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AI-Assisted Paraphrasing in Applied Linguistics Research: Insights from PhD Students at Moulay Ismail University

Saif Aqachmar^{1*} and Chaymae Ouhayou²

¹ Faculty of Letters and Human Sciences, Moulay Ismail University, Meknes, Morocco.

² Faculty of Letters and Human Sciences, Moulay Ismail University, Meknes, Morocco.

Corresponding author: *s.aqachmar@umi.ac.ma

Abstract. Artificial intelligence (AI) has become increasingly embedded in academic writing, yet relatively little is known about how doctoral researchers use AI-assisted paraphrasing in applied linguistics. This study examines patterns of use, perceived benefits, and concerns among PhD students affiliated with the Applied Linguistics and Artificial Intelligence research environment at Moulay Ismail University, Meknes, Morocco. A quantitative survey design was used, with 32 doctoral students participating; most item-level analyses contained 31 valid responses. Descriptive statistics were used to examine tool adoption, frequency, purposes, perceived usefulness, and ethical concerns. Reported use was high: 93.5% of valid respondents indicated that they had used AI-powered paraphrasing tools. QuillBot and ChatGPT were the most frequently selected tools, and the literature review was the section in which AI-assisted paraphrasing was most often reported. Participants primarily used these tools to generate alternative wording, improve clarity, and enhance language accuracy. At the same time, respondents expressed concerns about plagiarism, dependence on AI, loss of authorial voice, output accuracy, and ethical acceptability. The findings suggest that AI-assisted paraphrasing is functioning less as a substitute for doctoral writing than as a mediational resource within academic literacy practices. The study argues for explicit institutional guidance that combines responsible AI use with training in paraphrasing, source use, critical evaluation, and authorial voice.

Keywords: artificial intelligence (AI); paraphrasing; academic writing; doctoral education; applied linguistics; academic integrity

Resumen. La inteligencia artificial (IA) se ha incorporado rápidamente a las prácticas de escritura académica, aunque todavía se conoce relativamente poco sobre el uso de herramientas de parafraseo asistido por IA entre investigadores doctorales en lingüística aplicada. Este estudio

examina los patrones de uso, beneficios percibidos y preocupaciones de estudiantes de doctorado vinculados con el entorno de investigación en Lingüística Aplicada e Inteligencia Artificial de la Universidad Moulay Ismail, Meknes, Marruecos. Se empleó un diseño cuantitativo mediante encuesta, con 32 participantes; la mayoría de los análisis por ítem registró 31 respuestas válidas. Los resultados descriptivos muestran un uso elevado: 93.5% de las respuestas válidas indicó haber utilizado herramientas de parafraseo basadas en IA. QuillBot y ChatGPT fueron las herramientas más seleccionadas, y la revisión de literatura fue la sección en la que se reportó mayor uso. Los participantes recurren principalmente a estas herramientas para generar formulaciones alternativas, mejorar la claridad y aumentar la precisión lingüística. Al mismo tiempo, expresaron preocupaciones sobre plagio, dependencia de la IA, pérdida de voz autoral, exactitud de los resultados y aceptabilidad ética. Se concluye que el parafraseo asistido por IA funciona principalmente como un recurso mediador dentro de las prácticas de alfabetización académica y que las universidades requieren orientaciones explícitas para su uso responsable.

Palabras clave: inteligencia artificial (IA); parafraseo; escritura académica; educación doctoral; lingüística aplicada; integridad académica

1. Introduction

Artificial intelligence is rapidly changing how students and researchers search, draft, revise, translate, summarize, and reformulate academic texts. In higher education, generative and AI-assisted writing tools have moved from peripheral experimentation to routine use for many learners, creating new opportunities for linguistic support while also raising questions about transparency, authorship, academic integrity, and the development of independent scholarly voice (Walczak & Cellary, 2023; Deschenes & McMahon, 2024; Rentier, 2024). These questions are particularly relevant in multilingual research environments, where doctoral writers frequently work across languages and must negotiate disciplinary expectations concerning clarity, precision, citation, and acceptable textual borrowing.

Paraphrasing occupies a central position in this debate. Academic paraphrasing involves reformulating source material while preserving its core meaning and properly acknowledging the original source. It is not a purely mechanical replacement of words; it requires comprehension, lexical and syntactic flexibility, disciplinary awareness, and judgment about how source-based knowledge is integrated into a writer's own argument. Research has repeatedly shown that students

experience difficulty with paraphrasing and source integration, and that weak paraphrasing can create risks of patchwriting or plagiarism (Ovilia et al., 2022; Fitria, 2024).

AI-assisted paraphrasing tools respond directly to this difficulty. Systems such as QuillBot, ChatGPT, Grammarly, and other language technologies can rapidly generate alternative formulations, simplify sentences, suggest vocabulary, and modify tone. Studies of students' perceptions have reported benefits such as time savings, clearer wording, and increased confidence, while also documenting concerns about inaccurate reformulation, loss of meaning, overdependence, plagiarism, and uncertainty about acceptable use (Alammar & Amin, 2023; Mahmud & Saud, 2024; Malon et al., 2024). These tensions make AI-assisted paraphrasing a useful site for examining the broader transformation of academic writing.

