

HOW THE DOCTORAL STUDENTS NEGOTIATE MEANING WITH AI'S TOOLS? A CASE STUDY ON DOCTORAL STUDENTS' WRITING PEDAGOGY

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Abstract: The accelerating assimilations of Artificial Intelligence (AI) instruments within scholarly composition have unsettled established instructional practices, particularly within the doctoral context where mastery of advanced writing constitutes a core expectation. This investigation seeks to elucidate the manner in which doctoral candidates interact discursively with AI resources in the course of composing, attentive to the perceived affordances of AI for writing-related pedagogy. Corresponding to a single-case study schema, the inquiry documents recurrent exchanges between doctoral writers and AI composing utilities via rigorous qualitative interpretation. Purposive maximum-variation selection identified candidates from heterogeneous disciplines who habitually engage with applications including grammatical refinement, semantic rephrasing, and content-generation facilities. Empirical material originated from semi-structured interviews, concurrent think-aloud protocols, and comparative textual scrutiny of pre- and post-intervention drafts. Evidence demonstrates that AI instruments furnish pronounced assistance in grammatical precision and discursive coherence, yet respondents concurrently confront dilemmas pertaining to the safeguarding of academic integrity and to the cultivation of authentic scholarly voice. Consequently, the composing practise is reconstituted as a dialectical negotiation where writers assent to, adapt, or dismiss algorithmic recommendations. These observed manoeuvres yield substantial pedagogical implications for doctoral writing instruction within the contemporary AI-enhanced milieu. My examination articulates a structured pedagogical apparatus for embedding artificial intelligence resources within doctoral writing instruction. Central to the design is the postulate of maintaining an equilibrium between automated support and the deliberate orchestration of autonomous, critical analytical capacities. In consequence, the inquiry foregrounds the imperative of interrogating AI-mediated academic authorship.

Keywords: AI's Tools, Doctoral Students, Writing Pedagogy

1. INTRODUCTION

In the past few academic cycles, artificial intelligence (AI) applications have crystallised into pivotal supports in the sphere of higher education, most visibly in the domain of scholarly writing. Given their frequent encounter with multifaceted, consequential writing obligations, doctoral candidates are adopting AI programmes such as ChatGPT, Grammarly, and Scite to facilitate conceptual elaboration, improve linguistic precision, and enhance structural coherence. Notwithstanding the distinct merits namely, accelerated composition and refined expression. These systems concomitantly invite interrogation of the stature of human authorship, the cultivation of critical discernment, and the acts of meaning construction that characterize doctoral composition (Khuder, M., 2025; Kramar, N. et al., 2024).

Across the globe, the infusion of artificial intelligence into doctoral writing instruction is redefining the collaborative construction of knowledge between learner and algorithm. Doctoral candidates function neither as passive absorbers of machine-authored text nor as unquestioning producers; instead, they inhabit an

iterative space wherein they interpret, recalibrate, and critically evaluate algorithmically generated material. This ongoing interpretive struggle is instrumental to the enunciation of a distinctive scholarly voice and the formulation of academic identity (Parker et al., 2024; Storey, V. A., 2023). Within the Indonesian context and comparable academic environments, the incorporation of AI into scholarly writing is further problematised by differential digital literacies and persistent anxieties regarding ethical thresholds and habitual dependence on automated systems (Pratiwi & Suherman, 2025; Nguyen, A. et al., 2024).

