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| RESEARCH ARTICLE

## Learning Agility, Institutional Support, and AI Governance as Predictors of Artificial Intelligence Tensions among Postgraduate Students in Uganda

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| ABSTRACT

The integration of AI into higher education has sparked debates among scholars, especially regarding ethics, accountability, legitimacy, and academic practices. In this context, this study examined whether learning agility, institutional support, and AI governance could predict the level of tension among postgraduate students in Uganda's public higher education institutions. Using a quantitative design and a cross-sectional survey, the researcher collected substantial data from 88 postgraduate students; however, only 71 responses were analyzed. The data were examined through descriptive statistics, Pearson correlation, and multiple linear regression. The overall results indicate that respondents exhibited a relatively high level of learning agility, moderate institutional support, moderate levels of AI-related tension, and a low perception of AI governance. The correlation analysis showed that learning agility, institutional support, and AI governance were all positively correlated with AI tension. The only variable that emerged as a statistically significant predictor in the regression analysis was AI governance. In contrast, learning agility and institutional support did not have independent significant effects. These findings suggest that postgraduate students' perceptions of AI tension are more influenced by the socio-institutional environment than by their adaptive abilities. The study concludes that AI tension in higher education mainly reflects socio-institutional factors, requiring clear, practical, and trust-building measures as prerequisites for responsible AI integration. The data provide context-specific evidence from Uganda and contribute to the existing literature on AI in higher education by showing that governance is not merely a background condition but a key factor shaping students' perceptions of their AI experiences in academia.

| KEYWORDS

Higher Education, Artificial Intelligence Tensions, Learning Agility, Institutional Support, AI Governance, Postgraduate Students, Uganda.

| ARTICLE INFORMATION

**ACCEPTED:** 15 April 2026

**PUBLISHED:** 03 May 2026

**DOI:** 10.32996/jcsts.2026.8.6.9

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### 1. Introduction

More than ever before, artificial intelligence (AI) has the potential to transform higher education by reshaping teaching, learning, assessment, research support, and academic administration across universities. Recent research shows that universities are using AI to improve efficiency, enable data-driven decision-making, offer personalized education, and automate routine academic tasks (O'Donnell et al., 2024; Teng et al., 2022; Muhenda, 2026). Similarly, the findings by Benouachane (2024) and Ojha (2024) suggest that AI can effectively enhance both pedagogical practices and institutional performance when its implementation is supported by appropriate human and organizational resources. As a result, AI is one of the most significant digital advancements in higher education today. However, the rise of artificial intelligence in universities also sparks discussions about potential negative impacts. While many see AI as a generally positive influence on education, recent articles have highlighted ethical, pedagogical, and governance issues that may arise with adopting this technology in university settings.

According to George & Wooden (2023) and others, the strategic transition of higher education (HE) through the use of AI will foster mistrust among institutional leaders, faculty, and students, while also demanding full accountability and adequate

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institutional preparedness. Similarly, Du Boulay's (2023) research indicates that using AI for educational purposes raises difficult questions about fairness, transparency, privacy, and the need for human oversight of AI in learning. Furthermore, Paswan & Gupta's (2024) study highlights concerns about how human support impacts the integrity of teaching and learning (T&L) cycles. Conversely, Akgun & Greenhow's (2021) work shows that AI can create ethical dilemmas related to safety, performance, or excessive reliance on automated systems. These studies reveal that the importance of AI in higher education lies not only in its capabilities but also in the uncertainties and pressures it brings for users. These issues are especially relevant to postgraduate students, who frequently use AI in education, research, writing, and career development.

Although AI can assist students with searching for information, creating drafts, developing solutions, and more, they do not encounter these technologies in a neutral or stable environment. Instead, they face uncertainty about what qualifies as acceptable academic use, who owns the work they produce, who is responsible when mistakes occur using AI, and how reliance on AI might influence their overall skill development. Makeleni et al. (2023) highlight that AI use in higher education is often limited by policy gaps, resource inequalities, and other disparities. Additionally, because higher education institutions vary greatly in how they develop and enforce AI-related policies and expectations regarding equity and ethics, students often experience tensions rooted in concerns, worries, and uncertainty about AI use in academia. Universities also differ in how they create and communicate AI policies. These tensions warrant further academic research because they are unlikely to resolve on their own as students become more proficient with AI.

