A CONCEPTUAL FRAMEWORK FOR ENHANCING ACADEMIC RESEARCH WRITING: INTEGRATING CONTEXT-SPECIFIC GUIDANCE AND SWALE'S CARS MODEL

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Article Info	Abstract
Article History Received: November 2024 Revised: February 2025 Published: April 2025 *Keywords* *Academic research writing;* *Epistemic conception;* *Constituent characteristics;* *Challenges;* *Context-specific guidance;* *CARS Model;* *Academic discourse community*	*Academic research writing (ARW) is a complex, epistemic, and disciplinary practice fundamental to postgraduate scholarship. Despite its centrality in higher education, novice researchers (NRs) often face persistent challenges, including limited epistemological awareness, difficulties with disciplinary conventions, and inadequate pedagogical support. This study addresses these gaps by proposing a conceptual framework that integrates Swales' Create a Research Space (CARS) model with context-specific guidance to enhance ARW instruction. A narrative review methodology was employed to synthesize research on four core domains: content, context, language and structure, and cognitive ability. These constituent characteristics were mapped against common difficulties experienced by NRs and aligned with pedagogical strategies for scaffolding academic writing. The findings underscore the need for inclusive and responsive writing instruction that supports epistemic development and academic identity formation. The framework offers practical implications for writing curriculum design, mentoring, and instructional interventions. It also lays the groundwork for future empirical research to test its efficacy across varied educational contexts.*

INTRODUCTION

Academic Research Writing (ARW) plays a central role in postgraduate education and scholarly communication, enabling researchers to make meaningful contributions to their disciplines. It is far more than the mechanical presentation of information; ARW involves the structured construction, transformation, and contextualization of knowledge within an academic community. As a genre, ARW is defined by clarity, coherence, and intellectual engagement with the literature, requiring writers to not only present new ideas but also reinterpret existing knowledge in innovative ways (Bereiter & Scardamalia, 1987; Galbraith, 1999). The value of originality and focused argumentation in academic writing has long been emphasized as essential to the evolution of scholarly discourse (Halpern, Hakel, & Halpern, 1998; Overholser, 2011).

Effective ARW also demands a high degree of critical thinking and objectivity, where evidence-based reasoning supports claims in a logical and persuasive manner (Ballenger, 1992; Kuszyk-Bytniewska, 2020). These expectations underscore the intellectual rigor required to engage with complex ideas, reflect on research processes, and anticipate the broader implications of one's findings (Björk & Räisänen, 1997; Castillo-Martínez & Ramírez-Montoya, 2021). Recent shifts in academic writing practice, however, suggest a move toward more accessible and human-centered approaches. The emergence of post-academic writing

promotes narrative techniques and storytelling as strategies to improve reader engagement and enhance scholarly reach, while still maintaining academic depth (Badley, 2019, 2021). Another vital component of ARW is its recursive nature. Writing in academic contexts is a dynamic and dialogic process that involves revisiting, refining, and reinterpreting ideas in conversation with both existing texts and broader disciplinary communities (Zamel, 1982; Hayes & Flower, 1986; Chauhan, 2022). This continuous engagement with writing helps shape a scholar's academic identity and strengthens their participation within discourse communities (Swales, 1990, 2004; Lassig & Lincoln, 2009). Particularly for novice researchers (NRs), developing proficiency in ARW is not only about mastering grammar and citation styles, but about positioning their work within ongoing debates and contributing substantively to the knowledge economy (Lim & Koay, 2024; Flowerdew, 2013).

Despite these developments, existing writing models and pedagogical approaches often fall short of addressing the dual challenges novice writers face: aligning with academic structural conventions while also developing epistemic maturity. Many frameworks emphasize linguistic surface features or formulaic templates without adequately supporting cognitive engagement or context sensitivity. This paper responds to these gaps by proposing a conceptual framework that integrates Swales' Create a Research Space (CARS) model with context-specific academic writing guidance. This approach goes beyond genre analysis by leveraging CARS as a tool for structural clarity, while anchoring it within a wider system that fosters knowledge transformation, critical reflection, and academic identity formation.

Literature Review

Academic Research Writing (ARW) is widely recognized as a complex intellectual and communicative practice, central to the advancement of postgraduate education and scholarly identity. Studies have long acknowledged its function not only as a means of conveying research but also as a form of knowledge construction and epistemological engagement (Bereiter & Scardamalia, 1987; Galbraith, 1999; Flowerdew, 2013). More recent literature deepens this understanding by examining ARW through cognitive, rhetorical, and social lenses (Lim & Koay, 2024; Castillo-Martínez & Ramírez-Montoya, 2021; Chauhan, 2022), with emphasis on the interplay between writing development and academic acculturation. Several scholars have conceptualized ARW as inherently recursive and reflective. Zamel (1982), followed by Hayes and Flower (1986), describe writing as a process that involves planning, drafting, evaluating, and revising all in dialogue with existing scholarly texts and communities. This recursive process helps writers, particularly novice researchers (NRs), negotiate their academic identity within specific discourse communities (Swales, 1990, 2004; Lillis & Curry, 2010). Yet, despite this theoretical richness, challenges in writing persist, especially among postgraduate students lacking systematic exposure to advanced academic discourse conventions.