This investigation investigates the manner in which doctoral candidates construct meaning through the use of artificial intelligence technologies in the compositional practices that structure their terminal dissertations. The work foregrounds three interrelated dimensions: the strategies that scholars deploy when confronted with algorithmically constituted prompts and suggestions; the reflective practices that accompany these instrumental encounters; and the pedagogical exigencies that emerge in discursive contexts anomalously flooded with semi-autonomous textual generation. By situating these dimensions within the broader ongoing reconceptualization of academic literacy technologies, this study endeavours both to complete the empirical record and to examine the subtle, yet consequential, shifts in the practices through which knowledge is instantiated. Prior literatures have offered extensive accounts of architectures, code, and ontological underpinnings of generative AI, yet uneven attention has been devoted to the epistemic and rhetorical sedimentations that ensue in individual or collective meaning-making. Consequently, the work is, in essence, an interpretive phenomenological exploration of the convergence of doctoral writing socialization and embedded neural text generation, offered as both contribution and guide for future researchers and pedagogues.

The main research questions are:

1. How do doctoral students use AI tools to support their writing process?
2. In what ways do they negotiate meaning and maintain scholarly voice while usingAI?

The present inquiry contributes to scholarly discourse by mapping the evolving terrain of doctoral writing pedagogy as it intersects with the increasing prominence of artificial intelligence. Its central thesis advocates for an ethically calibrated integration of AI within academic environments, contended here to be authentic only when the technology is treated as an object of critical appraisal rather than as a surrogate author. The study furnishes a range of tangible, evidence-based directives intended for writing instructors confronted by the dual imperatives of cultivating students' agency and safeguarding the principle of academic integrity within an ecology increasingly shaped by automated tools.

2. LITERATURE REVIEW

The convergence of doctoral writing instruction and artificial intelligence (AI) applications has garnered sustained scholarly scrutiny, particularly regarding students' processes of meaning negotiation in conjunction with these systems. This review articulates dominant motifs and pertinent theoretical frameworks. Empirical inquiries indicate an emergent ontological reconfiguration of doctoral writing, wherein learners operate within a blended human-AI ecosystem. In this setting, meaning construction transpires as an iterative triad of brainstorming, revision, and evaluation of AI-generated propositions. Such negotiation mediates enhanced agency, metacognitive articulation, and authorial self-efficacy (Parker et al., 2024).

Concomitantly, effective AI integration pivots upon the anticipatory solicitation of feedback. Learners must discern instances in which AI contributions substantiate or misalign with disciplinary voice, an indication that critical discernment has transmuted into a prerequisite of AI-assisted authorship (Khuder, 2025). The remit of meaning negotiation is further broadened by an interrogation of epistemological limits. Doctoral candidates straddling multiple knowledge communities must synthesize, and at times mediate, heterogeneous evaluative norms, namely, the recalibrated adaptation of AI outputs to divergent disciplinary audiences (Li, 2006). Such synthesis reaffirms writing pedagogy as the site within which students can contextualize, adapt, and personalize AI technologies. In parallel, AI-mediated instruction amplifies the scholar-learner relationship by delivering instantaneous formative feedback, amplifying self-regulatory visibility, and streamlining cognitive fluency. Yet ethical vulnerabilities, encompassing systemic dependency and authorship probity, have emerged as ineluctable discussion loci (Dong, 2023; Bista & Bista, 2025).

3. METHODOLOGY

The present inquiry employs a qualitative multiple-case study design to delineate the epistemic and pragmatic contours within which doctoral students negotiate meaning as they strategically deploy AI technologies to enhance disciplinary writing.

This study employed a case study design to facilitate an in-depth, context-sensitive investigation of the ways doctoral students engage with writing technologies in the everyday environment of the graduate classroom. Six students enrolled in an English Language Education doctoral program at a prominent Indonesian public university were recruited as participants. Each was taking a graduate-level course in academic writing, during which exposure to AI-enhanced writing supports namely ChatGPT, Grammarly, and QuillBot was a course component.

Data were gathered through the deliberate application of three complementary instruments: (1) reflective writing journals in which participants recorded their encounters with the AI tools across the semester; (2) semi-structured interviews conducted at course conclusion; and (3) anonymised writing draft portfolios that included tracked revision histories. The use of these three instruments permitted the

triangulation of evidence, thereby enhancing the credibility and comprehensive assessment of students' learning trajectories and decision-making processes.