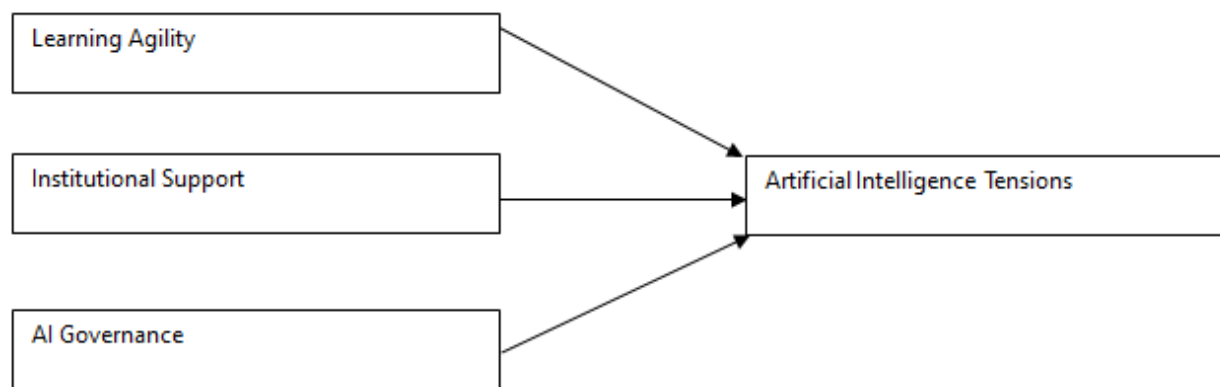
Although research on artificial intelligence's role in higher education is expanding rapidly, little attention has been paid to how learning agility, institutional support, and AI governance collectively shape AI-related tensions among postgraduate students in African public universities. Recognizing this gap is important because postgraduate students often operate in environments with changing policies, inconsistent digital infrastructure, and rapid AI experimentation. Therefore, this study aims to examine how learning agility, institutional support, and AI governance predict AI tensions among postgraduate students in Uganda. By linking individual adaptability with institutional and governance factors, this research extends the existing literature on AI in higher education beyond simple adoption and benefits to explore how postgraduate students in emerging universities experience and manage AI-related tensions.

## **2. Literature Review**

### ***2.1 Conceptual Framework and Hypotheses Development***

This study suggests that graduate students' resistance to AI is influenced more by their adaptability and environment than by the technology itself. Therefore, we examine learning agility, institutional support, and AI governance as independent variables, with AI tension as the dependent variable. We believe that students' experiences with AI are directly connected to their ability to adapt to new AI tools, the level of institutional support for responsible AI use, and the clarity of the university's norms regarding AI. At the individual level, learning agility is the ability to learn quickly, adapt to new environments, and respond effectively to the challenges posed by new technologies. Agile students are more willing to explore AI tools and integrate them into their studies.

Conversely, students' deeper engagement with AI can enhance their awareness of its uncertainties and risks, as well as how it might challenge their originality, judgment, and skills (De Meuse et al., 2010; Zhou et al., 2024). Strategic support at the institutional level—through leaders, coaches, mentors, and technical assistance—aims to develop strategies to reduce tension and fear related to the unknown (Tarisayi, 2024; Widodo et al., 2023). You are correct that AI governance (which includes rules, safeguard mechanisms, monitoring methods, and accountability procedures) also seeks to ease tensions by clarifying acceptable practices and research responsibilities (Larsson, 2020; Azevedo et al., 2024; Temper et al., 2025). Essentially, we believe that 'learning agility' increases tensions, while institutional support and AI governance help decrease them.



**Source:** Adopted from De Meuse et al. (2010); Makeleni et al. (2023); Widodo et al. (2023); George & Wooden (2023); Larsson (2020); Azevedo et al. (2024) and modified by the author

**Figure: Learning agility, institutional support, and ai governance as predictors of artificial intelligence tensions**

### 2.2 Learning agility and artificial intelligence tensions

Learning agility is one of the most promising ways to understand how students respond differently to AI. De Meuse et al. (2010) describe learning agility as the ability to learn from experience, adapt to new requirements, and succeed in unfamiliar situations. Similarly, earlier work by Lombardo and Eichinger (2000) highlights learning agility as a trait characterized by the ability to quickly learn from experience and apply that knowledge to new situations. In higher education, where AI tools are rapidly becoming part of students' experiences, this careful navigation of novelty could be crucial to how students create, interpret, and interact with AI in their learning.

