



User Experience of AI-Assisted Academic Writing Tools: Perceptions of Graduate Students and Faculty amid Arabic Language Detection Limitations

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ABSTRACT

Generative artificial intelligence (GenAI) tools are slowly being integrated into higher education, changing academic writing practices and introducing vital questions about user experience (UX), academic integrity, and institutional readiness. Even though past studies have paid most of their attention to English-language settings, there is a dearth of empirical evidence dealing with these matters from an Arabic-language academic setting perspective. This is especially the case in relation to the limitations of AI detection. In an attempt to close this gap, this study explores the perceptions of graduate students and members of faculty regarding AI-assisted academic writing tools, with specific attention to UX, ethical concerns and the effectiveness of Arabic-language AI detection systems. The study embraces a descriptive-exploratory quantitative design. Data was gathered from 27 faculty members and 66 graduate students from different institutions of higher education in Saudi Arabia. The findings expose a generally positive user experience in relation to originality, academic integrity, and overdependence on AI by students. Notable limitations were identified by both faculty and students regarding AI detection systems for the Arabic language. It seems that these limitations impact assessment practices, user behaviour, and perceptions of institutional oversight. This study's main contribution relates to context-sensitive evidence, showing that Arabic AI detection's limitations go beyond technical challenges to impact trust, ethical perceptions, and institutional responses. These findings stress the important role of pedagogically grounded approaches, Arabic-specific detection technologies, and more explicit institutional policies to encourage responsible AI integration in higher education.

Keywords: User experience (UX), AI-assisted academic writing, graduate students, faculty perception, Arabic detection tools, academic integrity, educational technology.



1. Introduction

Generative Artificial Intelligence (GenAI) is rapidly becoming part of the toolkit in higher education, where it is particularly impacting academic writing. GenAI Tools like ChatGPT have been improving over time. They are no longer just simple tools for checking grammar but more advanced technologies able to generate content, summarise intricate ideas, and refine arguments, enhancing the efficiency of academic writing (Khalifa & Albadawy, 2024; Yan, 2023). Faced with this shift, universities, academics, and researchers find themselves re-evaluating pedagogical approaches to academic integrity and the standards they are accustomed to. However, promising as they are, tools powered by AI are presenting both opportunities and challenges (Nguyen et al., 2024).

Both students and faculty generally accept the promise presented by AI in relation to overcoming issues with writer's block and gaining access to instant, personalised feedback (Alshamy et al., 2025, p. 1). However, there are concerns relating to the degree to which individuals should rely on GenAI. Aljuaid (2024) posits that this apprehension is a bone of concern, as when individuals over-rely on GenAI, the development of crucial critical thinking and research skills may be negatively impacted. This has introduced a critical debate characterised by differing perceptions between stakeholders. For students, the promise of convenience and efficiency is compelling, but academics are concerned about academic integrity, plagiarism, and possibilities for misuse (Alshamy et al., 2025, p. 1). While accepting the usefulness of GenAI, educators have warned that an overreliance on the technology risks undermining important skills related to writing, which is an intricate process that involves analysis and argumentation (Aljuaid, 2024, p. 3).

The concerns raised indicate that it is vital for institutions to formulate effective policies relating to the responsible use of GenAI. However, before this is done, it is prudent to understand the User Experience (UX) of the people who interact with these tools directly (García-Peñalvo et al., 2024, p. 3). Perusing the main databases shows that there is a growing body of research exploring student and faculty perceptions regarding GenAI (Al-Aamri et al., 2025; Vieira et al., 2024). Nonetheless, a gap is evident in the context of non-English academic environments. Nelson et al. (2025) agree and add that this is especially the case within Arabic-speaking institutions. Worsening this gap is a technological limitation: the reality that systems designed to detect AI tend to be unreliable when detecting machine-generated Arabic text (El Kassis et al., 2024). This situation has the potential to compromise standard checks and balances for academic integrity (Aljuaid, 2024; Chan, 2023). Al-Aamri et al.



(2025) acknowledge this view and add that the situation possibly impacts the behaviour of users, ethical considerations, and institutional trust in new ways.

With the aim of addressing the risks associated with the use of GenAI in the academic setting, the present study will investigate the perceptions of faculty and students in relation to the use of AI tools in academic writing, with specific attention paid to the limitations of systems designed to detect AI-generated content in Arabic. The investigation will focus on the use of AI-assisted academic writing tools, with particular attention paid to perceived usefulness, ethical concerns, and the limitations of Arabic-language AI detection systems.

1.1 Research Questions

The study is guided by the following research questions:

- **RQ1:** What are the perceptions of graduate students and faculty members regarding the UX of AI-assisted academic writing tools in higher education?
- **RQ2:** What are the key ethical concerns and perceived benefits associated with the use of AI tools in academic writing?
- **RQ3:** How do limitations in current AI detection systems in relation to Arabic-language influence user behaviour and institutional attitudes?

1.2 Research Aim

The aim of this study is to explore the UX of graduate students and faculty regarding their use of AI-assisted academic writing tools, with a specific focus on perceived usefulness, ethical concerns, and the limitations of Arabic-language AI detection systems.

1.3 Objectives

The broader research aim above will be supported by the following objectives:

- i) To identify methods used by graduate students to evaluate the usability, satisfaction, and efficiency of AI writing tools in the Arabic Academic context.
- ii) To analyse the ethical concerns and trust-related issues perceived by students and faculty when using GenAI in academic writing.
- iii) To examine the influence of the limited capability of Arabic AI-detection tools on students' writing behaviours and faculty supervision.



2. Literature Review

The rapid integration of AI in academic writing has introduced a revolution in educational practices, making exceptional support available in higher education. AI-assisted writing tools, including generative language models as exemplified by ChatGPT, plagiarism detectors, and grammar checkers, are now an influential aspect of academic workflows, improving efficiency and writing quality (Aljuaid, 2024, pp. 26-43; Khalifa & Albadawy, 2024, pp. 1-12). While this is mainly true with regard to their application in the English setting, the situation is relatively unclear when it comes to Arabic academic contexts, particularly with regard to limitations of AI content detection systems.

2.1 AI-Assisted Writing Tools and UX

An analysis of recent research shows that both students and faculty agree that AI-assisted writing tools offer valuable support that improves UX in academic writing. This reality is acknowledged by Aljuaid (2024) and Nguyen et al. (2024), who add that tools like Grammarly, QuillBot, and ChatGPT are generally perceived to improve the primary UX dimensions, including usability, satisfaction, and efficiency. These tools achieve this by providing immediate and personalised feedback, assisting users in dealing with cognitive and linguistic challenges. Such support has been linked to improvements in writing organisation, coherence, and fluency, positively contributing to the process of academic writing (Aljuaid, 2024; Nguyen et al., 2024).

From the point of view of the student, AI-assisted writing tools offer untrammelled convenience and accessibility, making it easy to generate ideas, draft, and edit documents, especially when there is a shortage of time and challenges related to language (Aljuaid, 2024; Alshamy et al., 2025). While these benefits are well acknowledged, academic staff and faculty members have indicated their concern relating to possible overreliance on AI technologies. This apprehension has been supported by several studies that have warned that when students excessively rely on GenAI, the development of higher-order skills, including critical thinking, creativity, and authentic writing, all considered core competencies in meaningful learning and scholarly practice, will be compromised (Khalifa & Albadawy, 2024; Aljuaid, 2024). It is on this basis that it can be suggested that balancing the efficiency afforded by AI tools with the preservation of rigorous academic standards is a prudent pedagogical discussion to be had.

