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The Digital Divide in Wellness: Unpacking the Effects of Artificial Intelligence on University Student Mental Health

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ABSTRACT

The accelerated spread of Artificial Intelligence (AI) within higher education institutions such as universities signifies a profound technological advancement with dual implications for sustainable development. While AI promises unique opportunities for youth empowerment, its application demands a critical examination of its effect on student wellbeing. This study investigates the influence of AI-mediated educational processes on university students' mental health through the lens of the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2). Using a convergent parallel mixed-methods design at a selected public university in Zimbabwe, the study combined quantitative data (n=303 students) with qualitative insights from focus group discussions with students and lecturers. Findings showed a inflexible "Hardware Hierarchy," where 85.5% of students recognise the laptop as an vital "academic station" for critical AI confirmation, while mobile-only users experience a "technologically hollowed-out" state. Even though AI is highly cherished for its usefulness among students using tools like ChatGPT AND Google Gemini as "always-on" tutors, it is somewhat linked with adverse mental health outcomes. These manifest as "Turnitin Anxiety," "Temporal Anxieties" connected to computer laboratory access, and ethical panic emanating from a "legal vacuum" in institutional AI policy. Furthermore, qualitative narratives demonstrate "Techno-Exhaustion" among faculty, particularly female lecturers endeavouring to balance domestic work with the rigours of AI-output verification. Overall, the study concludes that the digital divide has evolved from a matter of connectivity to a "Divide in Wellness." It recommends institutional innovation beyond simple technological application and proposes application of robust ethical AI policies and subsidised hardware and WIFI data support to ease psychological risks while promoting resilient human capital development within the Education 5.0 framework.

Keywords: Artificial Intelligence, Higher Education, Mental Health, UTAUT2, Wellness Equity, Zimbabwe.

INTRODUCTION

Internationally, the incorporation of Artificial Intelligence (AI) has transitioned from a mere emergent technological trend to an extraordinary instructional force within the higher education sector. This transformation symbolises a noteworthy departure from the "Information Age" towards an increasingly intricate "Mental Age," where AI mediators are primarily redefining the student involvement and the nature of academic research [1]. While the wider field of AI has its fundamentals in research spanning around seven decades, its implementation for academic development in developing economies, such as Zimbabwe, remains a promising yet unpredictable phenomenon [2]. Current literature is characterised by an "intellectual cleavage," with academics divided along an optimism-pessimism continuum about the technology's ultimate bearing on student reflexivity, academic integrity, and long-term institutional welfare [3, 4].

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The landscape of mental health education has undergone a theatrical digital transformation within this technological age [5, 6]. AI provides innovative frameworks for psychological provision, oscillating from the usage of Internet of Things (IoT) technologies for evaluating student wellness [7] to adaptive feedback systems intended to foster students' motivation [8]. Advocates of these technology innovations clearly maintain that personalised learning(PL) inspired by AI can significantly improve self-regulated learning (SRL) and student autonomy [9, 10]. In the local context, Midlands State University (MSU), a public higher education institution situated in the Midlands Province in Zimbabwe has so far emerged as a central leader in this digital frontier. Under the "Pioneering a Digital Future through Education and Innovation" framework, MSU has committed to emerging sustainable strategies in robotics and AI to tackle global challenges [21]. For instance, the Midlands State University Pro Vice Chancellor Professor Grace Mugumbate specifically affirms that this movement is not merely about automation but about cementing the Education 5.0 model to empower the nation through practical, innovative action [21]. The Education 5.0 framework is a shift from the tripartite(3.0) traditional type of education which was hinged on only three pillars(Teaching, Research and Community Engagement) without incorporating the other two pillars (Innovation and Industrialisation) aligned with the global sustainable development goals(SDGs) and the United Nations' Vision 2030.

However, this swift technology integration across disciplines within the universities presents profound "universal costs" and ethical pitfalls [12]. Other critics assert that Generative AI (GenAI) is likely to undermine human reflexivity, possibly leading to the "beginning of idiocracy" particularly if students bypass the cognitive development crucial for intellectual mastery [3, 13]. Negative externalities include increased anxieties concerning virtual network addition, data privacy, and the "existential dread" closely linked to professional dislocation [11, 14]. Researchers increasingly recognise this duality: while AI offers customisable support, it concurrently intensifies the risk of psychological pressure and academic integrity stress [4, 15].