At first glance, the link between learning agility and AI tensions appears simple; more agile students should be better able to explore AI tools, evaluate their usefulness, and integrate them into their learning methods without much fear or confusion. This makes sense considering research connecting adaptive ability to innovation, experimentation, and better problem-solving (Hasibuan & Azizah, 2023), and Zhou et al. (2024), who show that self-regulated engagement with generative AI helps students develop critical thinking and more effective problem-solving skills. From this perspective, learning agility helps students navigate AI environments more effectively.

However, a closer look shows a more paradoxical relationship. Capability not only helps with adaptation but also increases exposure to the contradictions of new technologies. Students who are more adaptable are likely to use AI more, question its outputs more, and become more aware of its limitations, biases, and ambiguities. In this way, greater adaptability might intensify, rather than reduce, tensions because it results in more encounters with open-ended questions about authorship, dependence, judgment, and proper use. Aun et al. (2025) and Bedoya-Villa et al. (2023) support this idea beyond the higher education context, showing how absorptive and adaptive capacities tend to both promote innovation and increase exposure to complexity and uncertainty. The point is that learning agility should not be seen only as a protective ability. In AI-driven learning environments, it can be a double-edged sword, enabling users while also heightening their awareness of risks and tensions. The researcher hypothesized that:

**H1:** Learning agility has a positive and significant effect on artificial intelligence tensions among postgraduate students.

### 2.3 Institutional support and artificial intelligence tensions

Tarisayi (2024) argues that responsible AI adoption in higher education largely depends on strategic leadership and institutional readiness, while Widodo et al. (2023) demonstrate that AI-based systems need credible support structures to function effectively and build user confidence. Together, these insights indicate that institutional support not only affects whether students will use AI but also influences how secure, guided, and legitimate that use feels. Literature supports the idea that institutional support reduces uncertainty about adopting new technology. When students know what resources are available, expect technical support when issues crop up, and receive training on how to use AI, socializing the technology becomes easier and more justified.

Conversely, O'Donnell et al. (2024) advance the broader idea that the educational power of AI depends not only on the technology itself but also on the social environments in which it is used. Similarly, George and Wooden (2023) state that institutional change through AI requires structures and systems that encourage user adoption, as well as processes and expectations. However, the literature also shows that support can be inconsistent or missing. In many cases, AI has been adopted

faster than student-centered support has been put in place, leaving users to navigate complex tools with little help. Makeleni et al. (2023) reveal that, in universities of the Global South, contextual inequalities and uneven readiness increase tensions over AI's educational use. In these scenarios, what is meant to be institutional support can be minimal. The researcher will explore why this matters further below, but simply claiming AI is beneficial does not automatically reassure students. When support is scattered, hard to access, and only reactive to pressure, students might remain unsure about how much AI can be integrated into their academic work. The researcher therefore hypothesized that:

**H2:** Institutional support has a negative and significant effect on artificial intelligence tensions among postgraduate students.

#### **2.4 AI governance and artificial intelligence tensions**

Larsson (2020) demonstrates that AI governance can be established through ethics guidelines as easily as through law, while Rassolov and Chubukova (2022) and Singh (2024) highlight governance issues related to liability, oversight, responsibility, and digital ethics. In higher education, Salajan et al. (2024) and Temper et al. (2025) show that AI governance is emerging as the primary institutional challenge, as universities must balance innovation with fairness, legitimacy, and user protection. The relationship between clarity and tension is also complex. In theory, greater clarity in governance should reduce student anxiety by clearly defining boundaries, responsibilities, and acceptable AI use. Azevedo et al. (2024) reveal that higher education institutions vary greatly in the AI-related policies they provide to students, and the effects of these policies on ethics and equity remain understudied. This suggests that clear policies can significantly influence how users interpret AI use, if at all. When students understand what is acceptable, what must be disclosed, and who is responsible, their uncertainty may decrease.

Conversely, governance can cause discomfort, stress, or anxiety if it is incomplete, confusing, overly strict, or poorly communicated. Colmenarejo et al. (2022) argue that rules based on fairness must be understandable and ethically justified to gain legitimacy. Gaon and Stedman (2019) and Sivarethinamohan and Sujatha (2022) state that governance mechanisms may create new anxieties when enforcing rigid norms without clarity or user involvement. For universities, being governed by rules or standards for AI use does not automatically provide reassurance; on the contrary, risks could rise due to uncertainty, unfamiliarity, or detachment from familiar academic activities. For students on the edges of knowledge creation and participation, the vague governance of AI, including those likely to use AI, might be especially significant. Hence, hypothesis three was generated, which states:

**H3:** AI governance has a negative and significant effect on artificial intelligence tensions among postgraduate students.