Empirical studies have acknowledged the dual character of user experience with GenAI tools in higher education. For example, in a study focusing on ChatGPT,



Perkins et al. (2024) reported that students perceived the tool as an idea-generating aid that assisted them in saving time, especially useful in overcoming writer's block. Nonetheless, participants indicated an awareness that over-reliance on AI tools has the potential to negatively impact independent skill development and contribute to ethical risks in academic writing. A similar study by Alshamy et al. (2025) analysed student and faculty experience at Sultan Qaboos University. They concluded that both groups recognised the ability of GenAI to improve innovation and academic productivity. Just like in similar studies, these scholars report that concerns were raised with regard to ethical consequences, compromised critical engagement, and risks to academic integrity in instances where AI-assisted writing tools were used in the absence of explicit institutional guidelines.

Largely, the literature paints a picture of UX with AI-assisted writing tools as mainly positive. This is particularly the case with regard to efficiency and usability, while at the same time exposing unrelenting concerns around trust, ethical use, and development of critical skills associated with academic work. Regarding Arabic-language academic higher education settings, characterised by linguistic challenges and limitations in AI detection systems, these UX-linked concerns are further augmented. This stresses the need for ongoing empirical research able to examine the manner in which usability, trust, and ethical perceptions intersect in AI-assisted academic writing.

2.2 Ethical Considerations and Trust Issues

While ethical considerations have always been an important element of academic writing, the proliferation of AI-assisted academic writing has brought the subject squarely into the centre of the discussion. Consistently, the literature identifies the main ethical challenges: a higher risk of plagiarism, ambiguity with regard to authorship, a dearth of transparency in AI use, and the possible misuse of outputs generated by AI (Aljuaid, 2024; Nguyen et al., 2024). Concerns have been voiced by both members of faculty and students, who all agree that when AI use is uninformed or unregulated, it may damage academic integrity and lead to a blurring of the boundaries between content generated by a machine and human intellectual contribution.

The opaque character of algorithmic processes further complicates trust in AI-assisted systems. For example, it is common for users not to be clear with regard to the manner in which generative models create, change, or refine content. This results in a lack of certainty with regard to possible bias, accuracy, and reliability. Such



uncertainties raise wider ethical concerns associated with data privacy, intellectual ownership, and accountability regarding using material generated by AI within the academic setting (Aljuaid, 2024; Alshamy et al., 2025).

Recent studies have coined the idea of AI-giarism, which refers to a type of academic misconduct where writers present AI-generated text as original human-authored work (Perkins et al., 2024). While attempts have been made at detecting these practices, the reality is that it is challenging to do so because available detection tools reveal unreliable accuracy and heightened false-positive rates, especially in multilingual and non-English settings (ibid). In Arabic academic writing, these detection systems are still underdeveloped and linguistically limited. It is within this context that it can be suggested that students may misjudge the effectiveness of detection mechanisms, shaping their ethical decision-making and perceptions of risk when using GenAI tools.

Aiming to deal with the trust-related and ethical challenges, the literature progressively promotes pre-emptive institutional and pedagogical interventions as opposed to relying only on detection. For example, Aljuaid (2024) and Nguyen et al. (2024) suggest wide-ranging AI literacy initiatives able to promote ethical awareness, transparency, and critical engagement with AI-generated content. Alshamy et al. (2025) agreed that developing professional training programs and institutional frameworks encourages responsible use of AI and makes academic integrity stronger, and supports reflective human-AI collaboration as opposed to punitive enforcement. Within Arabic-language academic higher education settings, limitations in AI detection and pedagogical frameworks highlight the need for empirical research on the ethical, trust-related, and usability dimensions of AI-assisted academic writing.

2.3 Limitations of the AI Detection System in Arabic

A leading challenge in AI-assisted academic writing is that the reliability of current AI-generated content detection is limited when applied to the Arabic language. This is partly because of the language's flexible syntax, rich morphological structure, and semantic complexity, which introduce major issues for prevailing detection algorithms (Aljuaid, 2024; Alshammari & Elleithy, 2024). These issues are worsened by orthographic diversity and dialectical variation, all of which have the effect of increasing the possibilities of misclassification. These technical limitations pose crucial repercussions for academic integrity practices in higher education institutions where the Arabic language is used. Aljuaid (2024) notes that weaknesses in Arabic language detection tools weaken institutional confidence in automated monitoring



systems and complicate the dependable application of academic integrity policies. Faculty members faced with false positives find themselves with no choice but to depend on their professional judgment. Alshamy et al. (2025) believe that this could result in a lack of consistency in supervision and assessment.

Looked at from the lens of students, perceived shortcomings in systems employed in detecting AI in Arabic settings affect academic writing behaviour. For example, the perceived level of accountability may decrease for those students who believe that the content they create using AI in Arabic is less likely to be detected. This has the potential to encourage an ethically questionable or a free-for-all attitude when it comes to the use of AI tools (Aljuaid, 2024; Alshamy et al., 2025). Such a situation introduces wider apprehensions around sustaining academic honesty and the credibility of academic writing in Arabic settings. Alshammari and Elleithy's (2024) study illustrates the technical intricacy of this issue. The authors conclude that the incorporation of districts into transformer-based Arabic detection has the positive effect of boosting recall, even though this improvement weakens computational efficiency and precision. Such trade-offs illustrate the challenges associated with detection systems balancing reliable performance with linguistic sensitivity. Together, these studies shed light on the substantial ethical and technological gap in current AI detection infrastructures for Arabic academic writing.

2.4 Implications for Policy and Pedagogy

The importance of embracing a pedagogical approach where AI tools assist, as opposed to substituting traditional academic writing instruction, is highlighted in the literature. For this approach to succeed, there is a need for precise ethical guidelines and institutional policies able to respond to the distinct cultural and linguistic context of Arabic higher education (Aljuaid, 2024, pp. 40–42; Khalifa & Albadawy, 2024, p. 10). One of the effective solutions identified to mitigate ethical risks while maximising educational benefit is encouraging organised human-AI collaboration through scaffolded learning activities, faculty training, and transparent disclosure of AI use (Nguyen et al., 2024, pp. 14–16; Aljuaid, 2024, p. 41).

From an institutional standpoint, it is critical to maintain academic integrity and support responsible use of AI through advancing Arabic-specific detection technologies and amalgamating AI literacy into academic curricula. This is a suggestion supported by recent studies that conclude that universities need to transcend beyond generic AI policies and embrace context-aware frameworks able to directly deal with the issues of Arabic academic writing produced with the assistance



of AI (Alshamy et al., 2025, p. 23; Aljuaid, 2024, p. 41). Practically, this involves putting in place policies allowing for disclosing AI use, identifying the specific tools used, the purpose of their use, and the applicable prompts of generated outputs, aligning with developing best practices in academic research and assessment transparency (Al-Azri & Al-Alawi, 2024, pp. 12–13).

From a pedagogical perspective, the literature calls for a change of direction, towards facilitative teaching roles where scaffolding is emphasised together with reflective practice, cooperative learning, and critical engagement with content generated using AI as opposed to a passive consumption of machine-produced outputs (Al-Azri & Al-Alawi, 2024, pp. 8–9). It has also been suggested that building competencies in pedagogy assisted by AI and ethical decision-making through ongoing professional development could benefit educators and enable an effective amalgamation of GenAI tools into academic writing instruction (Aljuaid, 2024, pp. 41–42; Alshamy et al., 2025, p. 12). Together, these policy-oriented and pedagogical strategies are beneficial for a proactive and educative institutional stance able to prioritise awareness, transparency, and academic support over distinctly retributive regulation. Alshamy et al. (2025) agree with this view and add that this leads to the integration of AI that enhances academic writing skills while preserving academic integrity in Arabic higher education settings.