As AI adoption increases across the Global South, international frameworks from different organisations including UNESCO are being assessed for their role in global educational governance [16]. In Zimbabwe, the National Artificial Intelligence Strategy (2026–2030) and the MSU Science, Technology, Engineering and Mathematics(STEM) Strategy have been adopted to standardise technological utility. MSU's strategy specifically prioritises inclusive education, targeting to bridge the digital divide by offering affordable coding, robotics, and AI (CRAI) resources and correctional facilities to marginalised educational contexts [21]. Yet, despite these robust institutional efforts towards technical capacity, the specific measures for safeguarding student mental health within these high-intensity digital settings remain inadequately addressed [17, 20].

Research Questions

This current study seeks to bridge a critical empirical void by exploring the psychological implications of AI implementation among university students and lecturers. The key question guiding this research is: How does the integration of Artificial Intelligence into higher education pedagogy influence the nexus between academic efficiency and student psychological well-being within the Zimbabwean socio-technical context?

To address this overarching problem, the study is operationalised through the following specific sub-questions:

RQ1: What is the relationship between specific AI-mediated pedagogical habits, particularly generative research and automated summarisation and self-reported levels of academic anxiety among students?

RQ2: How effective are current institutional AI policies in mitigating "ethical panic" and academic integrity stress, given the existing gap between policy ratification and student awareness?

RQ3: How can a human-centred AI literacy and wellness framework be designed to balance technological efficiency with the enhancement of critical thinking skills and student psychological well-being?

Problem Statement

Despite the rapid explosion of Artificial Intelligence (AI) within the Zimbabwean higher education landscape, a

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profound empirical deficit remains concerning the psychological implications of these technologies on the student body. While institutional frameworks, most notably the National AI Strategy and Midlands State University's STEM Strategy emphasise the need for technological regulation, infrastructure development, and the optimisation of academic output, they significantly neglect the affective domain of the student and the perception of lecturers [17, 19, 21].

The MSU AI Policy vision, as articulated by the Midlands State University Pro Vice Chancellor, Professor Grace Mugumbate, concentrates on "driving meaningful innovations" and equipping students with "21st-century skills" to solve global challenges such as poverty and inequality [21]. However, this push for "algorithmic efficiency" often outpaces the development of wellness safeguards. Subsequently, students are navigating a "digital frontier" where the mandate for constant innovation, coupled with the persistent fear of sophisticated plagiarism uncovering in an growing Education 5.0 landscape, has induced a state of "ethical panic" and chronic anxiety [4, 15].

Such a phenomenon is likely to threaten the creation of a digital divide in students 'wellness. While MSU's initiative to provide affordable AI and robotics equipment to disadvantaged schools is a landmark step in bridging the *access* divide, it does not integrally solve the *psychological* divide [21]. Students may have the tools, but lacking the mental framework to manage the "Techno-Exhaustion" and cognitive atrophy that come from unmediated AI reliance. If left unaddressed, this tension may undermine the cognitive resilience of the very human capital central to Zimbabwe's Vision 2030. This study, therefore, explores the relationship between AI implementation and student mental health aiming to propose a framework for a more holistic, human-centred technological transformation at the studied public university and beyond.

LITERATURE REVIEW

Globally, the integration of Artificial Intelligence (AI) within higher and tertiary institutions(HTEIs) is fundamentally reshaping the dual pillars of pedagogy, andragogy and praxis. Conventional models of instruction prioritise active student participation as a prerequisite for developing high-order analytical and problem-solving skills [8, 20]. Within these traditional frameworks, the learner's journey is contingent upon critical reflexivity, typically fostered through discursive questioning and collaborative enquiry [21, 27].

However, the rise of Artificial Intelligence in Education (AIED) challenges these established boundaries, necessitating a rigorous re-evaluation of the distinction between machine-based data synthesis and human cognition. Whilst AI demonstrates unparalleled efficiency in data processing and "algorithmic reasoning", it frequently lacks the sophisticated comprehension, contextual nuance, and innate inventiveness characteristic of human intelligence [9, 11]. As noted by Luckin et al. [11], although AI can simulate intellectual processes, it cannot replicate the empathetic and creative depth of human educators, sparking a debate on whether AI serves as a "collaborative apprentice" or a replacement for the human mentor.

The Duality of AI: Educational Opportunities and Ethical Pitfalls

The successful integration of AI requires a nuanced understanding of both the technology and the socio-emotional context of the educational process. In the disciplines of the Arts and Humanities, this shift is particularly contentious. Scholars have highlighted the potential for "epistemic parochialism"—where technology-driven results lack the cultural depth and indigenous knowledge systems required for genuine scholarship [2, 11].