#### **2.5 Artificial intelligence tensions in higher education**

The rise of AI in higher education has sparked a parallel body of research focused on its positive applications, emphasizing its potential to improve learning, assessment, research support, and administrative functions at universities. Scholars like O'Donnell et al. (2024) and Teng et al. (2022) argue that AI can enhance responsiveness and personalization, making various aspects of higher education smarter and more efficient. Benouachane (2024) and Ojha (2024), for example, see AI as a key driver of pedagogical innovation, especially in areas where institutions expand access to learning resources, automate routine tasks, or improve decision-making. Additionally, some researchers link AI to better education management and evidence-based management information systems for university governance (Siminto et al., 2023; Widodo et al., 2023).

A second, growing wave of literature urges caution in viewing AI in education as purely instrumental. Instead of seeing AI as ethically neutral or inherently good, this body of work highlights that AI is embedded within ethical, organizational, and political contexts that influence how it is experienced. Akgun and Greenhow (2021) raise ethical concerns about bias, fairness, and responsibility in AI's use in education, while Du Boulay (2023) emphasizes the importance of examining AI's educational applications with respect to transparency, human oversight, privacy, and accountability. Similarly, George and Wooden (2023) discuss how institutional change driven by AI can create uncertainty around trust, legitimacy, and readiness—especially when technology adoption outpaces the development of proper governance structures.

During the second wave, the idea of AI tensions becomes a helpful way to analyze. AI tensions describe feelings of discomfort, unease, contradictions, or doubts that come up when users interact with AI in uncertain situations marked by shifting norms and uneven organizational readiness. Tensions are not just complaints about AI; they reflect conflicts that arise when rapid progress and exploration clash with concerns about dependence, surveillance, cheating, privacy, and judgment. Paswan and Gupta (2024) show how AI makes students uncertain about the role of help, while Makeleni et al. (2023) explain that AI's impact on higher education in developing economies is often shaped by existing inequalities, different abilities, and fragile institutional guidance. The tensions students feel around AI should be seen as social-technical realities of a quickly changing educational landscape, not just psychological reactions.

Although many studies explore the ethical and institutional aspects of AI-supported learning, most tend to be broad, descriptive, or focus on overall adoption, opportunities, and governance. There is a significant gap in research on the specific factors driving AI-related tensions among postgraduate students, especially regarding formal rules, organizational support, and digital infrastructure, which remain underdeveloped. This group is often overlooked, yet postgraduate students interact with AI in particularly meaningful ways; they use it to support learning, develop as creators of scholarly work and research arguments, and serve as professional agents. Their experiences of tension are therefore crucial for the future of education and intellectual growth.

### 3. Methodology

This study used a quantitative cross-sectional survey design to explore how learning agility, institutional support, and AI governance affect tensions related to artificial intelligence among postgraduate students in public higher education institutions in Uganda. A quantitative approach was appropriate because the study aimed to measure these variables and analyze their relationships statistically (Creswell & Creswell, 2018). The cross-sectional survey design was also suitable, as the research focused on collecting respondents' perceptions and experiences at a single point in time and examining patterns of association among variables without altering the research environment (Bryman, 2016; Saunders et al., 2019). The target population included postgraduate students from a public higher education institution, with individual students as the unit of analysis. A purposive sampling method was used to select respondents who were familiar with or had previous experience using AI-supported academic tools, and an appropriate strategy for choosing participants based on their relevance to the research focus (Saunders et al., 2019; Komakech et al., 2024).

Data collection was conducted using a structured self-administered questionnaire measured on a five-point Likert scale, ranging from strongly disagree to strongly agree. Structured questionnaires are effective for gathering standardized data on attitudes and perceptions from a relatively large sample (Sekaran & Bougie, 2016). In the revised model, learning agility was conceptualized from items originally used to measure absorptive capacity; it reflects the ability to learn, understand, and apply new knowledge in unfamiliar settings (De Meuse et al., 2010; Lombardo & Eichinger, 2000). Institutional support was defined as comprising management, peer, and technical support, illustrating the support environment available to students using AI (George & Wooden, 2023; Tarisayi, 2024). AI governance was assessed using items initially labeled as AI legislation, but conceptually adapted to better reflect institutional rules, training, and monitoring arrangements, aligning with the current AI governance literature (Azevedo et al., 2024; Larsson, 2020; Temper et al., 2025). Artificial intelligence tensions were measured as a multifaceted dependent variable encompassing social, ethical, psychological, and organizational dimensions (Akgun & Greenhow, 2021; Du Boulay, 2023).