Recent scholarship highlights a persistent instructional gap in higher education: while ARW is expected, it is often under-supported by institutions. Research by Strobl et al. (2019) and Olsson et al. (2024) underscores the need for academic literacies programs that go beyond basic skills training to foster epistemological awareness, genre fluency, and cognitive engagement. ESL writers and international students, in particular, encounter significant barriers related to rhetorical structuring, argumentation, and language proficiency; issues compounded by disciplinary differences and limited feedback mechanisms (Shepard & Rose, 2023; Rashid et al., 2022; Akhtar et al., 2020). Efforts to address these concerns have led to the increased use of genre-based instruction models, most notably Swales' Create a Research Space (CARS) model. Originally developed to explain how research article introductions establish a rhetorical space for new contributions, the CARS model comprises three moves; (1) establishing a research territory, (2) identifying a niche, and (3) occupying the niche (Swales, 1990). This model has proven effective across disciplines, with studies adapting it to science writing

(Peacock, 2011), biochemistry (Kanoksilapatham, 2007), and applied linguistics (Samraj, 2002). However, these applications are typically discipline-specific and focus narrowly on introduction sections, leaving its broader pedagogical potential underexplored.

In contrast, this study extends the use of the CARS model beyond genre analysis. By embedding CARS within a context-sensitive pedagogical framework, this paper positions the model as both a structural and developmental tool; one that scaffolds not just writing form, but epistemic functions such as positioning, justification, and argument development. This responds directly to the call by Wingate (2017) and Lillis & Turner (2015) for academic writing support that is inclusive, recursive, and cognitively rich. Furthermore, while existing frameworks tend to isolate components of ARW (e.g., grammar, referencing, structure), this study identifies four interconnected constituent characteristics; context, content, language and structure, and cognitive ability, as essential to improving academic writing outcomes. These components are drawn from a synthesis of literature across multiple domains and disciplines (Hyland, 2012; Butler, 2006; Smith & Deane, 2014) and are reassembled here into a unified model of postgraduate ARW development. The integration of these features into one conceptual framework represents a novel contribution to both theory and practice.

Research Method

In order to conduct an investigation and evaluation of academic research writing (ARW) in the context of postgraduate study, this paper employs a qualitative research design. The selection of the narrative review methodology was based on its ability to effectively integrate existing research and provide readers with a comprehensive understanding of the subject matter. An extensive literature search was conducted utilizing various scholarly databases, including PubMed, Google Scholar, Scopus, and Web of Science. "Academic research writing," "postgraduate scholarship," "epistemic conceptions," "academic discourse community," "Swale's CARS model," and related terminology were among the terms and phrases utilized in the search.

We only considered peer-reviewed books, journal articles, and conference proceedings that were published in English for this search. To select the literature, we established inclusion criteria based on the specific subtopics we wanted to investigate. These criteria included the articles' ability to provide insights on different aspects of academic writing, such as constituent characteristics of academic research writing, epistemic conceptions, issues and challenges faced by postgraduate scholars, challenges in training, and Swale's CARS model. Studies that provided valuable insights into the significance of academic discourse communities were also included.

FINDINGS AND DISCUSSION
Academic Research Writing for Postgraduate Scholarship

Academic Research Writing (ARW) serves as the intellectual cornerstone of postgraduate education, seamlessly integrating scholarly inquiry, writing, and critical thinking into a unified process of knowledge creation. Far from being a static or formulaic practice, ARW supports the generation, articulation, and transformation of ideas into validated scholarly knowledge. Conducted predominantly within university settings, ARW acts as a bridge between formal education and active academic engagement, embodying both institutional rigor and the exploratory nature of disciplinary thought (Russell & Cortés, 2012; Evans, 2013).

This dynamic conception of ARW demands more than technical proficiency; it requires scholars to critically engage with complex theories and frameworks, enabling reinterpretation of existing knowledge and extension of disciplinary boundaries. Jeyaraj (2018) aptly refers to this as navigating a "jungle," signaling the nuanced, often messy intellectual terrain novice researchers must traverse. Importantly, ARW is not merely a vehicle for communication, it is a developmental process that supports continuous learning, reflexivity, and academic growth.

Academic texts such as theses or dissertations are often seen as final products; however, a process-oriented view recognizes these as evolving milestones rather than endpoints (Al-Zubaidi, 2012). This orientation fosters deep reflection, encourages creativity, and positions writing as a space for intellectual discovery, rather than mechanical reporting.

Through iterative engagement with ARW, postgraduate students develop their academic identities, gradually mastering the conventions of disciplinary discourse and participating in scholarly communities. This identity formation is essential not just for academic success, but for cultivating a sense of belonging in the academic landscape (Perpignan, Rubin, & Katznelson, 2007). It involves internalizing rhetorical expectations, refining the ability to structure complex arguments, and contributing meaningfully to academic dialogues. In summary, ARW in postgraduate contexts demands a balanced focus on both process and product encouraging not just polished output, but deep intellectual engagement, reflective practice, and scholarly transformation (Stubb, Pyhältö, & Lonka, 2011; Lonka, Pyhältö, & Stubb, 2014).