2.5 Summary of Research Gaps

Even though it cannot be disputed that the body of research focusing on AI-assisted academic writing in English has been growing in the recent past, it can also be noted that there is still a notable dearth of empirical studies dealing with this phenomenon from an Arabic-language point of view. This is validated by an analysis of existing literature, which predominantly focuses on efficiency, usability, and ethical dimensions in English-speaking higher education systems, creating an underrepresentation of academics and students within the Arabic-speaking setting (Aljuaid, 2024; Nelson et al., 2025). If one considers the linguistic, cultural, and technological complexities of the Arabic academic environments, it becomes clear that this gap is especially significant. With regard to the manner in which Arabic-speaking graduate students and faculty experience and evaluate AI-assisted tools, there is a dearth of understanding. It is therefore crucial to attempt to determine how ethical and integrity-related concerns play out within these environments, together with how the inadequacy of AI detection systems impacts both user behaviour and institutional trust. Such limitations shed the spotlight on the necessity of context-sensitive empirical studies able to capture the nuances of UX and ethical perception in



Arabic higher education. Moreover, studies conducted recently highlight the need for aligning the adoption of AI with institutional strategies and ethical policy frameworks to encourage responsible and equitable implementation (Batista et al., 2024, pp. 21–24). Notwithstanding, available frameworks tend to ignore the distinct socio-linguistic realities of Arabic-speaking institutions, characterised by distinct challenges for AI integration, emanating from the interaction between language structure, digital maturity, and academic norms.

In summary, the literature highlights a multidimensional research gap:

- i) A dearth of empirical evidence of UX with AI-assisted writing in Arabic.
- ii) Inadequate exploration of ethical and integrity issues linked to Arabic AI detection limitations.
- iii) Limited institutional comprehension of how to develop policies, literacy programs, and detection tools in response to the Arabic academic ecosystem.

It is important that these gaps are addressed if the aim is to build an inclusive and ethically grounded AI research landscape able to support a viable digital transformation in higher education in the Arab world.

3. Methodology

The present study embraced a descriptive-exploratory quantitative design. Many research methodology scholars agree that this is a suitable methodology for describing phenomena, identifying trends, and examining developing patterns related to perceptions of users in contexts associated with higher education (Creswell & Creswell, 2018; Kumar, 2019; Cohen, Manion, & Morrison, 2018). Following this design enables researchers to gather standardised quantitative data in an efficient manner from a specific population with the aim of exploring relationships among variables in emerging areas. Guiding the design is a UX perspective within a wider Human-Computer Interaction (HCI) paradigm, paying specific attention to the manner in which users perceive, interact with, and evaluate the usefulness and ethical implications of such tools.

3.1 Population and Sampling Procedure

This study's target population included graduate students and faculty members in higher education. All participants are experienced in using academic writing tools driven by AI. With the aim of intentionally selecting participants able to provide rich, relevant insights into the phenomenon being investigated, a purposive sampling



technique was embraced. What makes this an appropriate approach is the character of the study and the inclusion of criteria associated with the familiarity of the user with AI tools in academic writing. A total of 93 participants provided data. Among these, 66 were graduate students, and 27 were faculty members representing different academic disciplines within higher education institutions in Saudi Arabia. Participation was voluntary, and all online survey data was anonymised with the aim of ensuring ethical compliance and confidentiality.

3.2 Instruments and Data Collection

Aiming to explore the perceptions of participants with regard to usefulness, ease of use, ethical considerations, and the limitations of Arabic-language AI detection systems, two structured online survey instruments were developed by the researcher. The target of the first survey was graduate students, focusing on their direct experiences using AI-assisted writing tools, the perceived benefits, and challenges. The target of the second survey was faculty members. It addressed their experience supervising or assessing AI-supported writing, their awareness of ethical concerns, and their perceptions of AI detection tools and academic integrity.

The development of the two instruments was guided by a broad review of recent international studies on AI-assisted academic writing, UX in higher education, and academic integrity (Bernabei et al., 2023; Chan & Hu, 2023; Ngo, 2023; Shoufan, 2023; Kim, 2024). Items were tailor-made to fit the linguistic and cultural context of Arabic-speaking academic settings. Six experts in educational technology and AI in higher education reviewed the survey drafts with the aim of ensuring content validity. The focus of feedback was relevance, improved clarity, and the final versions were polished accordingly. Google Forms were used to electronically gather the data, ensuring accessibility and voluntary participation. The surveys can be seen in Appendix 1.

3.3 Data Analysis Procedures

SPSS version 28 is the instrument that was used to quantitatively analyse the data. To identify the prevailing trends in participants' perceptions and experiences, descriptive statistics (means, standard deviations, frequencies, and percentages) were computed. The validity and reliability of the survey instruments were examined by calculating Cronbach's alpha coefficients. On the other hand, Pearson correlation coefficients were computed with the aim of establishing construct validity between individual items and their corresponding dimension totals. Moreover, possible variances between



graduate students and faculty members in their experiences with AI –assisted academic writing tools were explored through inferential analyses (e.g., t-tests and correlation tests).

3.4 Ethical Considerations

Throughout the present study, ethical principles were strictly adhered to. Participants were informed that their participation was voluntary. The researcher obtained informed consent before requesting participants to complete the survey. There were no personal identifiers collected. Each participant was made aware that their responses would be used only for the purpose of the study. During all the stages, data confidentiality and anonymity were maintained, in keeping with institutional ethics norms and relevant guidelines.

4. Results

This section presents the results relating to the perceptions of participants and their experiences using AI-assisted academic writing tools. The main focus of the analysis will be on UX using AI-assisted academic writing tools, the challenges and benefits, and the impact of Arabic language detection limitations as reported by graduate students and members of faculty. The graphs in Figures 1, 2, and 3 below show the participants' demographic distribution. It can be noted that the number of females for both the faculty members (81.5% for faculty and 81.8% for students) and students grossly outnumber the males (18.5% for faculty and 18.2% for students).

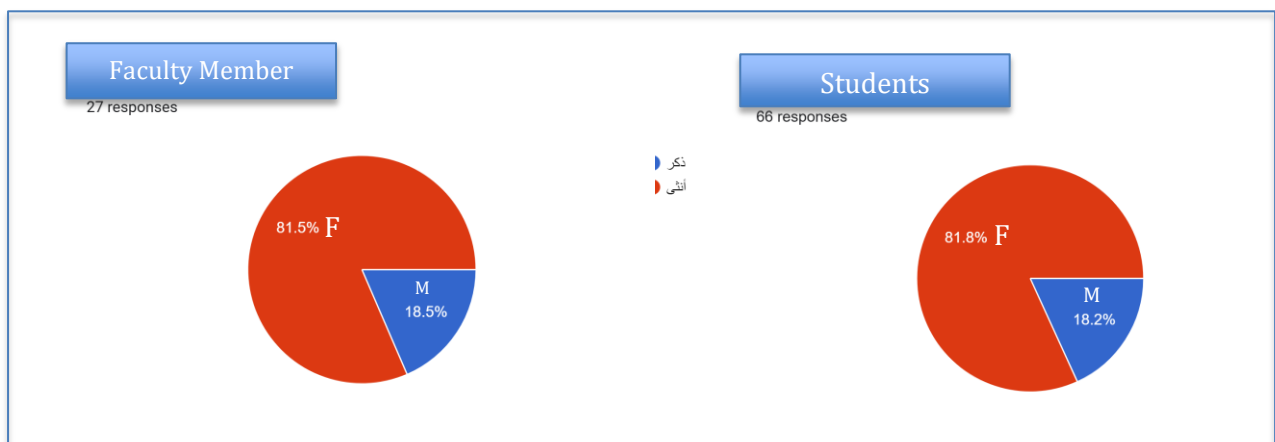


Figure 1: Demographic Distribution of Participants by Sex

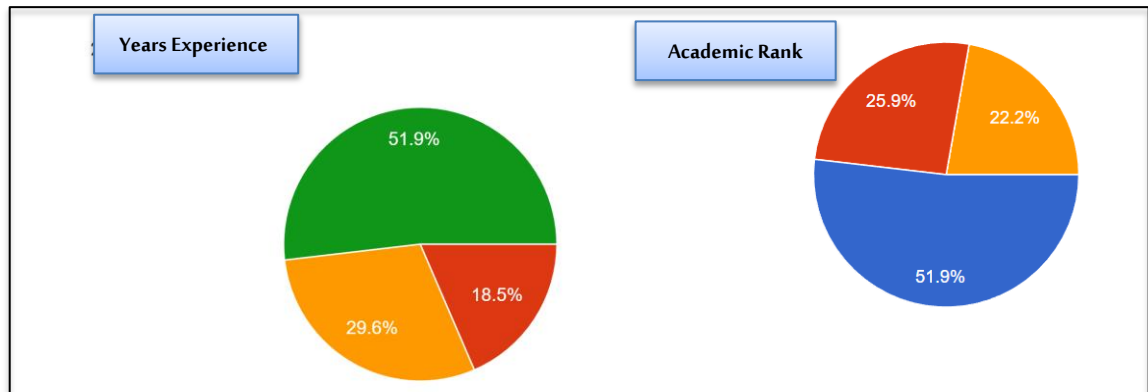


Figure 2: Demographic distribution of participants by years of experience and academic rank for faculty

From the gathered data, it can be noted that the majority of faculty members have over a decade of experience (51.9%). The proportion of those with seven to ten years is slightly lower than a third. Also, the majority of participants hold the position of Assistant Professor (25.9%), with less than a quarter holding the position of Full Professor (22.2%).