Descriptive statistics summarized respondent and variable characteristics, while reliability analysis checked the consistency of the scales. Hypotheses were tested using appropriate methods, including multiple linear regression analysis to predict a continuous outcome from multiple variables (Field, 2018; Hair et al., 2019). The study adhered to ethical principles of voluntary participation, confidentiality, and anonymity (Saunders et al., 2019).

### 4. Results

Postgraduates from Uganda's public universities submitted 88 questionnaires, but only 71 had all the necessary information for analysis. This resulted in a usable response rate of 80.7%. The study's results are organized by respondent profile, descriptive statistics, reliability, correlation, and regression analysis.

#### 4.1 Respondent profile

Characteristic	Category	Frequency	Percentage
Gender	Male	47	66.2
	Female	24	33.8
Age group	20–40 years	44	62.0
	41–50 years	21	29.6
	51–60 years	4	5.6
	61–70 years	2	2.8
Use of AI-powered tools	Yes	66	93.0
	No	5	7.0
Prior AI training	Yes	38	53.5
	No	33	46.5

Source: Primary Data 2025 (N=71)

The respondent demographic was primarily male 47 (66.2%), with females accounting for only 24 (33.8%) of the valid responses. The age distribution indicated that most respondents were between 20 and 40 years old 44 (62.0%), while 21 (29.6%) were in the 41–50 age range. Only 6 respondents (8.4%) were over 50 years old. This demographic profile suggests that the study mainly reflects postgraduate students in the younger age group compared to the broader postgraduate population, who are also more likely to be exposed to and use digital tools and emerging AI applications in academic settings. Data shows that a large majority, 66 (93.0%), reported using AI applications for educational purposes, while just over half, 38 (53.5%), have had prior instructional experience with AI. Therefore, it can be inferred that most respondents involved in the study have experience engaging with AI for educational reasons.

**4.3 Reliability analysis**

The reliability of the constructs in this study was evaluated using Cronbach’s alpha (see Table 2).

**Table 3: Reliability statistics**

Variable	Cronbach’s Alpha	Number of Items
Learning agility	0.770	4
Institutional support	0.895	12
AI governance	0.760	5
Artificial intelligence tensions	0.719	4

**Source: Primary Data (N=71)**

Results indicated that all retained variables demonstrated acceptable reliability for quantitative analysis. Learning agility achieved a Cronbach’s alpha of .770, reflecting good internal consistency across all items measuring students’ adaptive learning ability. Institutional support had the highest reliability coefficient ( $\alpha = .895$ ), suggesting that management, peer, and technical support items form a strong, cohesive support construct. AI governance also showed an acceptable reliability level ( $\alpha=.760$ ), while artificial intelligence tensions received a Cronbach’s alpha of .719, suitable for both exploratory and explanatory analyses. Overall, these reliability results suggest that the measures are sufficiently dependable for correlation and regression analyses.

**4.4 Correlation analysis**

A Pearson correlation analysis was conducted to assess the bivariate relationships among the three main study variables.

**Table 4: Correlation matrix**

Variable	1	2	3	4
Learning agility (1)	1			
Institutional support (2)	0.465**	1		
AI governance (3)	0.267*	0.394**	1	
Artificial intelligence tensions (4)	0.264*	0.271*	0.488**	1

**Source: Primary Data (N=71)**

**Note: \* $p < 0.05$ , \*\* $p < 0.01$**

The results showed that learning agility has a statistically significant, positive correlation with AI tensions ( $r = 0.264$ ;  $p < 0.05$ ), suggesting that students reporting higher levels of adaptive capacity also report greater levels of AI-related tension. However, the correlation was weak. Similarly, the relationship between institutional support and tensions related to artificial intelligence was positive and statistically significant ( $r = 0.271$ ,  $p < 0.05$ ). Although support is theoretically expected to reduce stress in the AI context, the positive association at the bivariate level might indicate that support is more noticeable in situations where AI-related concerns already exist. AI governance and artificial intelligence tensions also showed a strong positive correlation ( $r = .488$ ,  $p < .01$ ), indicating that greater knowledge of governance mechanisms and related institutional rules, including oversight, is associated with higher reported levels of tension. Greater awareness of governance visibility may lead to increased perception of accountability, risks, and the uncertain boundaries of AI use in scholarly activities. The intercorrelations among the predictors were moderate, indicating some relatedness but not a pattern indicative of severe multicollinearity.