The present study is informed by the academic literacies perspective, which conceptualizes academic writing as a socially situated practice shaped by disciplinary conventions, institutional expectations, identities, and relations of power rather than as a set of decontextualized technical skills (Lea & Street, 1998; Lillis & Scott, 2007). From this perspective, an AI tool is not simply a neutral device that corrects language. It can function as a mediational resource through which doctoral writers negotiate academic tone, lexical choice, source integration, and the expression of authorial voice. The relevant question is therefore not only whether students use AI, but how they position it within their writing practices and how they understand the benefits and boundaries of that use.

Existing research has examined AI use among undergraduate and graduate students, AI paraphrasing in EFL contexts, and broader questions of generative AI in academic writing. However, focused evidence on doctoral researchers in applied linguistics remains limited, particularly in Moroccan higher education. Doctoral researchers represent a distinctive population because they are expected to demonstrate advanced disciplinary knowledge, sustained engagement with sources, and an increasingly independent scholarly voice. Their use of AI-assisted paraphrasing therefore offers insight into how emerging scholars are adapting to rapidly changing writing technologies.

This study investigates AI-assisted paraphrasing among PhD students associated with Moulay Ismail University in Meknes. It addresses three questions: (1) How frequently do doctoral students use AI-assisted paraphrasing tools, and which tools do they report using? (2) For what academic purposes and in which sections of research writing are these tools used? (3) What benefits, challenges, and ethical concerns do doctoral students associate with AI-assisted paraphrasing? By

addressing these questions, the study contributes empirical evidence to current debates about responsible AI use, academic literacy development, and institutional guidance in doctoral education.

2. Literature Review

2.1. *Academic Literacies and AI-Mediated Writing*

Academic writing requires writers to participate in disciplinary ways of constructing knowledge. The academic literacies tradition emphasizes that successful writing depends not only on grammar or vocabulary but also on understanding epistemological assumptions, genre expectations, audience, identity, and institutional conventions (Lea & Street, 1998; Lillis & Scott, 2007). This perspective is particularly useful for studying AI-assisted writing because it prevents the analysis from reducing AI to a productivity tool. Instead, it directs attention to how writers use technologies to enter disciplinary discourse and how those technologies may influence voice, agency, and meaning-making.

Generative and language-support AI can help multilingual writers address surface-level challenges and can also intervene at deeper rhetorical levels by proposing alternative structures or formulations. Student use of generative AI for academic research includes idea generation, information seeking, summarization, and writing support (Deschenes & McMahon, 2024). Yet the ability of these systems to produce fluent language can make it difficult to distinguish linguistic improvement from substantive intellectual contribution. This creates a need for critical AI literacy: users must be able to evaluate outputs, preserve intended meaning, verify claims, and remain accountable for the final text.

In this sense, AI use should be understood as part of a broader ecology of academic literacy practices. Word processors, dictionaries, grammar checkers, reference managers, translation tools, corpora, and now generative AI all mediate scholarly writing. What is new is the scale and fluency with which AI systems can reformulate text. This capacity can be especially attractive to doctoral writers who face intense demands for publication-quality academic English.

2.2. *AI-Assisted Paraphrasing in Academic Writing*

Paraphrasing is one of the most cognitively demanding forms of source use because writers must understand a source, distinguish its central meaning from its wording, reconstruct the idea in a new linguistic form, and integrate it into a new rhetorical context. Ovilia et al. (2022) documented

recurrent difficulties in students' paraphrasing practices, while Fitria (2024) emphasized the importance of manual paraphrasing strategies for avoiding merely superficial lexical substitution.

AI-assisted paraphrasing tools can reduce some of these linguistic burdens by proposing alternative wording and sentence structures. Alammar and Amin (2023) found that EFL students perceived AI paraphrasing tools as useful in English-language research projects, while Mahmud and Saud (2024) similarly reported perceived value in proposal writing. QuillBot has been studied as a support tool for paraphrasing instruction, with evidence that structured integration can help learners improve paraphrasing performance (Thohir et al., 2024). These findings suggest that AI tools may be pedagogically useful when they operate within explicit instruction rather than as substitutes for reading, interpretation, and source attribution.

The rapid uptake of generative AI has also expanded the meaning of 'paraphrasing tool.' Students can now use conversational systems such as ChatGPT to request alternative formulations, explanations, tone adjustments, summaries, or language corrections. This flexibility makes the boundary between paraphrasing and more extensive AI-generated rewriting increasingly porous. For research on academic integrity, the important distinction is therefore not the brand of tool but the function it performs and the extent to which the writer retains intellectual and textual responsibility.

2.3. Benefits, Risks, and Ethical Boundaries

The literature identifies several recurring benefits of AI-assisted writing. Students value speed, ease of use, linguistic refinement, and the capacity to generate alternatives when they encounter writer's block. AI systems can assist with grammar, coherence, tone, and lexical variety, and they may be especially useful for writers who are working in an additional language (Mondal & Mondal, 2023; Malon et al., 2024). From an academic literacies perspective, these benefits may help writers participate more confidently in disciplinary communication.

