still wanted to own my thoughts"*. These reflections are consistent with findings from Black and Tomlinson (2025) and Nguyen et al. (2024a), who noted that users

of generative AI often experience initial ambivalence when balancing cognitive support with the preservation of personal academic voice.

Despite initial reservations, the data revealed that academics persisted in exploring AI tools, adapting their behaviours as familiarity increased. One participant shared, "*I started to become more comfortable when I learnt I could tailor the prompts to give me the exact results I want*", and another noted, "*I did come to see it as a resource to assist in my writing, especially in the way I expressed myself and to evaluate my writing*". This evolving relationship with AI underscores the importance of active engagement and strategic use, aligning with self-regulated learning principles, where planning, monitoring, and evaluation are iterative and responsive to task demands (Zimmerman, 2002; Kong et al., 2024).

Academics also reinforced the principle of verification: *"I now understand that I want to maintain my academic integrity and autonomy; I will use AI as a resource and regard it as a resource that needs verification, as any other source would"*. This illustrates that reflective engagement with AI can support both cognitive and ethical dimensions of academic practice.

As academics' confidence with AI grew, their professional identities and authorship perspectives evolved. Reflections highlighted a shift toward hybrid authorship, where human creativity and AI-assisted efficiency coexist: *"What I have gained will be used to inform my teaching and my research"*; "*I see myself as rooted in scholarly traditions but open to experimenting with new tools that can strengthen my work without compromising authenticity*"; and "*My experience reflects a shift towards hybrid authorship, where human creativity and AI efficiency intersect*". These insights indicate that deliberate, reflective use of AI can enhance researcher agency while preserving scholarly rigor (Marzuki et al., 2023; Van Wyk, 2025 a).

The data further revealed that structured approaches are essential for supporting self-regulated learning through AI. One participant noted, "*Self-regulation can be taught or developed. If not in place, the use of AI to support SRL must be deliberate and intentional*", while another emphasised, "*There needs to be structure to the use if students are to use it ethically and in a way that will support their learning*". Reflections also suggested that researchers' experiences could guide others: "*My journey can guide others in adopting a critical, balanced approach*". This aligns with socio-cultural learning theory, where knowledge is co-constructed and scaffolded through reflection and shared practice (van Compernolle & Kinginger, 2013).

Finally, the data highlighted ongoing questions that academics still hold regarding AI integration, demonstrating a critical, reflective stance: *"How can AI better integrate African epistemologies and decolonial perspectives?"*, *"Will there be shifts in how authorship and originality are defined in peer-reviewed publishing?"*, and "*My question is, what is academic research and writing?"*. These reflections underscore that while engagement with AI evolves, academics continue to critically evaluate its implications, reinforcing the interplay between user behaviour, positionality, and self-regulated learning.

Overall, Theme 3 illustrates the dynamic negotiation between initial skepticism, growing confidence, and evolving researcher identity, showing that thoughtful engagement with AI tools can support both ethical and cognitive dimensions of academic practice.

4.4 THEME 4: Writer Concerns Amidst Underwhelming AI Output

Theme 4 explored how academics perceived the ethical, cognitive, and identity-related tensions arising from the use of AI in their writing, and how these perceptions shaped their academic practices. The data revealed a consistent sense of underwhelm among academics regarding AI feedback. One participant reflected, "*I expected that Perplexity would be clear and precise in its response*", while another noted, "*I also expected AI to be clever – anticipating my needs and adding to my thinking*". Further reflections highlighted unmet expectations of AI's autonomous reasoning: "*I expected AI to know what I need with very little instruction, but that is not the case*", and "*A significant turning point was when I realised AI tools do not possess common sense and that I must not expect it to think on my behalf*".

Despite initial frustrations, academics quickly recognised that effective use of AI required deliberate critical engagement. One participant observed, "*Over time, I became more interactive and iterative. I learned to break down complex tasks into smaller, more specific prompts and to critically assess outputs rather than taking them at face value*". Another highlighted the effort involved in optimising AI input: "*For better results, one has to have carefully crafted prompts, which in itself can be time-consuming*". These reflections emphasise that AI cannot replace cognitive effort but rather requires the user to exercise judgment, strategic planning, and iterative refinement, aligning with principles of self-regulated learning (Zimmerman, 2002; Kong et al., 2024).