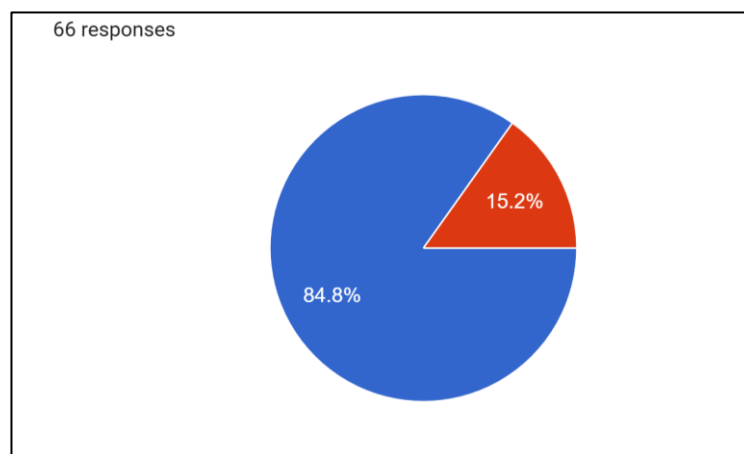


Figure 3: Demographic Distribution of Participants by level of study for students



It can be seen from Figure 3 that the majority of students are doing their Master's degrees (84.8%), and less than a fifth (15.2%) are doctoral students. Table 1 below presents the differences between students and faculty with regard to their depth of knowledge of AI technologies and their use of them.

Table 1: Percentages represent participants' responses within each group (faculty members and students).

The Sentences	Faculty			Students		
The Use of Generative AI Writing Tools for Arabic Academic Writing	81.5%			95.5%		
Most Frequently Used AI Tool	ChatGTP			ChatGTP		
Extent of AI Tool Use in Academic Writing	Always	Sometimes	Rarely	Always	Sometimes	Rarely
	34.8%	59.1%	6.1%	55.5%	40.1%	3.7%
Level of Knowledge of Generative AI-Assisted Writing Tools	Basic	Intermediate	Advanced			
	29.6%	37%	33.3%			

From the results presented in Table 1, it can be noted that a high percentage of participants report that they use GenAI writing tools. However, it is also clear that more students use AI (95.5%) than members of faculty (81.5%). The leading tool used by both groups is ChatGPT. When it comes to the degree to which each group uses AI tools in academic writing, it can seem that more students use these tools more often when compared to faculty (55.5% and 34.8%, respectively). On the other hand, more faculty members than students indicate that they use the AI tools sometimes (59.1% and 40.1% respectively), while fewer students than faculty members rarely use AI (3.7% and 6.1% respectively). When it comes to the degree of knowledge of GenAI-assisted writing tools, results show that among faculty members, there is a relative balance in distribution across knowledge levels (37% intermediate, 33.3% advanced level, and 29.6% basic).



4.1 To answer RQ1: What are the perceptions of graduate students and faculty members regarding the UX of AI-assisted academic writing tools in higher education?

With regards to responses from faculty (n=27), the findings show a generally positive perception of the role of GenAI writing tools in supporting students' academic writing. This conclusion is supported by the reality that a large majority (70.4% either agree or strongly agree that these tools are effective in boosting writing quality and productivity.

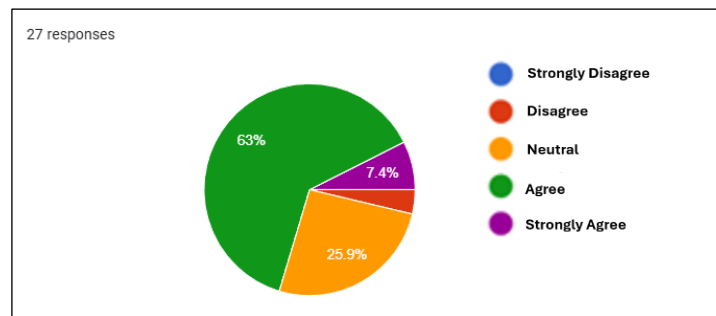


Figure 4: Perception of the role of generative AI writing tools in supporting students' academic writing

The fact that a quarter (25.9%) of participants selected a neutral response implies that there are differences in individual experiences or degrees of dependence on these tools. Negative perceptions were minimal, with a tiny percentage of respondents indicating disagreement, with no participants indicating disagreement. Overall, the results show a wide-ranging approval of GenAI tools as a means of supporting academic writing tasks.

With regards to students, the perceptions of students are presented by the results based on six key dimensions: usability, satisfaction, efficiency, control, trust, and intention to use. These dimensions make available a wide-ranging overview of how students interact with and evaluate writing tools supported by AI in academic contexts.

4.1.1 Usability

From the results, a generally high level of perceived usability of AI-assisted academic writing tools is apparent. Across usability-related items, an average of 72.4% of the participants agreed or strongly agreed that these tools are easy to use. Precisely, over four-fifths of the participants reported that AI writing tools are easy to use for



academic writing tasks and that traversing their features is intuitive. In comparison, perceived usability in Arabic was marginally lower, with an agreement rate averaging 63.6%. This implies that there are some challenges associated with language-related usability.

4.1.2 Satisfaction

Across satisfaction-related items, 71.6% of participants expressed agreement or strong agreement in relation to positive levels of satisfaction when using AI –assisted writing tools. Perceptions of improved writing experience were particularly associated with high satisfaction. In this regard, 83% of participants indicated that AI tools improve their general academic writing experience. Even though it was marginally lower than general satisfaction indicators, at 72.7%, satisfaction with the quality of Arabic language output remained comparatively high.

4.1.3 Efficiency

A huge majority of participants (87.1%) agreed that writing tools assisted by AI improve efficiency in academic writing. More than four-fifths (81%) of participants reported that AI increased their speed in completing writing tasks. On the other hand, more than 9 in every 10 participants (92%) indicated that the tools assist in saving time on elements like translation, paraphrasing, and grammar. From these findings, efficiency is stressed as a primary driver of positive UX.

4.1.4 Control

Participants reported a strong sense of control during their interaction with academic writing tools assisted by AI, with an average of 87.4 per cent agreeing that they actively review, edit, and manage AI-generated content before they submit their work. The majority of participants indicated that they have the capability to change AI outputs to ensure they are aligned with academic norms. They also agreed that using AI tools, particularly in Arabic, delivers a superior sense of control over the process of writing.

4.1.5 Trust

Trust is one of the UX dimensions that received moderately lower agreement levels. For instance, less than half (41.7%) of the participants agreed or strongly agreed with trust-related statements. Even though some respondents conveyed confidence in the accuracy and academic support provided by AI tools, a notable proportion reported reservations, especially in relation to the precision of Arabic content generated by AI. From this lower level of trust, ongoing concerns relating to reliability and academic risk are apparent.