At the same time, the benefits are accompanied by significant risks. AI outputs may alter meaning, introduce inaccurate or unsuitable wording, obscure the source of ideas, or produce a uniform style that weakens authorial identity. Overreliance may also reduce opportunities for writers to develop their own paraphrasing strategies. In addition, using AI to disguise source dependence rather than to support genuine comprehension can aggravate rather than solve academic-integrity problems (Alammar & Amin, 2023; Rentier, 2024).

Transparency has consequently become a central principle in discussions of responsible AI use in scholarly writing. Tang et al. (2023) argue that disclosure is important because generative AI cannot assume responsibility for the accuracy and integrity of academic work. The ethical issue is therefore not simply whether a tool was used, but how it was used, whether the author verified the output, whether source attribution remained accurate, and whether institutional or journal policies required disclosure.

These concerns are especially relevant for doctoral education. Doctoral researchers are not only producing assessed texts; they are developing professional identities as scholars. Their decisions about AI-assisted paraphrasing may therefore influence the development of independent voice, confidence, ethical judgment, and disciplinary participation. Empirical evidence about their practices can help universities move beyond prohibition-versus-permission debates toward more precise guidance about responsible use.

3. Methodology

The study employed a quantitative, cross-sectional survey design to describe patterns of AI-assisted paraphrasing among doctoral researchers in applied linguistics. A quantitative approach was appropriate because the study sought to identify the prevalence, frequency, purposes, perceived benefits, and perceived challenges associated with AI paraphrasing tools rather than to develop an in-depth interpretive account of individual writing histories (Creswell & Creswell, 2018).

The target population consisted of PhD students connected to the Applied Linguistics and Artificial Intelligence research environment at the Faculty of Letters and Human Sciences, Moulay Ismail University, Meknes, Morocco. Convenience sampling was used, with participation solicited through accessible academic networks and online communication channels. The submitted study reports 32 participants. Most of the item-level SPSS outputs contain 31 valid responses; the results below preserve the valid denominators reported in the original statistical outputs rather than imputing missing responses.

Data were collected through a structured online questionnaire administered in English using Google Forms. The instrument included closed-ended items on prior use of AI-assisted paraphrasing, frequency of use, specific tools, purposes, sections of academic writing in which AI was used, perceived benefits, challenges, and ethical acceptability. Several multiple-response questions allowed participants to select more than one option. Likert-type items assessed levels of

agreement with statements about use cases, benefits, and concerns. A limited number of open-ended prompts allowed respondents to elaborate on perceived advantages and difficulties.

Data were analyzed descriptively using IBM SPSS. Frequencies and percentages were used to summarize categorical and multiple-response items. For clarity, the Likert tables in this article report row percentages calculated from the valid count for each statement; this corrects the presentation problem in raw SPSS outputs in which column percentages can be difficult to interpret as item-level response distributions. No inferential statistical claims are made because the convenience sample is small and the study was designed primarily as a descriptive exploration.

Ethical safeguards were incorporated into the survey process. Participants were informed of the purpose of the study, participation was voluntary, responses were anonymous and confidential, and no identifying information was collected. The submitted manuscript did not report an institutional ethics-committee approval identifier.

4. Results

4.1. Participant Profile and Overall Adoption

The study reports a total sample of 32 PhD students. The valid responses summarized in the original statistical outputs were predominantly from participants aged 22–25 years (41.9%), while the 28–31 age group represented 12.9%. Women constituted approximately 58% of respondents and men approximately 41%. In terms of doctoral stage, 58.1% were in their second year, 25.8% in their first year, and 16.1% in their third year or beyond.

AI-assisted paraphrasing was widespread among valid respondents. As shown in Figure 1, 93.5% reported having used an AI-powered paraphrasing tool in academic writing, whereas 6.5% reported that they had not.