Overall, Theme 4 illustrates that while AI tools offer potential support in academic writing, academics' experiences were shaped by a need to actively manage and critically evaluate AI outputs. This process strengthened their autonomy, reinforced critical thinking, and highlighted the importance of intentional engagement with AI to ensure meaningful and contextually relevant writing outcomes. The theme demonstrates a balance between leveraging AI capabilities and maintaining authorial responsibility, underscoring the cognitive and ethical dimensions of AI-supported academic writing.

5. Discussion [Acronyms and Abbreviations]

The study aimed to explore how the integration of AI tools in academic writing influenced higher education academics' self-regulation. Using an autoethnographic approach, three academics reflected on their own interactions with AI tools to generate insights into their self-regulated learning (SRL) practices. A limitation of the study is that reflections were only conducted by three academics within one university, which limits the generalisability of the findings across broader contexts. However, this approach allowed for deep, contextualised insights into how academics engaged with AI during their writing processes. The convergence of perspectives across the academics helped ensure the validity of the findings (Creswell, 2009:191), and the rich, detailed reflections offer

transferable insights that could inform teaching practices and support students in ethical and effective AI use (Ahmed, 2024). The discussion is structured according to the research questions, with emphasis on the interplay between AI use, SRL, and ethical, cognitive, and identity-related considerations.

Findings indicated that academics were selective in the tasks they delegated to AI tools, demonstrating sustained control over their writing and critical thinking. One academic noted, "*AI could provide a starting point, but the intellectual ownership and critical engagement were responsibilities I chose to hold onto*". Another reflected, "*I always did the critical tasks manually, including developing arguments, adding cultural and contextual depth, integrating citations, and shaping the final voice of the paper*". These reflections highlight how AI was used as a cognitive mediator to support knowledge construction without diminishing the academics' autonomy, consistent with sociocultural perspectives on mediated learning (Gonzales et al., 2025). AI outputs were used to compare drafts, verify sources, and scaffold thinking, demonstrating characteristics of SRL through self-monitoring, self-checking, and self-directing towards writing goals (Zimmerman, 2002).

Interestingly, academics' goal-setting and overall writing approaches remained largely unchanged, reflecting maintained autonomy in learning processes, as one participant stated, "*My writing, in how I approach it, finding and filing sources, according to date and author, then reading and highlighting text to making notes did not change*". AI served as a tool to augment writing practices rather than replace them, supporting both lower-order and higher-order cognitive tasks, such as proofreading and critical argument development (Nguyen et al., 2024b; Black & Tomlinson, 2025). This aligns with Zimmerman's cyclical model of SRL, particularly the performance phase, in which learners actively monitor and regulate task engagement to achieve outcomes (Zimmerman, 2013).

Academics recognised both the affordances and limitations of AI tools. One participant shared, "*It rewrote it in a much better way, and I felt inadequate, scared that I am not a good academic and my writing will not succeed*", while another observed, "*I also found it helpful to have a constant reviewer/language editor for my writing*". The tools facilitated identification of gaps, summarisation of information, and structural suggestions, enhancing SRL through iterative engagement (Nguyen et al., 2024a). One participant reflected, "*It was particularly helpful in identifying gaps in my writing, suggesting headings, and summarizing dense or repetitive information*". AI reduced time spent on planning, enabling quicker engagement with analysis, which further supports self-directed learning and efficient task management.

Despite these benefits, academics expressed concerns regarding the ethical use of AI, cultural nuances, and the reliability of outputs. Some noted, "*It is trained on northern or western data/sources*", and "*I considered it less effective when it flattened cultural nuance or provided generic statements that required significant reworking*". Others reflected on source verification challenges: "*It answered without sources*", and "*Perplexity shows the process and I somehow got irritated when I saw it consulted LinkedIn as I do not rate it as a source*". These reflections illustrate how AI tools, if used uncritically, could risk dependency, compromise originality, or reduce deep cognitive engagement (Gonzales et al., 2025).

Academics mitigated these limitations by contextualising and refining AI outputs. One participant noted, "*I can tell it that the context is South African, but the integration of my context remained limited. I had to be very explicit and correct the tool and be vigilant*", while another explained, "*I understood then that I had to provide detailed context and refine outputs significantly to prevent oversimplification*". These reflections emphasise the active, critical role of the writer in maintaining intellectual ownership, underscoring the importance of SRL strategies such as self-monitoring, self-reflection, and iterative task evaluation (Zimmerman, 2011).