4.1.6 Intention to Use

Apart from concerns related to trust, participants demonstrated robust future use intentions. Overall, the majority of respondents (81.8%) agreed or strongly agreed that they intend to continue using writing tools assisted by AI in their academic activities. Also, the majority of respondents reported that they are willing to recommend these tools to peers and supported their amalgamation into academic writing environments, even where mechanisms for AI detection exist.

In their totality, the present study's findings show that both faculty members and graduate students hold generally positive perceptions of the UX of AI-assisted academic writing tools in higher education. With regard to members of faculty, they mostly perceived these tools as supportive of students' writing by improving quality and productivity, with minimal negative perceptions. In the same vein, graduate students also reported positive UX across usability, satisfaction, efficiency, control, and intention to use, pointing the spotlight on ease of use and time-saving benefits as the main strengths. Nonetheless, trust came out as the weakest dimension, especially with regard to the accuracy of Arabic-language outputs. Overall, even though there is no doubt that AI-assisted writing tools are extensively embraced and valued, UX is still negatively impacted by concerns linked to trust and linguistic reliability.

4.2 To answer RQ2: What are the key ethical concerns and perceived benefits associated with the use of AI tools in academic writing?

The results expose a strong concern about the implications of GenAI tools for academic integrity. An aggregate 74.1% of respondents either agree or strongly agree that using these tools introduces challenges to traditional academic writing integrity standards. Less than one-fifth of participants (18.5%) expressed a neutral stance, implying a degree of uncertainty or conditional views in relation to ethical implications. When it comes to disagreements, responses were limited, which suggests that concerns relating to academic integrity are broadly shared among participants.

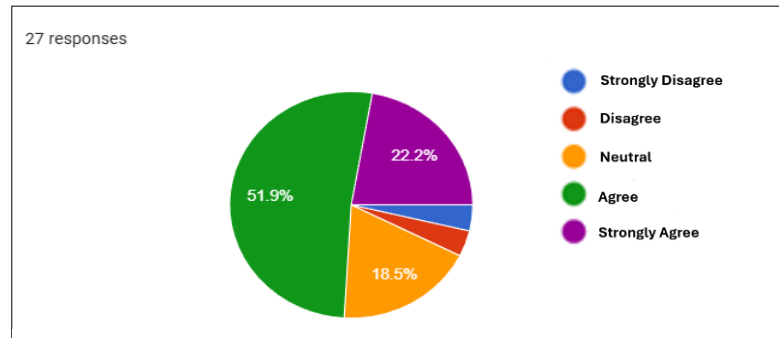


Figure 5: Perception of the implications of generative AI tools for academic integrity academic writing

Based on the responses of students, it can be concluded that there is a strong perception among students that they over-depend on GenAI tools in academic writing. This reality is supported by the fact that a large majority of students (85.2%) either agreed or strongly agreed in relation to expressing concern regarding excessive dependence on these tools.

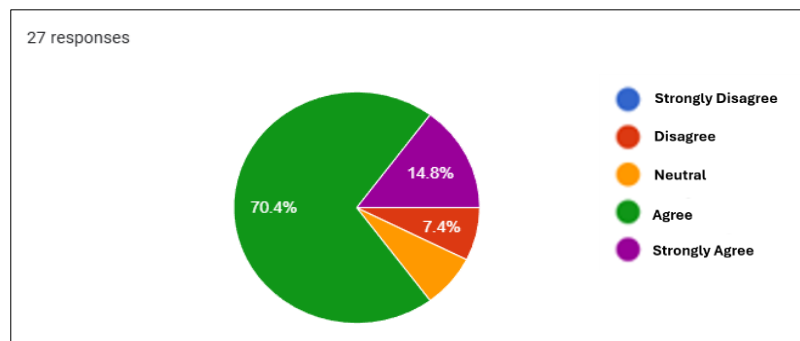


Figure 6: Faculty perceive excessive student reliance on GenAI for academic writing

The responses from faculty members also reveal noteworthy apprehension in relation to the impact of GenAI tools on academic originality. An aggregate 62.9% either agreed or strongly agreed with the belief that these tools reduce the originality of students' academic work.

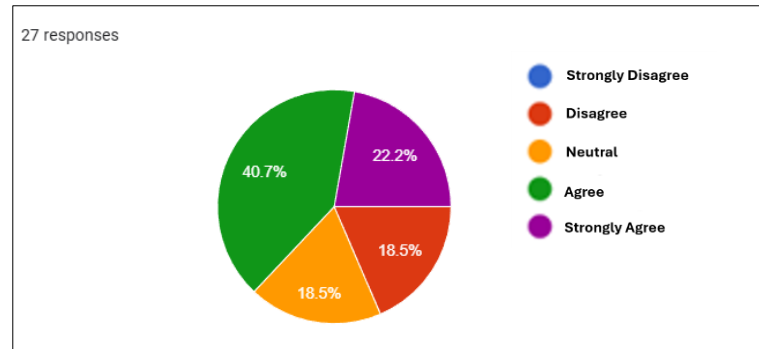


Figure 7: The impact of GenAI tools on academic originality in academic writing

The findings reveal a moderate or somewhat divided level of confidence among faculty when it comes to their ability to detect AI-generated texts. An aggregate 55.5% of participants either agreed or strongly agreed that they felt confident in identifying content generated by AI. Nonetheless, a notable proportion of respondents expressed a degree of uncertainty (25.9% neutral and 18.5% disagreement). From this distribution, it can be inferred that even though there is a growing awareness of GenAI tools, confidence among faculty regarding their reliability to detect academic texts generated with the help of AI is still inconsistent. On the other hand, members of the faculty expressed strong consensus with regard to the necessity of directly dealing with the ethical use of GenAI tools within teaching and learning policies. An aggregate 96.3% of respondents supported the suggestion that explicit ethical guidelines governing the use of GenAI in the educational context should be included. A tiny percentage of respondents selected a neutral response, and there was no meaningful disagreement reported.

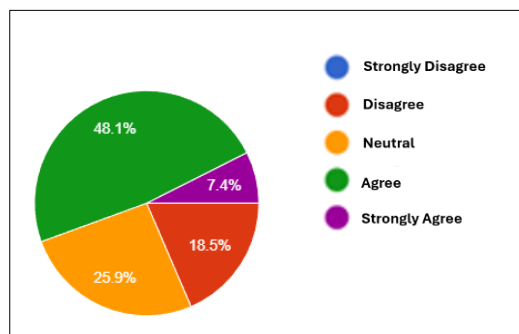


Figure 8: Faculty ability to detect AI-generated texts in students' academic work

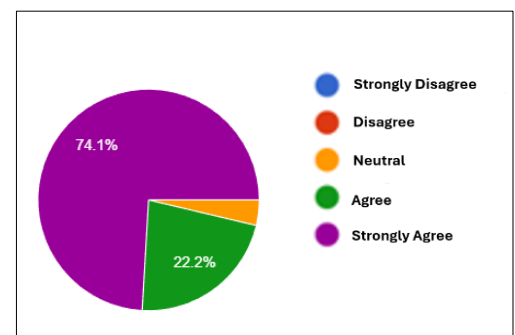


Figure 9: Faculty need for explicit ethical guidelines on generative AI use



Mainly, members of the faculty agreed that prevailing policies and systems in universities are not sufficient when it comes to dealing with academic content produced with the assistance of AI tools. An aggregate 70.3% of respondents either agreed or strongly agreed with the view that available regulations fail to cover issues like academic honesty and challenges related to assessment. On the other hand, 18.5% expressed disagreement and 11.1% selected neutral.