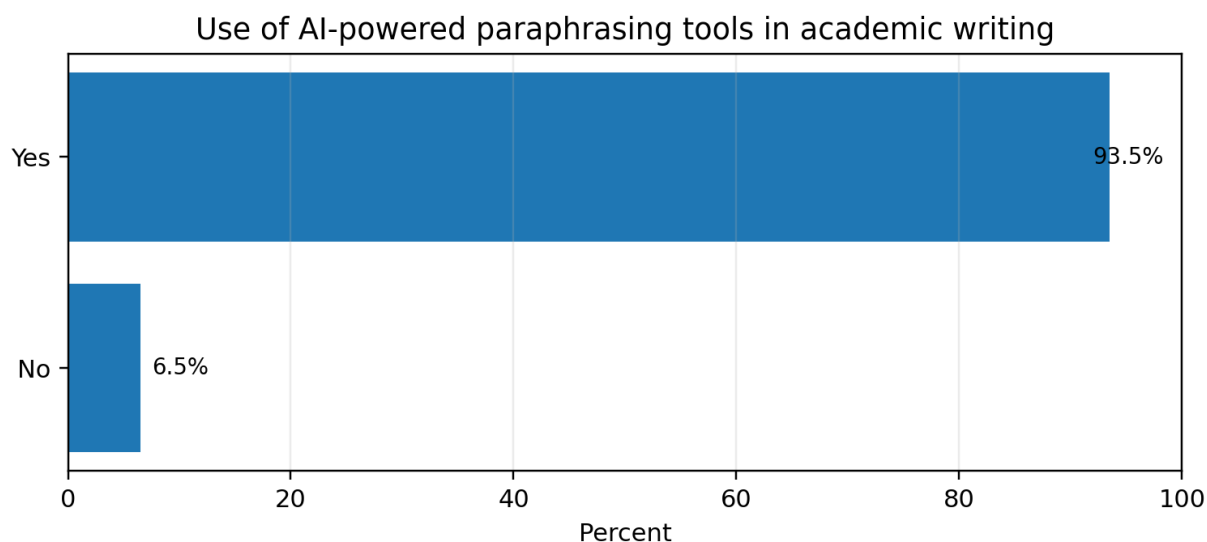


Figure 1. Reported use of AI-powered paraphrasing tools among valid respondents ($n = 31$).

Table 1

AI tools reported for paraphrasing

Tool	Selections (n)	Percent of AI-tool users
QuillBot	22	75.9%
ChatGPT	21	72.4%
Grammarly	15	51.7%
Gemini	8	27.6%
Paraphrase.io	3	10.3%

Note. Multiple responses were permitted. Percent of cases is based on the 29 respondents who reported using AI-powered paraphrasing tools; percentages therefore do not sum to 100%.

QuillBot (75.9% of AI-tool users) and ChatGPT (72.4%) were the most frequently selected tools, followed by Grammarly (51.7%), Gemini (27.6%), and Paraphrase.io (10.3%). The pattern suggests that participants used both dedicated paraphrasing platforms and broader generative or writing-assistance systems.

4.2. Frequency, Purposes, and Writing Sections

Table 2

Frequency of AI-assisted paraphrasing

Frequency category	n	%
Tried a few times but do not use often	9	29.0%
Aware of the tools but have never used them	2	6.5%
Use occasionally when paraphrasing help is needed	12	38.7%
Use regularly for most academic writing	8	25.8%

Note. Valid $n = 31$. Percentages may differ slightly from 100% because of rounding.

The most common pattern was occasional use when paraphrasing support was needed (38.7%). A further 25.8% reported regular use for most academic writing, while 29.0% had tried the tools only



a few times. This distribution indicates substantial exposure to AI paraphrasing without implying that all respondents used it continuously.

Table 3

Primary academic purposes for AI-assisted paraphrasing

Purpose	Selections (n)	Percent of cases
Generating alternative wording	18	58.1%
Rewriting for clarity	17	54.8%
Improving language accuracy	14	45.2%
Paraphrasing quotations	11	35.5%
Avoiding plagiarism	9	29.0%
Do not use AI tools for paraphrasing	2	6.5%

Note. Multiple responses were permitted; valid n = 31.

Table 4

Sections of academic writing in which AI paraphrasing was reported most often

Section	Selections (n)	Percent of cases
Literature review	19	61.3%
No specific section; general language improvement	8	25.8%
Introduction	7	22.6%
Abstract	6	19.4%
Conclusion	6	19.4%
Results and discussion	5	16.1%
Methodology	4	12.9%
References and citations	4	12.9%
Do not use AI tools for paraphrasing	2	6.5%

Note. Multiple responses were permitted; valid n = 31.

The literature review was the section most frequently associated with AI-assisted paraphrasing (61.3%). This aligns with the source-intensive nature of literature reviews, where doctoral writers must summarize, synthesize, and position prior scholarship. Methodology and results/discussion were less frequently selected, suggesting that participants were more cautious about using AI in sections closely tied to original study procedures and interpretation.

Table 5

Agreement with specific uses of AI-assisted paraphrasing

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Reword quotes or excerpts for literature review	6 (19.4%)	3 (9.7%)	3 (9.7%)	16 (51.6%)	3 (9.7%)
Generate alternative wording for concepts from reading	5 (16.1%)	1 (3.2%)	5 (16.1%)	16 (51.6%)	4 (12.9%)
Summarize long texts or research papers	4 (12.9%)	5 (16.1%)	4 (12.9%)	12 (38.7%)	6 (19.4%)
Rephrase methodology sections	4 (12.9%)	9 (29.0%)	7 (22.6%)	9 (29.0%)	2 (6.5%)
Paraphrase discussion/results sections	6 (19.4%)	10 (32.3%)	6 (19.4%)	7 (22.6%)	2 (6.5%)
Refine or enhance conclusions	6 (19.4%)	7 (22.6%)	2 (6.5%)	14 (45.2%)	2 (6.5%)
Support citation/source integration and avoid plagiarism	5 (16.1%)	6 (19.4%)	2 (6.5%)	11 (35.5%)	7 (22.6%)
Assist with difficult or complex academic language	4 (12.9%)	1 (3.2%)	5 (16.1%)	19 (61.3%)	2 (6.5%)
Improve academic tone and structure	3 (9.7%)	3 (9.7%)	4 (12.9%)	14 (45.2%)	7 (22.6%)
Formalize writing and use appropriate academic language	2 (6.5%)	8 (25.8%)	3 (9.7%)	11 (35.5%)	7 (22.6%)
Rewrite complex sentences for clarity	4 (12.9%)	10 (32.3%)	6 (19.4%)	10 (32.3%)	1 (3.2%)

Note. Each cell reports n (row %); valid n = 31 for each statement. Row percentages were calculated from the reported SPSS counts.