Academics developed strategies to integrate AI into writing processes while retaining agency and autonomy. These strategies included crafting precise prompts, verifying AI-generated feedback, and refining outputs to ensure cultural and contextual relevance. One academic stated, "*Once I had sections drafted, I used AI to expand or rephrase certain parts while manually editing to ensure originality*", while another reflected, "*Grøk and Perplexity I would ask for summaries of comparisons and then I would compare the responses*". Such practices demonstrate how AI can scaffold learning without undermining critical engagement, consistent with the principles of SRL and sociocultural theory (Black & Tomlinson, 2025; Gonzalez et al., 2025).

These experiences highlight opportunities for academics to support students in developing AI literacy and SRL. Structured teaching strategies could guide students in ethically and effectively using AI tools, helping them take responsibility for goal setting, self-monitoring, and self-assessment (Zimmerman, 2013). Furthermore, academics recognised that careful, reflective engagement with AI tools could enhance writing efficiency, critical thinking, and iterative learning practices, all of which are central to lifelong learning and academic success.

Throughout the study, academics emphasised the importance of maintaining their authorial voices despite AI integration. Reflections indicated a deliberate effort to avoid overreliance on AI while leveraging its benefits. As one academic noted, "*AI could provide a starting point, but the intellectual ownership and critical engagement were responsibilities I chose to hold onto*", highlighting the balance between embracing technological tools and sustaining traditional writer identities. This finding underscores how SRL and sociocultural perspectives converge, as learners navigate the mediation of AI while retaining self-regulation, agency, and personal voice.

The themes collectively illustrate the nuanced experiences of academics using AI in writing. Theme 1 highlighted selective task delegation and sustained writer autonomy, Theme 2 revealed the balance between AI's capabilities and constraints, Theme 3 explored skepticism and reflective engagement, and Theme 4 captured ethical, cognitive, and identity-related tensions amid underwhelming AI outputs. These interrelated themes show that effective AI use is mediated by critical thinking, iterative self-regulation, and careful contextualisation, providing empirical support for the role of AI as a cognitive mediator rather than a replacement for intellectual effort.

Academics initially approached AI tools with skepticism, grappling with ethical and identity tensions. Through reflective engagement, they developed strategies that maintained control over their work, enhanced SRL, and preserved authorship. These experiences offer valuable insights for guiding students in ethically and effectively using AI tools, fostering autonomy, self-monitoring, and critical thinking, and bridging the gap between technological innovation and traditional academic practices.

6. Conclusion

This study illustrates the transformative yet complex role of generative AI in academic writing within South Africa's higher education, particularly in ODeL environments. Academics' reflections show that AI tools offer significant benefits, including enhancing idea development, improving language precision, and reducing cognitive load. However, these benefits are maximised only when paired with deliberate self-regulated learning strategies, where writers critically evaluate AI-generated outputs, maintain authorial autonomy, and align technology use with ethical standards. The findings underscore the necessity of preserving scholarly integrity while leveraging AI as a supportive tool rather than a replacement for human cognition.

Implications of the study are both practical and theoretical. Practically, professional development programs for academics should focus on fostering AI literacy, ethical engagement, and SRL skills, enabling them to guide students in responsible and reflective AI use. Institutionally, clear policies and practical guidelines are needed to integrate AI tools systematically in research, teaching, and learning, ensuring both innovation and ethical safeguards. For students, embedding AI use within SRL frameworks can strengthen metacognitive skills, autonomy, and academic competence. The findings also contribute to the theoretical understanding of SRL in technology-enhanced contexts, demonstrating how AI can function as a cognitive mediator that supports goal setting, monitoring, and self-reflection.

Recommendations include implementing structured training programs for academics and students to develop AI literacy and reflective writing practices, using culturally and contextually appropriate approaches. Institutions should establish clear policies governing AI use, emphasising academic integrity, originality, and ethical engagement. Future research should explore the longitudinal effects of AI-assisted writing on academic identity and authorship, as well as scalable models for AI integration that promote equity, innovation, and inclusivity in higher education. By situating AI adoption within reflective, ethical, and culturally responsive frameworks, universities can harness AI's potential to enhance research productivity and learning outcomes while preserving social and academic values.

Conflict of Interest
The researchers declare no conflict of interest.

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