**4.5 Regression results**

Using multiple linear regression analysis, the researcher identified both combined and individual relationships among three variables (learning agility, institutional support, and AI governance) that affect AI tensions.

**Table 5: Model summary**

Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate
1	0.508	0.258	0.224	0.503

**Table 6: ANOVA for regression model**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	5.885	3	1.962	7.749	0.000
Residual	16.966	67	0.253		
Total	22.851	70			

The study showed that these predictors produced statistically significant results, with overall analysis indicating positive outcomes. This was demonstrated by a statistically significant regression ( $F(3, 67) = 7.749, p < .001$ ) that explained a notable portion of the variation in the dependent variable. The model's calculated R value was 0.508, and both its  $R^2$  and adjusted  $R^2$  were 0.258, indicating that 25% of the variation in AI tensions could be explained by learning agility, institutional support, and AI governance. This suggests the model has a moderate ability to explain AI-related tensions among students and confirms that these three factors are valid predictors.

**Table 7: Regression coefficients**

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
Constant	1.918	0.414	—	4.631	0.000
Learning agility	0.114	0.091	0.149	1.254	0.214
Institutional support	-0.011	0.095	-0.015	-0.113	0.910
AI governance	0.324	0.085	0.455	3.795	0.000

**Source: Primary Data (N=71)**

Among the three variables (learning agility, institutional support, and AI governance), AI governance was the only one with a statistically significant predictive relationship ( $\beta = .455, p < .001$ ), indicating that students who perceive stronger AI governance also report higher levels of tension regarding AI use. As students become more aware of their institutions' AI-related rules, accountability mechanisms, and governance expectations, their concern and uncertainty increase. Unlike AI governance, learning agility showed no independent effect on AI tensions ( $\beta = 0.149, p = 0.214$ ); however, the positive directional coefficient suggests that more agile students tend to experience greater AI tensions at the bivariate level. This effect diminished after accounting for governance and institutional support.

Additionally, no significant relationship was found between institutional support and AI tensions ( $\beta = -0.015; p = .910$ ). Although a negative relationship was expected, its negligible size and overall insignificance indicate that institutional support, as measured here, did not explain variation in AI tensions when controlling for other predictors. The results highlight a strong link between AI governance and student tensions related to AI, even after accounting for behavioral, institutional, and technological factors. This suggests that factors such as visibility, accountability, and oversight within AI governance influence students' perceptions and tensions beyond mere adaptability or perceived institutional support.

**5. Discussion**

The study examined how learning agility, institutional support, and AI governance influence postgraduate students' perceptions of AI-related tensions at public higher education institutions in Uganda. Results showed that the overall model was statistically significant, but each predictor played a different role. The only significant multivariate predictor was AI governance; no significant independent effects were found for learning agility or institutional support after accounting for other variables. These findings suggest that postgraduate students' AI-related tensions are shaped more by normative and regulatory environments than by individual adaptability.

Preliminary data also indicated that respondents reported high levels of learning agility on average, moderate institutional support, moderate tensions related to AI, and much lower perceptions of AI governance. This trend shows students actively use

AI and develop adaptive skills in their studies, but they do so in environments where governance is perceived as unclear, underdeveloped, or poorly established. These results align with literature indicating that AI adoption in higher education often outpaces the institutional rules and ethics designed to regulate it (Azevedo et al. 2024; Du Boulay; 2023; Tarisayi; 2024). Consequently, the findings support the hypothesis that the main challenge for higher education may not be whether students will continue using AI, but whether institutions have created conditions for responsible AI use.

The findings also show that learning agility is positively and significantly associated with AI tensions in a bivariate analysis; however, this association was no longer significant in the regression model. This positive link suggests that as students become more adaptable, curious, and willing to use AI, they are more likely to notice ambiguities, contradictions, and risks related to AI. This challenges the idea that higher digital proficiency always reduces uncertainty. Instead, it indicates that more agile students engage with AI more deeply and analytically, making them more aware of issues such as dependence, originality, legal accountability, and the limits of machine-generated outputs. This interpretation aligns with the findings of De Meuse et al. and Zhou et al. (2024), who show that effective engagement with generative AI requires self-regulation, reflective judgment, and active cognitive oversight.