4.3. Perceived Benefits

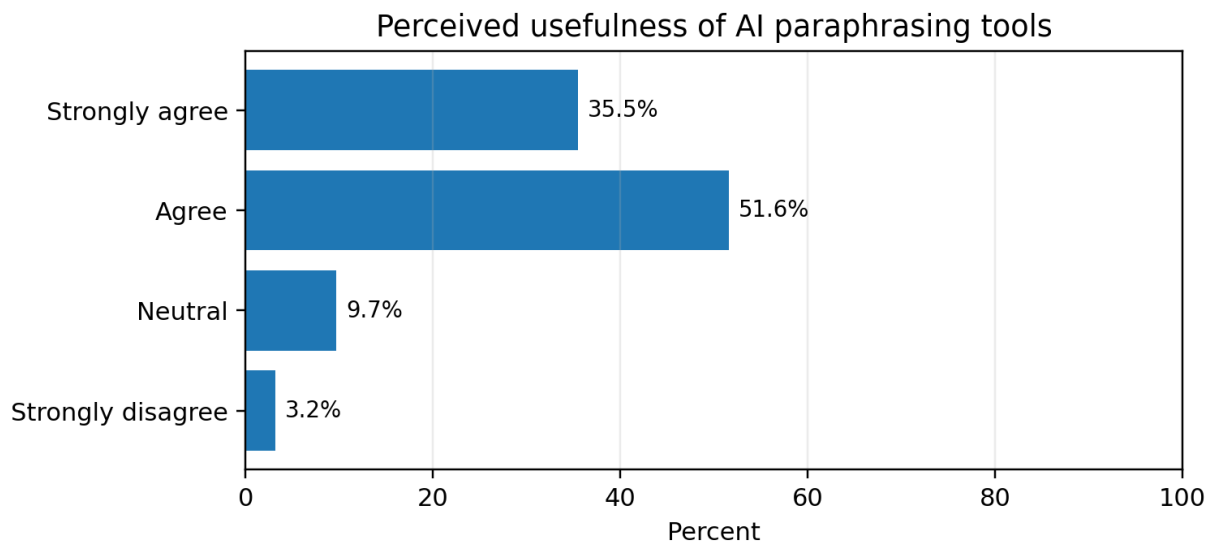


Figure 2. Perceived usefulness of AI paraphrasing tools among valid respondents ($n = 31$).

Overall perceptions were favorable: 51.6% agreed and 35.5% strongly agreed that AI paraphrasing tools were helpful, yielding 87.1% positive responses. Participants' written comments emphasized ease of use, time saving, support with summarization, and access to alternative vocabulary.

Table 6

Perceived benefits of AI-assisted paraphrasing

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Helps me write more clearly	0 (0.0%)	4 (12.9%)	8 (25.8%)	15 (48.4%)	4 (12.9%)
Saves time during the writing process	0 (0.0%)	3 (9.7%)	10 (32.3%)	15 (48.4%)	3 (9.7%)
Improves the academic tone of my writing	0 (0.0%)	3 (9.7%)	6 (19.4%)	18 (58.1%)	4 (12.9%)
Helps express complex ideas in simpler, clearer language	1 (3.2%)	3 (9.7%)	4 (12.9%)	16 (51.6%)	7 (22.6%)
Helps overcome writer's block through alternative wording	1 (3.2%)	2 (6.5%)	3 (9.7%)	19 (61.3%)	6 (19.4%)
Provides vocabulary or expressions I had not considered	5 (16.1%)	6 (19.4%)	4 (12.9%)	14 (45.2%)	2 (6.5%)
Helps avoid accidental plagiarism by offering original phrasing	1 (3.2%)	2 (6.5%)	14 (45.2%)	10 (32.3%)	4 (12.9%)
Makes me feel more efficient and productive	3 (9.7%)	6 (19.4%)	7 (22.6%)	9 (29.0%)	6 (19.4%)
Helps me develop paraphrasing skills	1 (3.2%)	4 (12.9%)	3 (9.7%)	19 (61.3%)	4 (12.9%)
Makes academic writing feel less stressful and more manageable	0 (0.0%)	4 (12.9%)	10 (32.3%)	14 (45.2%)	3 (9.7%)

Note. Each cell reports n (row %); valid $n = 31$. The original SPSS output displayed column percentages; row percentages are reported here to make item-level interpretation transparent.