Epistemic Conceptions

Epistemology, the philosophy of knowledge, concerns itself with the nature, sources, and limits of human understanding. As Steup (2014) asserts, it examines how knowledge is constructed, validated, and related to reality. Within the context of Academic Research Writing (ARW), epistemology is foundational; it shapes how researchers perceive, assess, and communicate scholarly claims. A robust epistemological stance is crucial for scientific inquiry and reflective writing, providing the depth and structure needed for producing meaningful, rigorous academic discourse (Browaeys, 2004).

Understanding and developing epistemic conceptions that is, learners' beliefs about knowledge and knowing is particularly important for novice researchers (NRs), as these conceptions directly influence how they approach research and writing tasks. A growing body of literature suggests that stronger epistemological awareness leads to more complex, critical, and sophisticated academic writing (Bartholomae, 2019; Lonka, Pyhältö, & Stubb, 2014). ARW, in this view, is not a passive activity of reporting existing information, but an active, reflective, and transformative act of knowledge creation.

Writing in academia requires scholars to synthesize diverse sources, critically evaluate existing theories, and generate novel interpretations. This transformation process; moving from basic understanding to deep integration of ideas is cognitively demanding and involves high-order thinking skills. Novice researchers often find this aspect of ARW more difficult than data collection or methodology development, as it requires constructing new meaning through active reflection and adaptation (Jaroongkhongdach et al., 2012). Moreover, this process is mediated by the writer's awareness of disciplinary discourse norms and the expectations of an academic audience.

For novice researchers to fully participate in academic communities, their epistemological assumptions must evolve beyond knowledge reproduction toward knowledge transformation. Many initially perceive writing as a static task; simply restating sources or summarizing results. However, effective ARW demands that writing be seen as dialogic and generative, where the writer engages with, challenges, and extends existing scholarship (Vahed et al., 2018; Wilmot & McKenna, 2018). To support this transition, educational interventions must directly address and reframe maladaptive conceptions of writing. Training programs, writing centers, and disciplinary workshops can cultivate cognitive and epistemic growth by explicitly teaching; (1) critical thinking and synthesis skills (Tahıra & Haıder, 2019), (2) integration of theory and empirical evidence (Carter, 2019), and (3) application of epistemological principles in scholarly writing (McMillan & Weyers, 2012). Additionally, exposure to varied academic genres, guided text analysis, and feedback-rich environments can

deepen students' understanding of how knowledge is constructed and conveyed across contexts.

Constituent Characteristics

To support novice researchers (NRs) in navigating the complexities of academic communication, this study identifies four constituent characteristics (Figure 1) that underpin effective Academic Research Writing (ARW): Context, Content, Language and Structure, and Cognitive Ability. These core dimensions serve as guiding pillars for producing scholarly work that is clear, rigorous, and intellectually credible. Each characteristic plays a distinct role in shaping how knowledge is communicated and validated within academic discourse communities (Hyland, 2012; Swales, 2013).
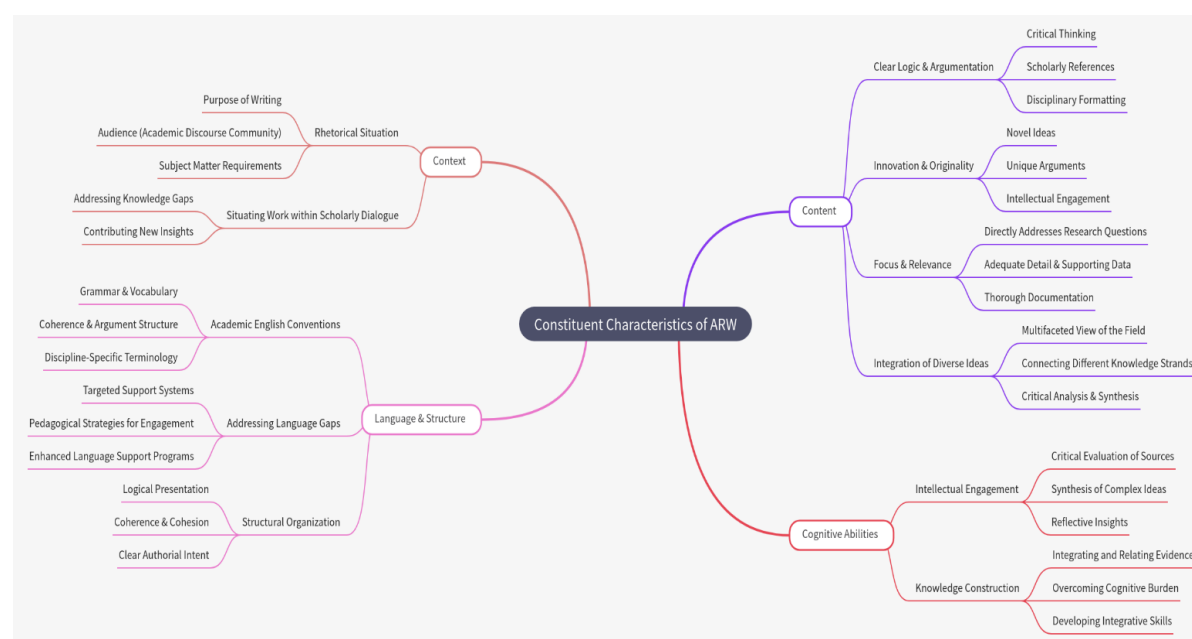