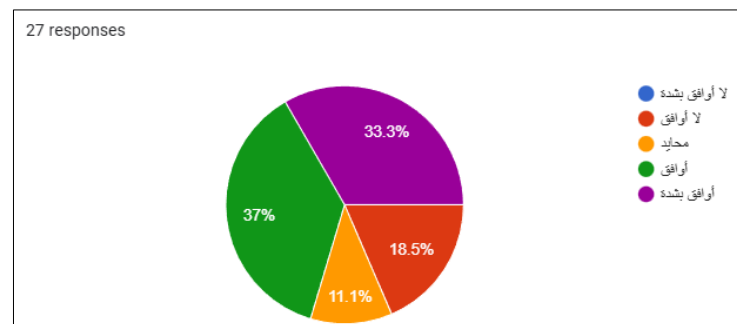


Figure (10): Inadequacy of current policies in addressing AI-generated academic content

Among members of the faculty, there is a strong consensus that there is a need for alternative approaches to assessment and academic supervision with regard to AI-supported academic writing. An aggregate 96.3% either agrees or strongly agrees with the sentiment that there is a need for revised evaluation practices. Neutral or opposing responses were minimal.

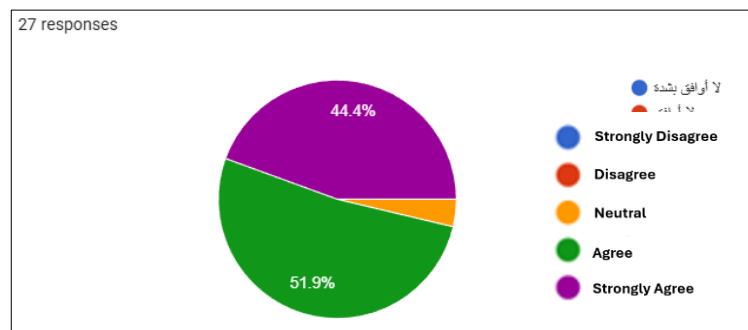


Figure 11: AI-supported academic writing requires alternative approaches to assessment and academic supervision.



Overall, the results related to faculty members exposed an array of ethical concerns around the use of GenAI tools in Arabic writing. The leading source of apprehension related to academic integrity, especially the challenge associated with identifying the difference between content originally produced by students and that produced by AI in Arabic, is due to limitations in prevailing detection tools. This is a reality acknowledged by several participants who added that this challenge has the potential to enable undisclosed or unregulated use of AI tools in academic submissions.

Another source of apprehension that was cited frequently relates to the possible decrease in originality and critical thinking among students. Participants noted that even though text generated with the help of AI may come across as being linguistically sound, a closer analysis shows that it usually does not have depth, analytical reasoning, and an explicit demonstration of the student's unique intellectual contribution. Other concerns were raised regarding the reliability and accuracy of Arabic content generated by AI, including the danger of linguistic or conceptual errors that cannot be easily identified by students. Moreover, members of the faculty also pointed out issues around fairness and equity in assessment, implying that the dearth of clear guidelines and a reliable detection mechanism could lead to unequal assessment of student work and academic judgments that lack consistency.

4.3 To answer RQ3: How do Arabic-language limitations in current AI detection systems influence user behaviour and institutional attitudes?

Substantial limitations regarding the effectiveness of available AI detection tools when applied to Arabic academic contexts are revealed by the findings. The perception that available detection tools are insufficient is shared by the majority (66.6%) of faculty members, with 29.6% strongly agreeing and 37% agreeing that available tools are not effective in identifying Arabic texts generated by AI. On the other hand, a little less than a quarter of respondents (22.2%) expressed a neutral view, with around one in ten (11%) disagreeing. This implies some variation in experience but an overriding perception of limited effectiveness.

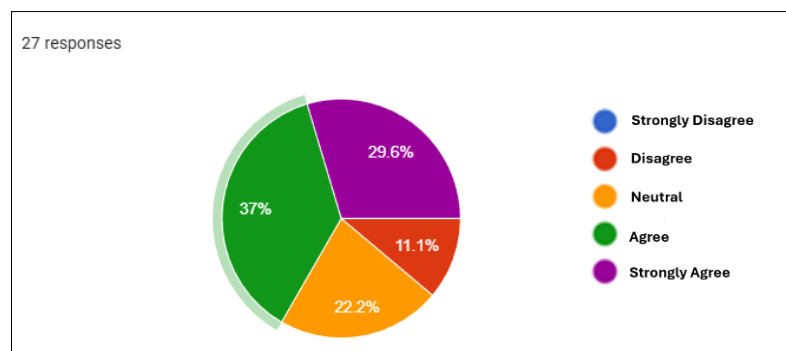


Figure (12): Limited effectiveness of current AI detection tools for Arabic academic texts.



Faculty members expressed the view that a huge percentage of Arabic content generated by AI can bypass university systems designed to detect it. An aggregate 59.2% of respondents either agreed or strongly agreed with the view that content generated by AI often exceeds the institutional capabilities of detecting it. Only a third expressed neutral responses, while about one in ten (11.1%) disagreed. Together, these findings shine a spotlight on the systemic challenges related to reliably detecting Arabic content generated by AI. This underscores the need for better detection technologies and institutional policies that are sensitive to context.

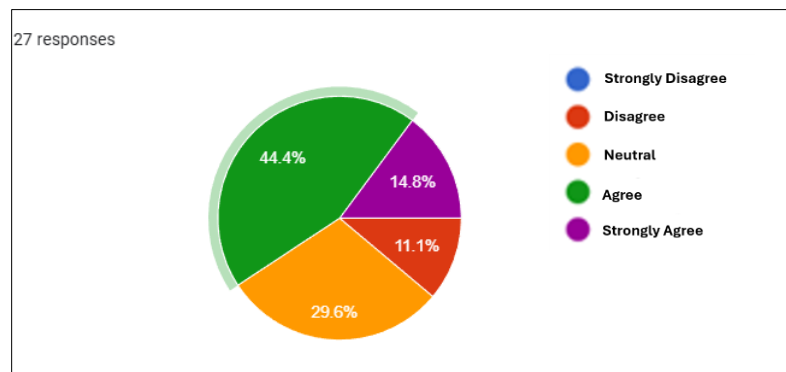


Figure 13: AI-generated Arabic content is able to bypass detection systems currently adopted by universities

In comparison to English texts, faculty members expressed decreased confidence when attempting to verify the originality of Arabic texts in the context of generative AI use. An aggregated 77.8% indicated that they feel less confident when assessing the originality of Arabic academic texts produced with the assistance of AI tools. Around one in ten (11.1%) expressed neutral views, and a similar proportion expressed negative views. This reinforces the dominance of the perception that the confidence of faculty members is low when it comes to verifying the originality of Arabic texts.

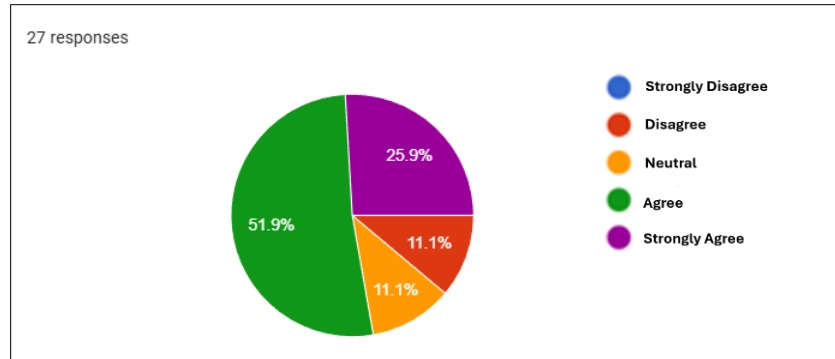


Figure (14): Lower confidence in verifying Arabic text originality compared to

Consistent with the concern around the lack of confidence when detecting originality of Arabic texts, respondents expressed strong agreement regarding the necessity of establishing tools for detecting AI specific to Arabic academic writing. An aggregate 88.9% either agreed or strongly agreed with the emphasis on the need for focused detection tools for academic content written in the Arabic language. Only 11.1% percent reported neutral responses, and there was no disagreement observed.