The strongest patterns of agreement concerned academic tone, clarity of complex ideas, overcoming writer's block, and development of paraphrasing skills. By contrast, responses were more mixed regarding vocabulary expansion and overall productivity. This distinction is important: participants appeared to value AI chiefly for targeted linguistic reformulation rather than as a comprehensive replacement for the academic writing process.



4.4. Challenges and Ethical Uncertainty

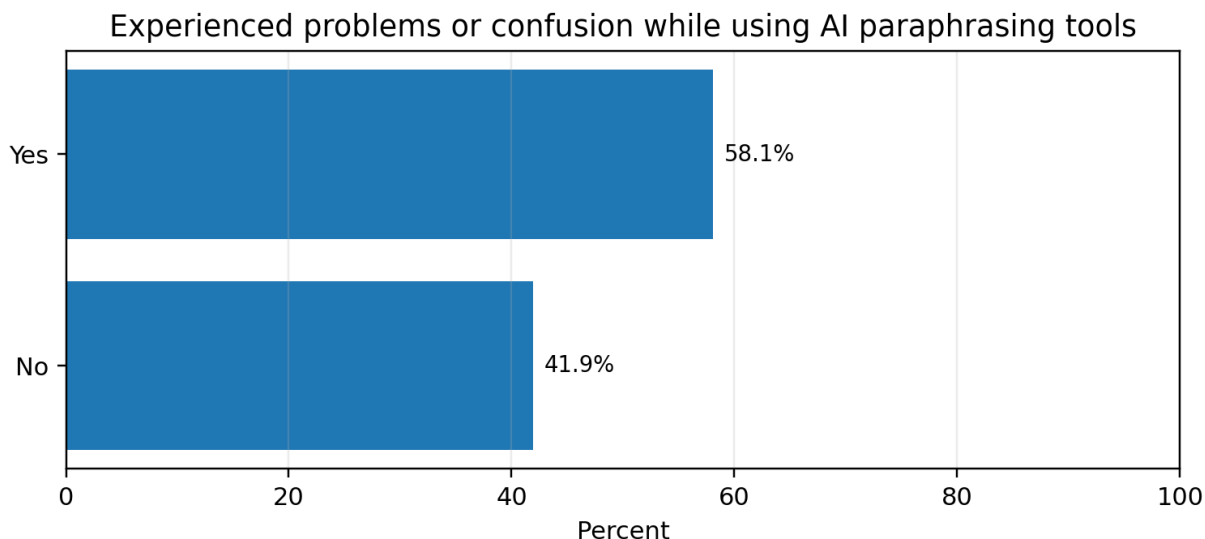


Figure 3. Reported problems or confusion while using AI paraphrasing tools (valid n = 31).

Table 7

Main concerns associated with AI-assisted paraphrasing

Concern	Selections (n)	Percent of cases
Risk of plagiarism	23	74.2%
Dependence on AI	21	67.7%
Ethical concerns	19	61.3%
Loss of personal writing style	18	58.1%
Inaccurate or awkward output	11	35.5%

Note. Multiple responses were permitted; valid n = 31.

Table 8

Agreement with statements about challenges of AI-assisted paraphrasing

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
AI paraphrasing can produce inaccurate or misleading content	0 (0.0%)	5 (16.1%)	5 (16.1%)	15 (48.4%)	6 (19.4%)
AI paraphrasing can misrepresent the meaning of the original text	2 (6.5%)	2 (6.5%)	3 (9.7%)	17 (54.8%)	7 (22.6%)
I am concerned about maintaining my original academic voice	1 (3.2%)	1 (3.2%)	2 (6.5%)	16 (51.6%)	11 (35.5%)
I am concerned about the ethical implications of using AI tools	0 (0.0%)	6 (19.4%)	5 (16.1%)	11 (35.5%)	9 (29.0%)
I find it difficult to fully trust AI output	3 (9.7%)	2 (6.5%)	6 (19.4%)	12 (38.7%)	8 (25.8%)
I find it difficult to evaluate the quality or credibility of AI-generated paraphrases	1 (3.2%)	2 (6.5%)	4 (12.9%)	21 (67.7%)	3 (9.7%)
I spend significant time editing and revising AI-generated paraphrases	0 (0.0%)	3 (9.7%)	1 (3.2%)	17 (54.8%)	10 (32.3%)
I am concerned about becoming dependent on AI tools for academic writing	0 (0.0%)	0 (0.0%)	7 (22.6%)	18 (58.1%)	6 (19.4%)

Note. Each cell reports n (row %); valid n = 31.