Data were subjected to thematic analysis within Fairclough's Critical Discourse Analysis framework to investigate the interplay of language, power, and identity during doctoral students' engagement with generative AI. Attention was given to three analytical strata: textual features, exemplified by students' processes of iteratively revising AI-generated drafts; discourse practice, illustrated by the interpretive stances students adopted toward AI-generated feedback; and sociocultural practice, wherein prevailing academic standards and disciplinary orienting values conditioned the ways in which AI was incorporated. NVivo software was employed for coding, while robustness of the coding schema was confirmed through intercoder sessions involving two researchers, thereby achieving satisfactory intercoder reliability. Identified patterns and themes were prioritised according to their frequency, interpretive depth, and explicit resonance with the theoretically situated conceptual framework.

The choice of method was well suited to elucidate the situated, iterative judgements that doctoral students perform as they assimilate generative AI into disciplinary writing. Furthermore, the analysis advances the field by signalling specific pedagogical leverage points that curriculum development and AI-integrated writing instruction might address in the near future.

4. FINDINGS

Analysis of the data from the reflective writing journals indicated the emergence of three principal themes that characterized the ways in which doctoral students constructed meaning in the presence of generative artificial intelligence: purposeful engagement, rigorous discernment, and the intertwined evolution of affective and intellectual faculties.

Students actively engaged with generative AI tools rather than approaching them as passive interfaces. Participants articulated distinct pedagogical rationales guiding their selections. For surface-level refinement, applications such as Grammarly remained the default, correcting punctuation and eliminating grammatical errors. Conversely, students turned to ChatGPT for higher-order cognitive tasks—conceptual brainstorming, the rephrasing of syntactically convoluted sentences, and the solicitation of feedback regarding the overall flow and internal coherence of drafts. One respondent succinctly formulated the practice: "*I often use ChatGPT to rephrase my abstract, but the model's output is never adopted verbatim; I juxtapose its wording with my own and synthesize the most persuasive elements of each.*" This account indexes a dialogic rather than additive posture, with the algorithm strategically positioned as a pedagogical interlocutor rather than a substitute for human authorship.

Several subjects documented episodes of doubt and internal negotiation when confronted with automated suggestions. Participants routinely interrogated the

relevance, tone, and epistemic ownership of AI outputs rather than assimilating them unquestioned. “*Sometimes, ChatGPT’s voice is too generalized, at times overly performative or distinctly ‘Western’*,” one participant explained; therefore, the student actively re-lexicalized the passage to ensure that the same findings were fluidly congruent with their disciplinary persona. In each account, the gestures of revision substantiate an ongoing commitment to preserving the integrity of scholarly voice.

Reflections articulated in students’ journals indicated an affective arc: the initial exhilaration subsequent to the deployment of novel tools was trailed by skeptical distance, and eventually by a disciplined and calibrated modality of ongoing engagement. This evolution appears to endorse the coexistence of technological assistance with the sustained exercise of scholarly judgment, rendering the partnership deliberate rather than deterministic.

At the semester’s outset, several students acknowledged a dependency on artificial intelligence, confessing that they had “relied on systems too eagerly” prior to recognizing the subsequent erosion of their own voice. By the course’s conclusion, a majority had cultivated a more sophisticated posture. As one end-of-semester commentary articulates, “*AI is now a waystation. It nudges me past a dead end, yet the steering wheel is mine.*” This trajectory illustrates progressive cognitive maturity and a reconceptualization of writing from the mere assembly of sentences to the active construction of disciplinary knowledge.

Analysis of the semi-structured interviews conducted during the final workshops identifies four salient themes that illustrate how doctoral candidates mediate meaning when integrating AI instruments into their scholarly drafts.