Although the role of learning agility became non-significant in the regression model, it does not imply it was entirely independent. When governance and institutional support were included, the impact of learning agility lessened. Therefore, adaptive capacity alone does not determine how much AI-related tension students face; the institutional context also plays a mediating role. Even students with high learning agility might experience tension when they face uncertainty about whether or how to use AI in line with institutional standards. This supports earlier research indicating that students' learning ability is closely linked to the governance structures that guide AI use in higher education.

Furthermore, although institutional support was not a significant predictor in the multivariate analysis, it showed a positive bivariate relationship with AI tension. This suggests that current support systems may not be strong, clear, or sufficiently visible to alleviate AI concerns. This contradicts the common belief that support structures reduce uncertainty and increase confidence. George & Wooden (2023) argue that successful AI adoption depends on organizational readiness and supportive systems, while Tarisayi (2024) highlights the importance of strategic leadership and deliberate institutional planning. The current findings suggest that although some support is present, it is insufficient to affect students' experiences of AI tension.

The positive correlation between reported tensions and institutional support suggests that support has been mostly reactive, responding to students' existing uncertainties rather than actively preventing them. This aligns with evidence from Makeleni et al. (2023) and Muhenda (2026), which indicates that higher education institutions in developing countries are often unprepared to manage AI-related changes. This does not mean that support causes greater tension; rather, the support systems are not yet mature enough to stabilize and alleviate concerns.

Finally, the study revealed that AI governance is the strongest predictor of AI tensions and has a positive effect. As perceptions of governance improve, tensions among postgraduate students tend to rise. This underscores the need for governance to foster clarity about acceptable AI use and institutional roles, but the situation is becoming increasingly complex. As AI advances, greater awareness of rules, monitoring, and accountability may heighten sensitivity to risks and competing interests. Students are increasingly aware of the stakes regarding academic integrity, ethics, and institutional reputation, creating a mix of information and uncertainty. Previous studies support this interpretation. For example, Azevedo et al. (2024) note the lack of uniformity and ethical standards in AI policies, implying governance exists but remains vague. Larsson (2020) highlights that ethical frameworks can create ambiguity because standards are often aspirational or weakly defined. Salajan et al. (2024) show that AI governance varies across regulatory logics and institutions. Temper et al. (2025) argue that for governance to effectively reduce uncertainty, it must be closely linked to actual institutional practices. This study echoes prior research, demonstrating that even emerging governance can increase, rather than decrease, student anxiety.

The greater explanatory power of AI governance over learning agility and institutional support has important theoretical implications. AI tensions among students are best understood as responses not only to technology but also to institutional meanings, expectations, and controls. Students' reactions depend on how they interpret the governance, judgment, and accountability mechanisms within their institutions. The researcher adds that governance is not simply background scenery; it actively shapes AI management and user experiences.

## **6. Conclusion, Implications, and Limitations**

### **6.1 Conclusion**

This research aimed to examine whether learning agility, institutional support, and AI governance predict tensions related to artificial intelligence among postgraduate students in Ugandan public higher education institutions. It was found that although

these three factors collectively explained a large portion of the variance in AI tensions, only AI governance was statistically significantly associated with AI tensions in the multivariate model. This suggests that a higher perception of AI governance correlates with increased AI-related tension; therefore, as students learn more about institutional rules, accountability expectations, and oversight arrangements related to AI use in academia, they also become more aware of the uncertainties, risks, and contested boundaries involved. Conversely, learning agility and institutional support did not show significant independent associations with AI tension after accounting for the broader institutional context.

The results indicate that the AI tensions faced by graduate students are driven not only by their ability to adapt to AI or the existing support systems but primarily by how AI is managed and overseen, which appears to have a greater influence than their adaptive skills. Since students in this study want to work with and engage with AI technologies and possess reasonable adaptive abilities, the fact that governance structures supporting AI are still developing suggests they may not receive enough support to reduce their anxiety or uncertainty. Therefore, this study emphasizes that tensions related to AI in higher education are more rooted in social and institutional issues than in technology or psychology.

This research contributes to the expanding body of literature on Higher Education and Artificial Intelligence, particularly beyond existing studies that mainly focus on opportunities, AI adoption, and performance benefits. Instead of maintaining this narrow focus, this article highlights student tensions as a critical area for independent investigation and emphasizes the importance of governance conditions in examining their root causes. In doing so, this study broadens current research by demonstrating that the student experience (SE) of AI is influenced not only by students' skills but also by how students perceive and enact the rules and expectations for AI.