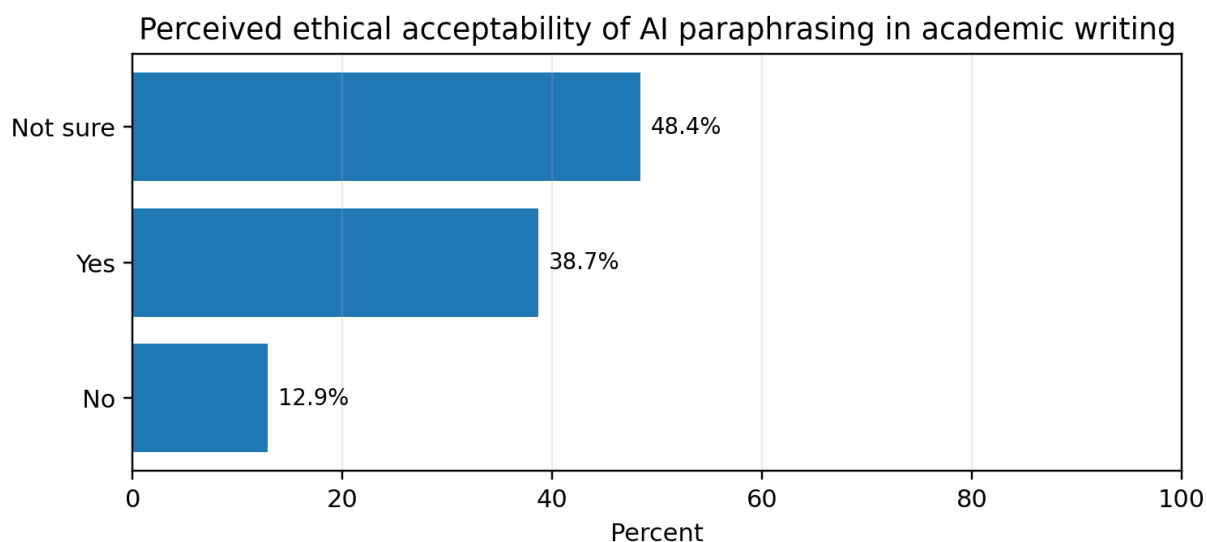


Figure 4. *Perceived ethical acceptability of AI paraphrasing in academic writing (valid $n = 31$).*

Ethical uncertainty was one of the clearest findings. Nearly half of valid respondents (48.4%) were unsure whether AI-assisted paraphrasing was ethically acceptable, compared with 38.7% who considered it acceptable and 12.9% who did not. This uncertainty is consistent with the simultaneous endorsement of AI's usefulness and concern about plagiarism, dependence, trust, and loss of personal writing style.

5. Discussion

The findings indicate that AI-assisted paraphrasing has become a routine component of academic writing for many doctoral students in the study context. The reported adoption rate of 93.5% among valid respondents is consistent with wider evidence that generative AI is already embedded in student research practices (Deschenes & McMahon, 2024). The result should not be interpreted as evidence that AI is replacing doctoral writing. Rather, the pattern of use suggests selective deployment for linguistic and rhetorical support.

Three features of the results are especially significant. First, tool choice was pragmatic. Participants used both dedicated paraphrasing systems and general-purpose generative AI. QuillBot and ChatGPT were the most frequently selected, suggesting that users value both specialized rewriting functions and conversational flexibility. From an institutional perspective, this makes tool-specific rules difficult to sustain. Guidance is likely to be more effective when it is organized around functions—such as paraphrasing, summarization, translation, or text generation—rather than around individual commercial products.



Second, participants concentrated AI use in source-intensive and language-intensive tasks. The literature review was the most frequently selected section, and generating alternative wording, rewriting for clarity, and improving language accuracy were leading purposes. This pattern supports an academic literacies interpretation: AI functions as a mediational resource at points where writers must transform reading into disciplinary prose. It may help doctoral writers cross linguistic barriers, but the intellectual work of understanding sources, evaluating arguments, and positioning a contribution remains irreducible to paraphrase generation.

Third, high use coexisted with high caution. Participants described AI as useful, but a majority also reported problems or confusion. The most frequently selected concern was plagiarism, followed by dependence on AI, ethical uncertainty, and loss of personal writing style. This combination is analytically important. It contradicts simplistic assumptions that students who use AI are either uncritical adopters or deliberate rule-breakers. In this sample, many users appear to be actively negotiating uncertain boundaries while recognizing both the value and the risks of the technology.

Authorial voice emerges as a particularly important issue. Academic literacies research treats voice not as a decorative stylistic feature but as part of how writers position themselves in relation to disciplinary knowledge and institutional expectations (Lea & Street, 1998; Lillis & Scott, 2007). When doctoral students repeatedly accept machine-generated reformulations, there is a risk that linguistic fluency becomes detached from personal rhetorical choice. At the same time, AI can also help multilingual writers access linguistic possibilities that make their intended voice more legible. The pedagogical task is therefore not to preserve an imaginary pre-digital purity of writing, but to help students make conscious decisions about which AI suggestions to accept, revise, or reject.

The ethical findings reinforce the need for explicit institutional communication. Nearly half of participants were uncertain whether AI-assisted paraphrasing was ethically acceptable. Such uncertainty is predictable when policies lag behind rapidly changing practices or when institutional statements rely on broad concepts such as 'unauthorized assistance' without explaining acceptable editing, paraphrasing, translation, or disclosure. Transparency principles in academic publishing provide a useful direction: users should remain accountable for meaning, verify AI-generated text, preserve accurate citation, and disclose material AI assistance when required by institutional or journal policy (Tang et al., 2023; Rentier, 2024).