Figure 1. Constituent characteristics of effective ARW

Context

The foundation of effective Academic Research Writing (ARW) lies in the writer's ability to navigate its contextual dimensions. Context encompasses the rhetorical situation in which scholarly writing occurs including the purpose of writing, the expectations of the academic discourse community, and the disciplinary norms that shape subject-specific communication (Björk & Räisänen, 1997). Novice researchers must develop an awareness of how their writing fits within broader academic conversations, responding not only to theoretical frameworks but also to the implicit values, assumptions, and debates circulating within their fields. Contextual awareness requires writers to situate their work meaningfully within existing literature. This involves identifying and addressing gaps in knowledge, acknowledging prior contributions, and framing one's research as a response to or extension of established ideas. ARW is not conducted in isolation; it is a form of intellectual participation in ongoing scholarly dialogue, shaped by the discursive practices of specific academic communities.

Moreover, strong contextualization enhances the relevance and impact of a researcher's contributions. It signals academic maturity and demonstrates an understanding that writing is not merely a technical activity, but a social and epistemological one interwoven with disciplinary identity, credibility, and knowledge progression (Lillis & Curry, 2010). Within the framework presented in this study, context serves as a guiding lens that shapes how content is selected, arguments are developed, and ideas are positioned for scholarly engagement.

Content

In academic research writing (ARW), content forms the intellectual core of the scholarly argument. Especially in disciplines characterized by theoretical complexity or empirical depth, content must be presented with clear logic, structured reasoning, and robust support. Unlike informal or narrative writing, ARW requires writers to ground their arguments in critical thinking, evidence-based reasoning, and adherence to disciplinary standards in both formatting and citation (Lassig & Lincoln, 2009).

A structured approach to developing academic content has been advocated as essential for novice researchers. Smith and Deane (2014) argue that scaffolded academic instruction helps early-career scholars build writing fluency and confidence, thereby mitigating attrition and improving research quality. Such structuring also supports the clarification of complex ideas, ensuring that arguments remain compelling and appropriately substantiated (Beaufort, 2017). One of the most vital elements of academic content is originality. Scholars are expected to contribute novel insights, not simply echo existing knowledge. Innovation in ARW involves advancing new perspectives, posing unique research questions, and articulating arguments that reflect intellectual engagement with the field (Overholser, 2010; Baptista et al., 2015; Milovanović et al., 2023). Patriotta (2017) and Cantoral (2019) similarly emphasize the value of originality as a marker of academic rigor, asserting that meaningful academic writing challenges prevailing paradigms and expands conceptual boundaries.

Equally important is focus and relevance. Academic writing must stay closely aligned with the research questions, avoiding unnecessary digressions that could dilute the strength of the argument (Zhang, 2014). A well-developed paper provides sufficient detail and supporting data, guiding the reader through a logical progression of ideas. Klingner et al. (2005) suggest that thorough documentation of methods, findings, and interpretations is essential not just for clarity but also for reproducibility and academic integrity. Thoroughness also involves the integration of diverse perspectives within the field. Halpern et al. (1998) contend that comprehensive academic writing must connect multiple strands of thought, offering a multifaceted view that enhances readers' understanding of complex disciplinary issues. This level of synthesis not only strengthens the credibility of the argument but also positions the writer as a thoughtful and inclusive scholar.

Importantly, this ability to synthesize and integrate content is deeply connected to cognitive processes. Butler (2006) emphasizes that writers must categorize, compare, and evaluate competing ideas before combining them into a coherent narrative. This level of cognitive engagement helps authors generate well-reasoned conclusions that reflect both depth of understanding and analytical rigor. As Graff and Birkenstein (2010) argue, academic content should not only demonstrate what the writer knows, but also how they have reasoned through their engagement with literature, theory, and data. In summary, the Content characteristic of ARW involves far more than delivering information, it is the thoughtful construction of knowledge through critical selection, organization, innovation, and integration.

Language and Structure

Language and structure form a critical pillar of Academic Research Writing (ARW), particularly for novice researchers (NRs) and postgraduate students. Despite exposure to English instruction at the secondary level, many learners struggle to meet the demands of advanced academic English. Studies have shown that even students from English-medium backgrounds often lack the linguistic proficiency required for scholarly writing at the tertiary level (Cherkashin et al., 2009; Jaroongkhongdach et al., 2012; Shepard & Rose, 2023). These challenges stem from a disconnect between general English education and the specialized requirements of academic discourse, which include not just grammar and vocabulary, but also coherence, critical argumentation, and discipline-specific terminology (Butler, 2006; Zubaidi, 2012; Mutimani, 2016).