### **6.2 Theoretical implications**

The research makes important contributions to theory. First, it offers a deeper understanding of the nature of AI in higher education, suggesting that the link between adaptive ability and AI outcomes is more complex than often assumed. Specifically, students' learning agility was positively associated with their awareness of AI-related tension types, as indicated by the bivariate analysis, suggesting that greater adaptive ability is associated with greater awareness of ambiguity in AI-related contexts. The study also supports a more paradoxical view of capabilities in environments enabled by AI; that is, students who are more engaged with AI may also be more conscious of the ethical, pedagogical, and institutional tensions involved.

The second key insight from this study is that AI governance should not be viewed simply as an 'explanatory variable,' but rather as a central, not just a contextual, factor. Many studies discuss AI governance mainly in terms of normative or policy issues; however, there are also experiences that influence how individuals use and understand AI daily. Therefore, AI governance needs to be integrated into more explicit models of technology use among students, especially in postsecondary education where institutional rules and policies are still evolving.

Finally, this research provides context-specific data from Uganda, supporting the call for more research on AI applications in Higher Education beyond regions that have received the most attention, such as Western countries. This paper concentrates on AI use among public sector postgraduate students and helps expand the evidence base on AI in Higher Education, emphasizing that governance issues may be especially important in environments with rapidly changing digital infrastructures and institutional policies.

### **6.3 Practical implications**

These findings also have important implications for higher education institutions, university leaders, and relevant stakeholders. Higher education institutions should recognize that AI is already part of students' academic experiences, and promoting students' use of AI through poorly defined, confidence-building governance frameworks may increase students' uncertainty. Therefore, these institutions must develop clear, well-defined, and student-centered AI governance frameworks that include guidelines on acceptable use, accountability expectations, disclosure requirements, and ethical boundaries.

Additionally, the limited significance of institutional support relationships suggests that current mechanisms may not adequately reduce students' tensions regarding AI. Therefore, universities should enhance their academic guidance, technical support, and structured training on responsible AI use. These support systems should be integrated into teaching, supervision, assessment, and orientation processes rather than being irregular or disjointed.

The findings also suggest that governance and support should be developed together. Lacking support, governance can create a control-focused environment that fosters insecurity rather than a positive atmosphere for students. Conversely, support without governance may leave students unsure about what is legitimate and lacking clear boundaries. The most effective approach for

institutions is to establish clear governance guidelines, implement ongoing practical applications of these guidelines (support), maintain open communication channels, and involve students in the continuous development of these models.

Lastly, this research has implications for higher education policy in Uganda. As AI becomes more deeply integrated into academia, there may be a need for sector-wide guidance to help institutions develop unified principles for AI use in teaching, learning, research, and assessment. These recommendations will help reduce uncertainty about AI integration in higher education and promote coordinated adoption across the system.

#### **6.4 Limitations of the study**

This research has several limitations that should be recognized, despite its contributions to the field. The study relied on self-reported survey data, which may be influenced by common-method bias, social desirability, and individual differences in interpretation. Although self-reports are valid measures of perceptions and experiences, future research should consider combining them with other data sources, such as interviews, policy reviews, and behavioral observations of AI use. While 71 questionnaires were completed, this is sufficient despite initially collecting 88 responses; the small sample size restricts the scope of the findings. Although the results apply to all public higher education institutions in Uganda, they may be less relevant to private universities or higher education sectors in countries with significantly different levels of AI maturity and governance.

#### **6.5 Areas for future research**

In the future, research should explore whether the relationship between AI governance and the tensions related to using artificial intelligence (AI) in education changes as institutional policies are created and put into practice within academic settings. Researchers should also perform more comparative studies across public and private universities and different countries to see if governance-related tensions around AI adoption in higher education are specific to certain contexts or part of a larger trend in AI use in post-secondary education. Additionally, researchers could examine the impact of mediators and moderators, such as students' literacy in AI technology, perceptions of academic honesty, trust in institutional systems, and whether differences in students' majors influence how they perceive and experience the tension between AI governance and AI use in their field.

**Declaration of Conflict of Interest:** The author declares no conflicts of interest regarding the publication of this article.

**Funding Source:** This research did not receive any specific funding from any agency, whether public, commercial, or not-for-profit.

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**Ethics Approval:** This study was conducted in accordance with established ethical standards for research with human subjects. The principles of voluntary participation, confidentiality, anonymity, and proper data handling were maintained throughout the research. Each participant provided informed consent before taking part.

**Availability of Data:** The data used to support the research findings in this study are available upon request from the corresponding author with consideration for ethics and confidentiality.

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