The study also suggests that anti-plagiarism framing alone is insufficient. Participants frequently identified plagiarism as a concern, yet AI paraphrasing should not be presented as a mechanism for making borrowed text undetectable. Responsible paraphrasing begins with understanding, synthesis, and attribution. AI can support re-expression, but it cannot convert inadequately acknowledged source use into ethically sound scholarship. Doctoral writing instruction should therefore integrate AI literacy with established instruction in citation, patchwriting, quotation, synthesis, and source-based argumentation.

6. Implications for Doctoral Education and Institutional Policy

The results support a shift from binary policy approaches toward guided, transparent, and pedagogically informed AI integration. Universities should recognize that doctoral students are already using AI-assisted writing tools and that ambiguity about acceptable practice can itself become an academic-integrity risk. Clear policy should distinguish legitimate language support from undisclosed generation of substantive scholarly content and should explain how responsibility, verification, citation, and disclosure operate in each case.

Doctoral programs can also integrate AI-assisted paraphrasing into academic-writing instruction. A useful training sequence would require students to compare a source passage, their own manual paraphrase, an AI-generated alternative, and a final critically revised version. Students could then identify semantic drift, unnecessary synonym replacement, altered claims, citation requirements, and changes in authorial voice. Such exercises treat AI as an object of critical literacy rather than as either a forbidden shortcut or an unquestioned solution.

Supervisors have an important role because expectations concerning AI are often communicated locally through supervision rather than through formal policy. Programs should provide supervisors with common guidance so that doctoral students do not encounter inconsistent rules across research groups. Institutional training should also address data privacy and confidentiality, especially when researchers consider entering unpublished manuscripts, sensitive data, or third-party intellectual property into external AI systems.

Finally, institutional policy should preserve space for disciplinary variation. Applied linguistics researchers may use AI for language-related tasks differently from researchers in laboratory sciences, law, or the creative arts. General principles—human accountability, verification, transparency, confidentiality, accurate attribution, and preservation of intellectual

contribution—can provide a common foundation while allowing disciplines to define context-specific examples.

7. Limitations

Several limitations should be considered when interpreting the findings. First, the sample was small and drawn primarily from a specific doctoral research environment at Moulay Ismail University. The convenience sampling strategy limits generalizability to the wider population of doctoral students in Morocco or to other disciplines.

Second, the submitted manuscript reports 32 participants, whereas most SPSS item outputs contain 31 valid responses. The present article preserves the reported valid denominators and does not impute the missing response. Future studies should report item-level missingness explicitly and maintain a clear denominator for each analysis.

Third, the study relies mainly on self-reported behavior. Participants may overestimate or underestimate their AI use, and responses about academic integrity or ethical acceptability may be influenced by social desirability. Usage logs, writing-process data, or stimulated-recall interviews could provide a richer account of how AI is actually incorporated into doctoral writing.

Fourth, the predominantly quantitative design offers limited insight into the reasoning behind participants' choices. The open-ended responses provide useful indications, but future mixed-method or qualitative research should examine how students evaluate AI outputs, how they revise machine-generated paraphrases, and how supervisors shape their decisions.

Finally, AI tools evolve rapidly. The platforms and affordances reported in this survey reflect a particular technological moment. Longitudinal research is needed to understand how practices change as institutional policies, model capabilities, and disciplinary expectations develop.

8. Conclusion

This study provides a focused view of AI-assisted paraphrasing among PhD students in applied linguistics at Moulay Ismail University. The findings show that these tools are already widely used and are valued primarily for generating alternative wording, improving clarity, supporting language accuracy, and assisting source-intensive writing such as literature reviews.

At the same time, use is accompanied by substantial uncertainty. Participants expressed concern about plagiarism, dependence on AI, preservation of authorial voice, output accuracy, trust, and ethical acceptability. These concerns demonstrate that widespread use does not eliminate the need for academic judgment; it makes that judgment more important.

From an academic literacies perspective, AI-assisted paraphrasing is best understood as a mediational resource rather than as an autonomous writer. Its educational value depends on whether students remain capable of understanding source material, evaluating reformulations, maintaining accurate attribution, and making deliberate rhetorical choices. Universities should therefore neither ignore AI use nor respond only through prohibition. They should provide explicit guidance and training that combines responsible AI literacy with the enduring foundations of scholarly writing: comprehension, synthesis, citation, critical evaluation, and accountable authorial voice.

9. Declarations

Funding: No specific external funding was reported in the submitted manuscript.

Conflicts of Interest: No conflict of interest was reported in the submitted manuscript.

Data Availability Statement: Aggregated data supporting the reported results are presented in the article. The underlying participant-level dataset was not supplied with the submitted manuscript.

Ethics Statement: Participants were informed of the study purpose; participation was voluntary; responses were anonymous and confidential; and no identifying information was collected. No institutional ethics-committee approval identifier was reported in the submitted manuscript.

Artificial Intelligence Use Statement: AI-assisted tools were used during editorial preparation for language editing, structural refinement, table reconstruction, and bibliographic checking. No AI system was used to generate or alter the empirical data, statistical counts, or participant responses reported by the authors. Final responsibility for the content remains with the authors.

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