To address this gap, scholars emphasize the need for targeted pedagogical interventions that go beyond grammar drills. Research advocates for academic language instruction embedded within writing practices, where learners engage with critical analysis, argument structuring, and synthesis of complex texts (Hyland, 2016; Strobl et al., 2019; Olsson et al., 2024). These practices help build not just surface-level fluency, but also the deeper linguistic competency needed to express complex scholarly ideas. Language proficiency in ARW is not merely a communicative skill, it is a cognitive enabler. The ability to articulate insights clearly and persuasively is intimately linked to higher-order thinking processes such as analyzing, evaluating, and synthesizing information (Smith & Deane, 2014). If learners are unable to use language effectively, their capacity to construct meaningful arguments and contribute to academic discourse is severely constrained. Hence, language support must be viewed not as remedial, but as foundational to the development of critical and creative thought.

For English as a Second Language (ESL) students, the barriers are particularly acute. Research highlights persistent difficulties with structuring arguments, using formal academic style, and applying appropriate terminology (Sargunan, 2011; Flowerdew, 1999). These struggles extend to essential academic skills such as paraphrasing, commenting on methodology, and engaging with theoretical frameworks, all of which are prerequisites for scholarly credibility (Canagarajah, 2013; Lillis & Turner, 2015). Without focused educational interventions, these gaps limit ESL students' ability to participate fully in academic communities.

In response, institutions must implement targeted support systems including academic writing centers, dedicated language courses, and writing mentorships that cater to both linguistic and structural development. These programs should also promote collaborative learning and critical engagement with diverse texts to foster both confidence and competence (Archibald, 2014). Beyond language proficiency, structural awareness plays a pivotal role in reader engagement and research clarity. A well-organized manuscript helps readers navigate the argument logically, while disorganized work may be rejected regardless of content quality (Shah et al., 2009). Coherent structure enhances not only communication but also scholarly impact. Butler (2009) notes that structure supports cohesion and coherence, while Swales and Feak (2012) emphasize that clear rhetorical moves and logical flow are essential for meeting academic standards. Finally, as Dwivedi et al. (2022) highlight, manuscripts written in poor English often face higher rejection rates, especially in international publication contexts. Thus, mastering the conventions of academic language and structure is not optional, it is critical for acceptance, dissemination, and impact.

Cognitive Abilities

Cognitive abilities are central to effective Academic Research Writing (ARW), enabling writers to engage meaningfully with content, process complex information, and articulate well-reasoned arguments. These abilities extend far beyond the mechanical aspects of grammar and syntax; they reflect a scholar's capacity for intellectual engagement, synthesis of ideas, and critical evaluation of sources. Developing such cognitive competencies is essential not only for producing well-structured academic texts, but also for advancing nuanced, original insights that enrich scholarly discourse. As Wingate (2017) emphasizes, advanced cognitive skills including reflective analysis, evidence integration, and argument development significantly elevate the quality and impact of academic writing. These skills enable researchers to communicate complex ideas more effectively, aligning their work with the epistemic goals of their disciplines. ARW, in this sense, performs an epistemic function: it is not merely a mode of communication but a vehicle for knowledge construction and transformation (Bereiter & Scardamalia, 1987; Galbraith, 1999). Writing becomes a cognitive act through which new meaning is generated, evaluated, and situated within academic contexts. For novice researchers

(NRs), cultivating this function is critical, as it allows them to move beyond surface-level reproduction of knowledge toward meaningful academic contribution.

However, many novice writers experience what has been described as cognitive burden; the struggle to link complex concepts, synthesize diverse perspectives, and construct coherent arguments (Shah et al., 2009). This cognitive load can hinder progress and weaken argument structure, particularly when writers are unable to effectively relate new ideas to prior knowledge or established theoretical frameworks. Without support, this can lead to underdeveloped arguments, fragmented reasoning, and reduced writing confidence. To overcome these challenges, academic programs must implement explicit cognitive scaffolding. Writers should be taught to approach writing not as a task of information transfer but as an opportunity to engage, explore, and create. Educators can support this development by encouraging deep reading, critical discussion, and iterative drafting practices that promote integrative thinking (Bean, 2011). Additionally, Hanim et al. (2020) highlight the importance of creating learning environments that model and practice cognitive strategies, such as mapping ideas, synthesizing arguments, and justifying claims. By prioritizing cognitive development, institutions can empower NRs to write with clarity, coherence, and originality. These skills not only improve writing quality but also foster the intellectual agility necessary for long-term academic success.

Challenges and Issues in ARW

Academic research writing (ARW) is a multifaceted and cognitively demanding activity that plays a central role in the professional and intellectual development of postgraduate researchers. It functions not only as a means of communicating research findings but also as a mechanism through which scholars construct disciplinary identities and position their contributions within evolving academic conversations. As Paré (2010) and Starfield (2015) observe, the challenges embedded in ARW are considerable, particularly for novice researchers (NRs) unfamiliar with the expectations and rhetorical conventions of scholarly writing.

Among the most critical challenges in ARW is the cognitive and epistemic complexity involved in creating, synthesizing, and communicating knowledge. Writing in this context requires deep engagement with ideas and a capacity for original insight rather than mere factual reporting (Donnelly, 2014). These demands are heightened by the high-stakes nature of academic publishing, which often affects institutional prestige and researcher advancement (Budsaba, n.d.). For many NRs, such pressure contributes to motivational and emotional barriers, including fear of criticism and diminished confidence, which in turn negatively affect writing fluency and clarity. Another layer of complexity stems from the implicit and often unspoken conventions that govern academic writing. Genre structures, rhetorical expectations, and citation practices are not always made transparent in instruction, leaving novice writers to rely on guesswork or informal feedback (Boice, 1993; Lonka, 2003). These tacit norms pose a particular challenge for multilingual or underrepresented scholars who may lack access to institutional writing cultures.