Nearly all respondents characterized AI applications as collaborative aides rather than stand-alone remedies. They engaged tools such as ChatGPT and Grammarly chiefly to polish syntax, elevate coherence, and render dense ideas more accessible. Yet learners remained vigilant, frequently imposing supplementary revisions to align prose with disciplinary conventions. A student captured this stance succinctly: “*I usually let ChatGPT give me a draft, but I always rewrite the parts to sound more academic and personal.*” This observation reflects a wider pattern of negotiated adoption, in which algorithmically produced text serves as provisional scaffold while authors maintain sovereignty over the finished product. Participants asserted the necessity of preserving their distinctive scholarly voice. Although AI provided assistance with organization and lucidity, respondents actively distance themselves from habitually relying on automated systems. Multiple interviewees voiced unease that generated materials may lack differentiation or analytical intensity. One commented, “*Sometimes it sounds too generic, so I have to inject my own argument and voice.*” Such remarks underscore learners’ recognition of the technology’s incapacity to render nuanced viewpoints and their deliberate habit of inserting personal interpretation to ensure that AI complements, rather than supplants, original argumentation.

Engaging with AI during negotiation tasks prompted immediate, reflective decision-making; students appraised the semantical integrity of proposed outputs, flagged potential misappropriation of sources, and gauged the alignment of material with disciplinary citation protocols. One learner commented, “*Grammarly catches a lot, yet I reject nearly a third of its edits, especially where the nuance shifts beyond grammar alone.*” This statement exemplifies metacognitive monitoring, wherein the learner interrogates not merely the accuracy of the algorithm, but also its interpretive stance and its often-opaque editorial intention. In focus-group discussions, students universally expressed unease regarding dependency on machine-generated reasoning and the ontological implications of co-authorship. Several articulated apprehensions that excessive reliance might dull analytic distinctiveness, while others framed the technology as a neutral instrument that becomes academically responsible only under clear, transparent heuristics. “*What the corpus needs,*” observed one, “*is recurring instruction on the rhetorical arc of a disciplinary argument so I can recognize it as a flashcard, not a ghostwriter.*” This statement implies a curricular opportunity to weave ethical scrutiny into the architecture of doctoral writing instruction, thereby transforming emergent competence with generative AI into normative scholarship rather than a furtive exercise.

5. DISCUSSION

The findings of this investigation reveal that doctoral students position AI tools neither as obedient servants nor as authoritative sources, but as interlocutory partners, calibrating their use according to an ongoing, situated appraisal of purpose and agency. This appraisal transpires across three deeply intertwined domains: purposeful engagement, discerning filtration, and integrative emotional-cognitive maturation.

5.1 How doctoral students use AI tools to support their writing process

The first domain, purposeful engagement, illustrates an incipient but differentiated digital rhetoric: participants calibrated instructional and epistemic AI applications to distinct pedagogical and disciplinary scales of discourse. Grammarly was strategically deployed to remedial surface mechanics, while ChatGPT oriented the researcher toward transformable parameters of genre, coherence, and ideation. This patterned maneuver accords with Nguyen et al. (2024), who label students as “functional collaborators,” revealing the negotiable fidelity with which heuristics and ontologies are mutually calibrated. Anecdotal accounts, such as an iterative “merge” of algorithmic prompts and the student’s pre-existent corpus, convincingly resonate with Parker et al. (2024), who fortify “hybrid authorship” as a co-emergent synthesis of anthropic and algorithmic textuality. Collectively, these findings invite a reconceptualization of compositional boundaries not as contestable hiatus from the automaton, but as dialogic in which agency multiplies rather than diminishes.

Secondly, the participants' selective scrutiny of machine-generated feedback demonstrates an advanced metacognitive posture. Throughout the study, students interrogated the veracity, register, and disciplinary appropriateness of AI-proposed revisions, positioning the technology not as arbiter but as interlocutor. Their reluctance to assimilate suggestions without evaluative delay corroborates Khuder's (2025) thesis of emergent "disciplinary voice," a voice that creates resistive micro-spaces against the generic authority of algorithmic formulations. Their apprehension that an AI-aided text might register "too Western" proves that the immediate linguistic correction of clauses conceals broader negotiation of epistemic and affective identity; such linguistic calibration affirms Fairclough's proposition that register choices enact and contest ideology.