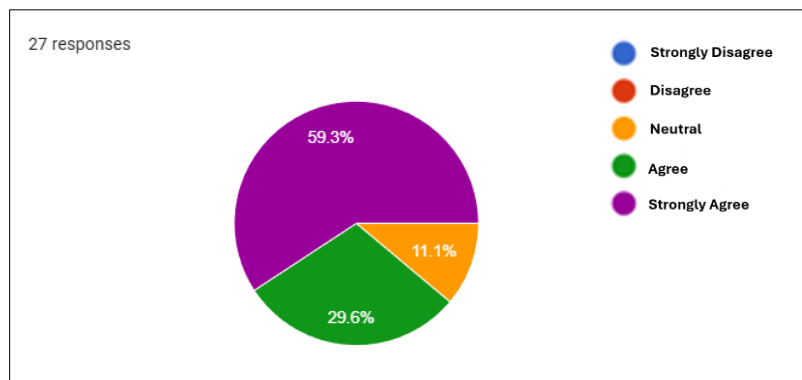


Figure (15): The need to develop AI detection tools specifically tailored to Arabic academic writing

Members of the faculty also shared the perception that limitations in Arabic language AI detection lead to a lack of consistency in the implementation of academic policies. An aggregate 88.9% either agreed or strongly agreed with the belief that compromised detection capacity in Arabic results in discrepancies in the application of academic integrity policies. Only 11.1% of respondents expressed a neutral position, with none expressing disagreement. From these findings, it can be inferred that inadequate detection reliability in Arabic impacts assessment practices while also undermining consistency in institutional enforcement of academic regulations.

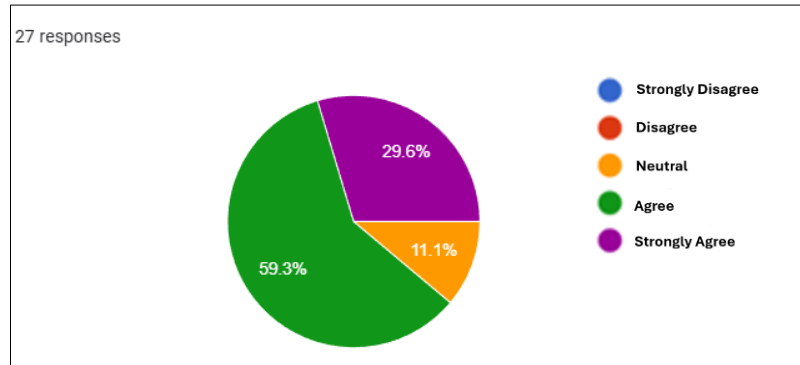


Figure (16): The limitations in Arabic-language AI detection capabilities contribute to inconsistencies in the implementation of academic policies

Students share the perception that limitations in Arabic-language AI detection systems have a significant effect on the behaviour of students while also shaping their perceptions of institutional oversight. The majority of participating students (51.6%) either agree or strongly agree with the view that available detection tools are not effective with regard to detecting Arabic content produced with the help of AI. A little less than a third (28.8%) expressed neutral views, while 18.2% disagreed. This reflects a moderate but notable concern around detection reliability.

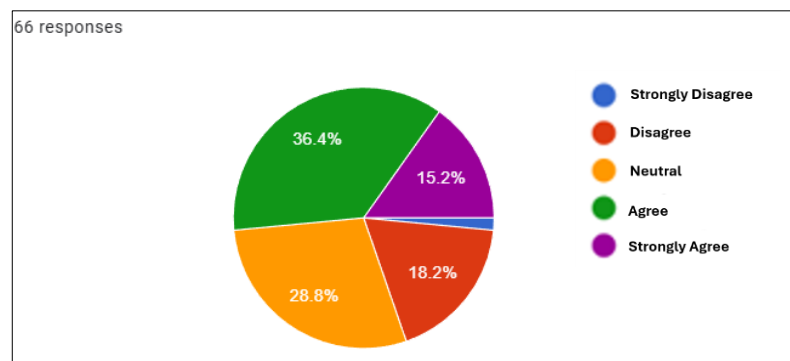


Figure (17): The limitations AI detection tools as ineffective in identifying Arabic AI-generated content

The perception that available AI systems are not able to detect AI content in Arabic seems to have an impact on the behavioural intentions of students. Slightly less than a quarter (24.3%) of students either strongly agree or agree that the weak plagiarism and AI detection tools spur greater use of AI tools. This provides proof that when detection is weak, students are encouraged to increase their use of AI tools. Nonetheless, a larger proportion (an aggregate 43.9% disagree) of participants debunked this notion, with a considerable 31.8% expressing a neutral view. From this



distribution, it can be inferred that even though detection limitations have the potential to influence the behaviour of some students, this impact is not uniform across the student population.

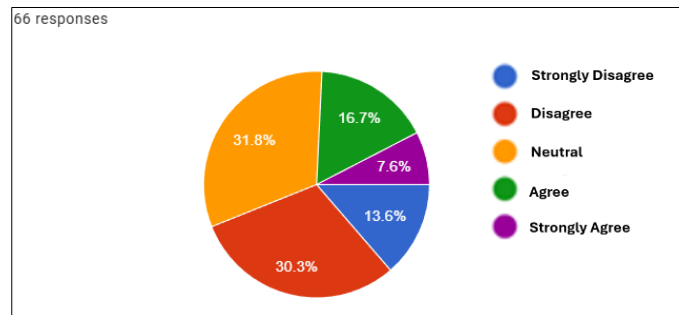


Figure (18): The weak Arabic plagiarism and AI detection tools encourage greater use of

Regarding safety, student perceptions relating to the use of AI tools in Arabic writing are a further reflection of detection limitations. An aggregate 44% of respondents reported feeling more secure when using AI tools in Arabic compared to English. On the other hand, an aggregate 31.8% disagreed, while 24.2% expressed neutral views. This can be read to mean that a considerable proportion of the student population associates Arabic-language use with lower perceived detection risk.

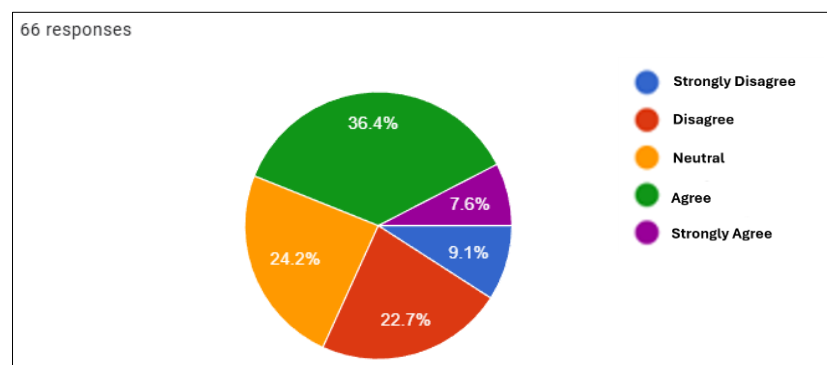


Figure (19): Perceived safety when using AI tools in Arabic further reflects the impact of detection limitations

At the level of the institution, the responses of students imply that enforcement and accountability gaps exist. Remarkably, about two-fifths (40.9%) agreed that they have never been requested to justify or explain their use of Arabic AI-generated text in academic work. On the other hand, about a quarter (25.8%) were neutral, and a little more than one-fifth (22.7%) disagreed. A reading of this pattern shines the spotlight on inconsistent institutional practices when it comes to monitoring Arabic academic



submissions, supporting perceptions of a weaker oversight.