In addition to cognitive and institutional barriers, structural and linguistic difficulties remain prominent. Mastery of academic English requires far more than syntactical accuracy; it involves familiarity with specialized vocabulary, logical organization, and discipline-specific discourse conventions (Wang & Bekken, 2003). For writers working in a second or third language, these expectations often create further obstacles, particularly in articulating arguments, integrating sources, and meeting disciplinary standards for coherence and cohesion (Inesta, 2012; Swales, 2016). Synthesis of literature is also a frequent challenge among NRs. Many struggle to integrate diverse perspectives into a coherent theoretical framework, often defaulting to descriptive summaries rather than analytical synthesis. This problem reflects not only a limited familiarity with the literature but also an underdeveloped capacity to compare,

categorize, and evaluate scholarly ideas in meaningful ways (Jaroongkhongdach et al., 2012). As a result, their research narratives often lack clarity, depth, and coherence.

The conceptual framework proposed in this study offers targeted pedagogical responses to these challenges by aligning them with four foundational domains of ARW development: context, content, language and structure, and cognitive ability. These domains provide a scaffold for identifying specific areas of writing difficulty and designing instructional strategies accordingly.

Challenges in Training for ARW
Despite the acknowledged centrality of academic research writing (ARW) in postgraduate education, students often enter higher education underprepared for the specific demands of disciplinary writing. Standard writing resources and manuals, while available, frequently fail to address the cognitive, rhetorical, and contextual complexities of academic writing in research-intensive settings. For novice researchers (NRs), this gap is particularly evident when attempting to situate their studies within existing scholarship or meet the expectations of their academic communities.

Empirical research highlights the persistence of this issue. In the Malaysian context, Min and Mohamed (2015) identified a consistent disconnect between lecturers' assumptions about student competence and students' actual abilities to write critically and coherently. Similar concerns have been echoed in more recent studies (Akhtar et al., 2019; Singh, 2019; Akhtar et al., 2020; Rashid et al., 2022; Peng & Azmi, 2022), which confirm that the challenges of academic writing instruction remain largely unaddressed. A key factor contributing to this stagnation is the flawed assumption that admission into postgraduate study implies automatic proficiency in research writing, overlooking the diversity of linguistic, educational, and cognitive backgrounds (Lee, 2014). Further compounding this issue is the dominance of academic English in global scholarly discourse. While the use of English facilitates international collaboration, it also imposes rigid expectations that may marginalize students from non-dominant linguistic and rhetorical backgrounds. Calls for a pluralistic academic writing pedagogy have gained traction, with scholars such as Lillis and Curry (2010) advocating for inclusive practices that validate multilingual identities and culturally diverse rhetorical patterns. Such an approach not only fosters inclusivity but enhances the intellectual richness of academic dialogue.

To address these entrenched training gaps, the conceptual framework proposed in this study can be adapted for pedagogical use. The four core elements of the framework—context, content, language and structure, and cognitive ability—offer a structure through which academic institutions can design more responsive and inclusive ARW support systems. The table below outlines specific applications of the framework in training contexts.

Swale's Create A Research Space (CARS) Model and The Three Moves: A Framework for Structuring ARW
Swale's Create A Research Space (CARS) model is a seminal framework for analyzing the structural patterns of rhetorical academic works, particularly the introduction sections of research papers. This model is instrumental in breaking down the introduction into systematic and strategic moves, facilitating a clear understanding of how to effectively establish a study within the existing literature.
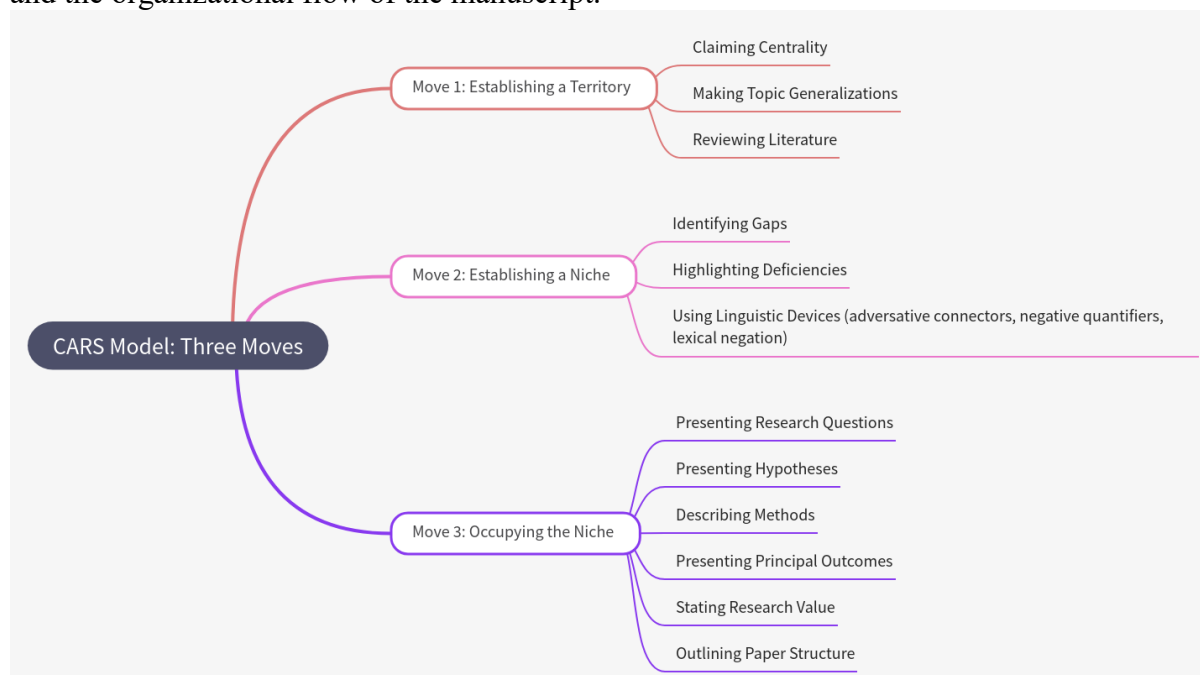
The CARS model guides writers through a structured approach to crafting introductions, helping to articulate the relevance of their research by identifying gaps in the literature and positing their study as a response to these gaps (Swales, 1990; Samraj, 2002). By applying this model, writers can more effectively communicate the significance of their work to the scholarly community, ensuring that their research contributions are clearly understood and well-integrated within the field. Swale's Create A Research Space (CARS) model