5.2 In what ways they negotiate meaning and maintain scholarly voice while using AI

The affective trajectory from reliance to tempered agency also denotes a curricular pivot. Initial reliance, visible in students' candid admissions of outsourcing originality, gradually subsided as the cohort collectively internalized the epistemic and ethical cost of participatory superstructure. The oscillation from undivided dependency to measured uptake parallels Storey's (2023) assertion that AI-mediated writing is not a mere analogue of technology, but an imbricated cognitive, affective, and identity process. The emergent disposition to conceptualize the agentive algorithm as dialogic co-creator, rather than epistemic crutch, signals advanced self-regulatory capacity and the consolidation of an emergent, context-oriented authorial agency.

Beyond the application of general guidelines, the interviews document live ethical bargaining among the scholars. Respondents voiced ambivalence regarding a range of issues appropriation, credit assignment, and the condition of novelty—topics that recent surveys corroborate (Pratiwi & Suherman, 2025; Dong, 2023). Their demand for more systematic institutional protocols reinforces the conclusion of Bista & Bista (2025) that policy environments must adapt to the ethical and instructional complexities of generative-digital authorship. Their stress on "determining the precise timing and manner of prudent AI deployment" confirms a strong pedagogical mandate for targeted, structured training in trustworthy machine assistance, a directive that acquires renewed urgency within the collapse of implicit prescription around doctoral examination.

When aggregated, the testimonies delineate a nascent framework of co-authoring in the academy one that is dialogical, methodically ethical, and substantively pedagogical. The configuration affirms the long-standing premise of Li (2006) that discipline writing is a contested arena of meaning-making now renegotiated in the presence of algorithmic interlocution. The productive assimilation of these instruments, therefore, requires more than procedural literacy; it

necessitates simultaneous cultivation of evaluative acumen, affective steadiness, and a cultivated, durable sense of scholarly belonging.

6. CONCLUSION

This investigation demonstrates that doctoral candidates do not function as passive recipients of generative writing technologies; rather, they serve as active, reflexive negotiators of academic meaning. Field observations confirm that students systematically deploy strategic engagement, critical filtering, and deliberate emotional-cognitive development, thereby calibrating the affordances of generative tools while safeguarding the requirements of academic integrity, disciplinary voice, and individual originality.

The pedagogical protocols surrounding tools such as ChatGPT and Grammarly derive from an explicitly developed awareness of each tool's functional and epistemic constraints. Instead of uncritically adopting machine-generated propositions, candidates scrutinize relevance, tonal fidelity, and conformance to disciplinary conventions, thereby manifesting a substantial metacognitive and ethical disposition toward the integration of AI within sustained writing practices.

The documented emotional trajectory advancing from initial uncritical enthusiasm to calibrated, reflexive use underscores the necessity of deliberate, sustained support that instantiates both technical proficiency and reflective judgment. Such findings compel an expansion of doctoral writing curricula: instruction must not only transmit compositional mechanics, but must also interrogate authorship, normative ethics, and the epistemic politics of AI-mediated textual production.

In conclusion, artificial intelligence applications serve to amplify the quality of doctoral writing when employed with intentional design. Consequently, universities and supervising faculty are charged with the obligation to furnish explicit, contextualized instruction that cultivates both ethical usage and the preservation of individual scholarly voice. Absent such scaffolding, reliance on AI may inadvertently obscure authorship. Moreover, the sustained transformation of scholarly activity by emergent technologies makes the cultivation of critical digital literacies an imperative. Such literacies will guard against normative compliance and ensure that doctoral research retains its essential independence and intellectual integrity.

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