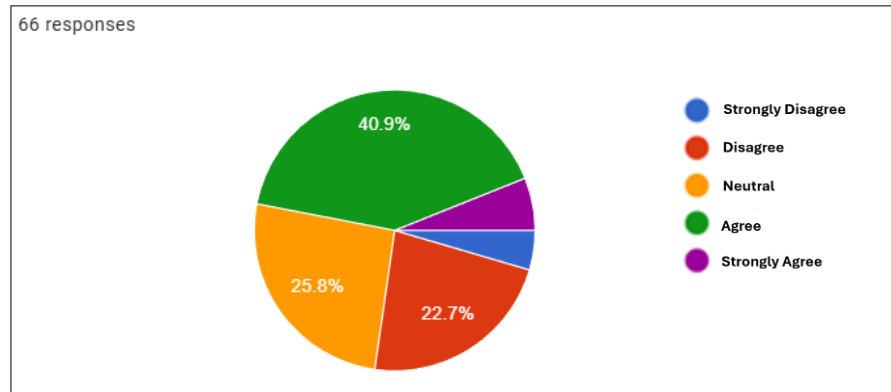


Figure (20): Students report never being asked to justify the use of Arabic AI-generated text

The results presented above lead to the proposed institutional measures for ethical regulation that could help alleviate the challenges noted in the present study. Overall, members of the faculty stressed the requirement for unequivocal institutional policies able to govern the ethical use of AI tools in higher education. Participants emphasised that these policies need to be explicit when they define tolerable and intolerable use of AI-assisted writing and that this must be clearly and transparently communicated to all stakeholders.

Another important theme is the important role of training and awareness initiatives. Suggested programs include workshops, guidelines, and instructional resources that are able to promote responsible and informed use of generative AI tools. The important role of educating students in relation to ethical boundaries was underscored by participants, who also stressed the necessity of critically reviewing and improving AI-generated outputs.

Faculty members also recommended that assessment practices need to be revised to discourage overreliance on the final written products. Examples of proposed approaches include more emphasis on process-based assessment, such as oral explanations and drafts, reflective tasks, and in-class activities. This is perceived as allowing for enhanced evaluation of the actual learning and engagement of students. Finally, a number of participants stressed the institutional investment in developing AI detection tools specific to the Arabic language with the aim of supporting consistent enforcement of academic integrity policies.

An analysis of students' responses exposed a nuanced, if consistent perception of limitations in Arabic-language AI detection systems. Even though over 50% of students perceived available detection tools as ineffective in identifying Arabic AI-generated content, they did not have the same behavioural responses. Some in the



student population linked weak detection with a greater willingness to use AI tools. However, a greater proportion of the student population debunked the idea of a direct link between detection limitations and heightened misuse of AI tools in academic writing. Notably, a substantial proportion of students reported that they feel more secure when using AI tools in Arabic than they do when using them in English. This implies a decreased perception of detection risk. Moreover, many students indicated limited institutional follow-up in relation to justifying Arabic AI-generated content, pointing to a lack of consistency with regard to oversight and reinforcement. Together, these findings imply that students' perception of risk and institutional control are influenced by detection limitations. However, it can also be noted that their impact on actual behaviour differs across the student population.

5. Discussion

The present study examined the UX of AI-assisted academic writing tools based on the perspective of graduate students and faculty members. Specific attention was paid to ethical concerns and limitations of Arabic-language AI detection systems. Generally, the findings expose a nuanced landscape in which perceived efficiency and usability exist together with escalating concerns linked to academic integrity, trust, and institutional preparedness.

Based on a UX perspective, the results reveal a perception among both students and faculty that AI-assisted tools present an advantage insofar as supporting academic writing is concerned. A considerable proportion of members of the faculty (70.4%) agree with the assumption that GenAI tools boost productivity among students, together with writing quality. Students also reported positive experiences in relation to ease of use, efficiency, and satisfaction. These findings are in alignment with past research that emphasised the role of GenAI as a cognitive and linguistic scaffold able to support drafting, revision, and idea development (Alshamy et al., 2025; Nelson et al., 2025). In this regard, the consistency between the perceptions of both students and faculty implies that AI tools are increasingly gaining acceptance in academic writing practices, especially when framed as supportive as opposed to substitutive technologies.

Notwithstanding perceptions related to GenAI as a supportive tool for both faculty and students, the findings also highlight an explicit divergence between perceived usefulness and ethical confidence. Members of faculty expressed solid concerns in relation to academic integrity, with almost three-quarters (74.1%) agreeing with the assumption that GenAI challenges long-standing integrity norms and over four-fifths (85.2%) have the perception that students overrely on these tools. Even though in an indirect manner, these concerns were also raised in the responses of students when they spoke about trust and control. This is especially in settings where there is a perception that detection mechanisms are weak. This tension reflects what was described in previous studies as a shift away from acceptance of the tools in the



direction of ethical negotiation, where users acknowledge both the value and risks linked to AI-assisted writing (Alshamy et al., 2025; Ravšelj et al., 2025).

Crucially, the results of the present study bring to the fore the pivotal role of Arabic-language detection limitations in influencing both the attitudes of institutions and the behaviour of users. A substantial fraction of the student population accepts the assumption that current detecting tools are not effective in identifying text generated by AI in Arabic content. Many also reported that they feel more confident using AI tools in Arabic academic writing than in English. It looks like these perceptions impact behavioural choices, possibly decreasing the perceived risk of detection and increasing reliance on GenAI in Arabic academic writing. These findings echo the conclusions of computational studies that demonstrate the technical challenges associated with Arabic AI detection, especially as a result of morphological complexity, diacritics, and orthographic variation (Alshammari & Elleithy, 2024). From a UX point of view, this introduces an uneven trust environment characterised by a sense of control and accountability among users that is shaped less by policy clarity and more by technological gaps.

An analysis of responses from faculty shows that there is a perception that institutional systems are yet to adapt to these linguistic and technological realities. More than 70% of faculty members expressed the perception that the university policies currently in place are insufficient when it comes to dealing with AI-generated academic content. Added to this, most participants stress the need for alternative assessments and supervision approaches. This implies that the challenge is not being perceived as merely technological but also pedagogical and organisational. Faced with a dearth of reliable Arab-specific detection tools, it looks like faculty members depend more heavily on subjective judgment, which has the potential to negatively impact fairness, trust, and consistency in assessment practices. A situation like that has the potential to impact overall UX in an undesirable way for both instructors and students, reinforcing uncertainty as opposed to responsible engagement.

On the whole, these findings propose that UX in academic writing assisted by AI cannot be perceived exclusively through usability and efficiency metrics. Rather, ethical clarity, trust, and perceived institutional support emerge as correspondingly vital dimensions, especially in Arabic-language academic settings. The main contribution of this study to the literature is that it demonstrates that limitations in Arabic AI detection systems do not just represent technical challenges, but also dynamically influence the behaviour of users, perceptions regarding ethics, and institutional responses. To deal with these issues, it is crucial that strategies are integrated to combine AI literacy, transparent policies, pedagogically grounded assessment redesign, and ongoing development of linguistically robust detection technologies. From this perspective, the findings support the necessity for an approach to AI integration that is sensitive and able to acknowledge linguistic diversity, embraces a holistic view of UX, while also balancing innovation with



academic integrity. This leads to another contribution of this study to the literature: demonstrating that limitations in Arabic AI detection systems dynamically influence the behaviour of users, reasoning in relation to ethics, and practices adopted by institutions, as opposed to functioning as neutral technical constraints.

6. Conclusion

The present study examined the UX of AI-assisted academic writing tools based on the perspectives of graduate students and faculty members in Arabic language higher education settings. From these findings, it can be inferred that even though AI tools are generally seen as valuable in terms of usability and efficiency, limitations in Arabic AI detection systems have a significant impact on institutional practices, ethical perceptions, and trust.

Embracing a UX-oriented lens made it possible for the present study to demonstrate that the effective integration of AI in academic writing goes beyond technical functionality to include ethical clarity, institutional support, and user confidence. These insights highlight the necessity for policies that are sensitive to context, AI literacy programs, and pedagogically grounded assessment strategies specifically made to fit Arabic academic settings. Studies in the future could use these findings as a basis by adopting a longitudinal or mixed-method approach and by evaluating developing AI detection strategies that are specific to Arabic-language as a way of furthering responsible and equitable use of AI in higher education.

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