delineates three strategic moves (Figure 2) essential for structuring the introduction of academic research papers.

The first move, *establishing a territory*, sets the stage for the research by situating it within a broader scholarly conversation. This is typically achieved through steps such as claiming centrality, making topic generalizations, and reviewing items from the literature. These steps help to position the study within an established area of interest and demonstrate its relevance to the field (Chahal, 2014).

The second move, *establishing a niche*, focuses on identifying a gap or a new angle within the territory established. Researchers articulate this niche by pointing out deficiencies in the current understanding or coverage of the topic. Linguistic devices such as adversative sentence connectors (e.g., 'however,' 'nevertheless'), negative quantifiers (e.g., 'no,' 'little'), and lexical negation (using verbs like 'fail,' 'overlook') are often employed to emphasize the existing gaps or overlooked areas (Chahal, 2014).

In the final move, *occupying the niche*, the researcher describes how the current study addresses the niche identified earlier. This involves presenting the research questions, hypotheses, methods, and principal outcomes. It also includes stating the value of the research and outlining the structure of the paper, which helps to orient the reader to the study's goals and the organizational flow of the manuscript.

Figure 2. The Three Moves of CARS Model

Swale's model has not only facilitated the analysis of introductions but has also been extended to examine the methods sections of research papers, showcasing its versatility and adaptability to different parts of a manuscript. Scholars like Bruce (2008), Peacock (2011), Ruiying and Allison (2003), and Kanoksilapaham (2007) have applied and expanded upon the model, analyzing the results and discussion sections across various disciplines, further validating its utility in academic writing. This expansion highlights the model's adaptability and its effectiveness in structuring and analyzing scholarly communications beyond the introductory sections, underscoring its importance in the continuous development of academic writing practices.

For NRs, understanding and applying the CARS model can significantly enhance the clarity and effectiveness of their academic writing. By meticulously constructing each move and its corresponding steps, researchers can ensure that their work is well-grounded in the

existing literature, clearly articulates its contribution, and effectively communicates its findings and implications. The structured approach of the CARS model provides a clear pathway for authors to follow, which not only improves the readability of their papers but also increases the likelihood of publication acceptance. The model serves as a critical tool in the arsenal of academic writing techniques that help bridge the gap between novice and experienced scholars (Swales, 2004; Bitchener, 2010). The following figure (Figure 3) depicts the above-mentioned challenges and its possible solutions, whereby the Swale's CARS Model could be seen as a framework to put the solutions into practice.
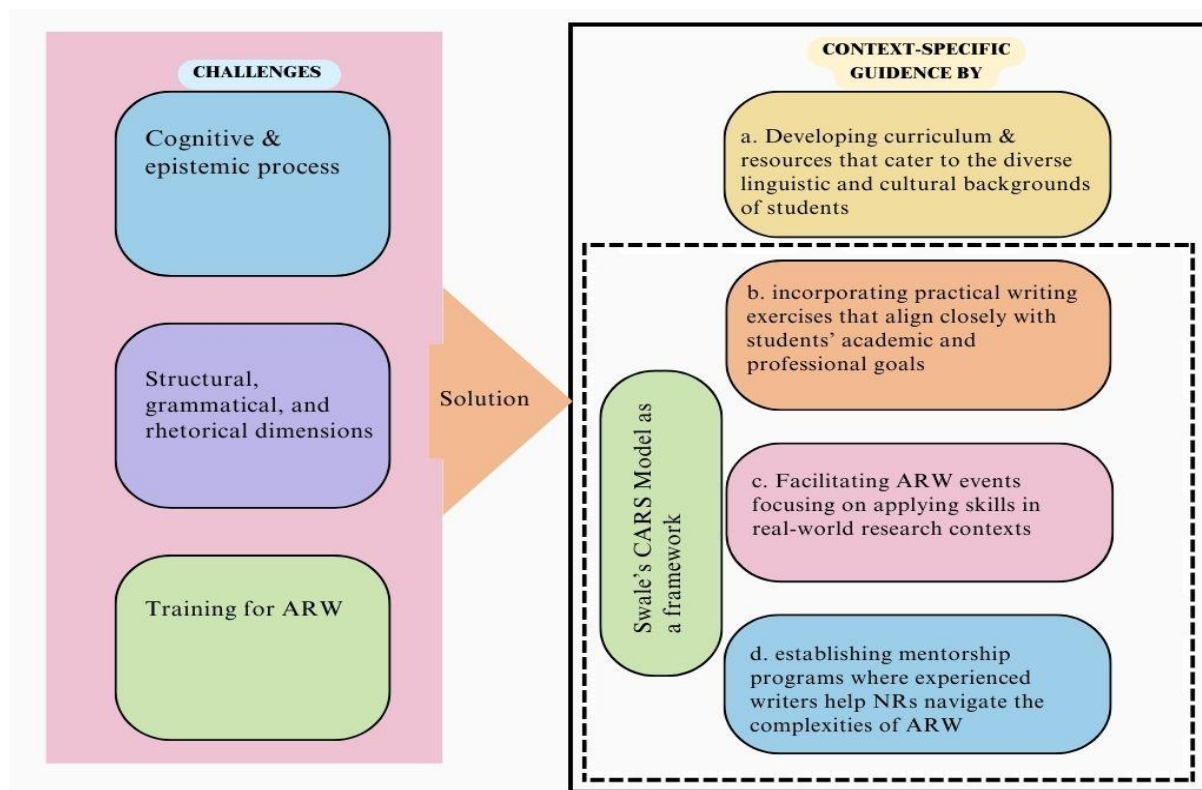

Figure 3. ARW Challenges and possible solutions

CONCLUSION

Despite the extensive body of literature addressing the challenges faced by novice researchers in academic research writing (ARW), a notable gap remains in understanding the epistemic beliefs that shape how new scholars conceptualize and engage with knowledge production. These beliefs influence how researchers approach writing tasks, structure their arguments, and position their work within scholarly communities. Addressing this gap is essential for fostering deeper engagement with academic writing and enhancing the development of scholarly identity.

This review has proposed a conceptual framework grounded in four constituent characteristics of ARW: content, context, cognitive ability, and language and structure. These domains were identified to support novice researchers in developing pattern-oriented approaches to writing and research development. Rather than navigating academic conventions through trial and error, this framework offers a structured guide for identifying and addressing specific challenges in research communication. It encourages a shift in perspective from focusing on surface-level writing issues to critically examining how knowledge is constructed, transformed, and communicated within disciplinary boundaries.

The paper also highlighted persistent challenges in ARW, including the cognitive and epistemic demands of knowledge transformation, the structural and rhetorical barriers posed by academic English, and the lack of systematic training in writing practices. These challenges remain prevalent across higher education institutions and have not been adequately addressed by traditional writing instruction. As potential responses, this study recommends the development of writing curricula that accommodate diverse linguistic and cultural backgrounds, the integration of discipline-specific and practical writing exercises, the facilitation of workshops grounded in real-world academic tasks, and the establishment of mentoring structures that guide novice writers through the conventions of scholarly discourse. The integration of Swales' Create a Research Space (CARS) model into this framework provides a structured rhetorical strategy that supports clarity, coherence, and audience awareness.

Additionally, the role of academic discourse communities has been emphasized as a vital element in the development of writing competence. These communities shape the norms and expectations that guide scholarly communication, and engagement with them is essential for novice researchers seeking to become knowledge contributors. The framework supports this engagement by equipping learners with the rhetorical, cognitive, and linguistic tools necessary to meet disciplinary expectations. Through this process, novice researchers are encouraged to evolve from passive consumers of information to active knowledge-transformers capable of contributing meaningfully to academic discourse.

Moving forward, this conceptual framework holds significant implications for academic writing instruction and research development. Institutions may adopt the model to design writing support systems that are contextually grounded, student-responsive, and embedded within disciplinary practices. In terms of future research, the framework can be empirically tested through classroom-based interventions, longitudinal studies tracking writing development, or comparative analyses across disciplines and cultural contexts. Such studies would not only validate the framework's pedagogical value but also contribute to refining its elements for broader application.

Ultimately, addressing the epistemic foundations of ARW can enhance not only individual research performance but also the collective quality of academic writing within institutions. By foregrounding this dimension, educators and researchers alike can work towards a more reflective, inclusive, and effective academic writing culture—one that prepares new scholars to participate fully in the intellectual life of their fields.

Author contributions

All authors have contributed to the study conception and design. Material preparation, data collection and analysis, and the drafting of the manuscript were performed by Jafar Paramboor. Kamarudin worked to find the literature critically evaluate their relevance and suitability to the manuscript. Al-Hudawi contributed to conceptualization and organization of this manuscript.

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