Furthermore, the deployment of generative AI has introduced significant ethical "frictions". There is compelling evidence that students may utilise AI-generated content in unapproved ways, leading to a breakdown in academic integrity and the subsequent erosion of student-teacher trust [16, 21]. Invasive monitoring and "algorithmic surveillance" also risk diminishing student autonomy, potentially transforming the learning environment into a site of suspicion rather than exploration [15, 21]. In the Zimbabwean context, where education has traditionally been teacher-centred and values-driven, the transition to AI-mediated learning represents a radical departure from the "transfer of traditions" toward a data-driven interface [28].

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Personalised Learning Systems and Adaptive Support

Conversely, AI presents transformative opportunities when applied through Intelligent Tutoring Systems (ITS) and adaptive learning platforms [10, 11]. These systems have been demonstrated to improve learning outcomes by providing real-time, tailored feedback that mimics the support of a human mentor, thereby correcting misconceptions timeously [9, 13]. Adaptive platforms such as those utilised in language learning like Duolingo or mathematics such as Dream Box, leverage AI to customise course materials to specific cognitive needs, contributing to a more efficient and effective learning trajectory [22]. Such learning systems effectively promote Self-Regulated Learning (SRL**)**, permitting students to adequately circumnavigate complex academic demands at a pace well-suited to their personal development [11].

A critical concern in contemporary scholarship is the alignment of AI with established educational theories. Although extensive research has interrogated technological barriers [23] and future prospects [24], few studies have rigorously examined how AI intersects with sociocultural or constructivist frameworks that prioritise critical thinking, context, and teamwork [9]. Furthermore, while studies in the Global North focus on resource-rich environments, there is a significant lacuna regarding under-resourced institutions in the Global South, where infrastructure remains a primary obstacle [2, 23]. This study addresses this gap by providing empirical evidence from the Zimbabwean context, advocating for a human-centred strategy that ensures AI serves to empower students rather than marginalise them through unmanaged psychological strain.

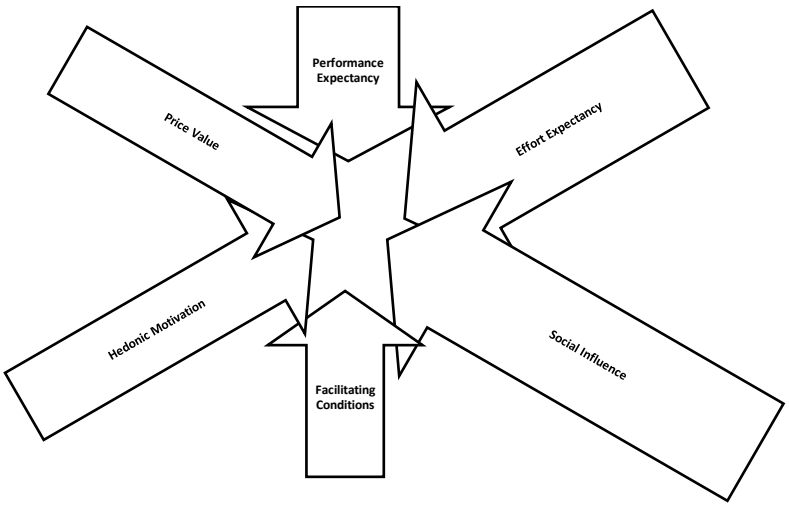
THEORETICAL FRAMEWORK

The Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

To unpack the multifaceted psychological and behavioural dimensions of AI acceptance, this study employed the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2), as elaborated comprehensively by Venkatesh, Thong, and Xu [26]. This framework is suited for research since it shifts the focus from organisational utility to consumer-based contexts, permitting for a nuanced examination of how individual student inspirations influence digital behaviour and, subsequently, psychological well-being.

The implementation of AI within the Faculties of Arts and Humanities, Education and Development Studies is determined by numerous core constructs that directly affect students' intention to use these tools. Figure 1 exemplifies the main features of the UTAUT2 Framework:

Figure 1 Key features of the UTAUT2 Framework



Source: Guvhu, 2026-Self-construction

- Performance Expectancy: The degree to which a student believes that employing AI for generative research and concept explanation enhances their academic output and efficiency [26].

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- Effort Expectancy**:** As Generative AI (GenAI) becomes increasingly conversational, the "effort barrier" decreases, fostering quick implementation. It is perceived that students are more likely to engage with tools that possess "user-friendly" visual interfaces and intuitive experiences [12, 22].

- Social Influence: The external pressures exerted by peers and lecturers. In a competitive situation, the "fear of falling behind" acts as an important catalyst for acceptance [15, 26].

- Facilitating Conditions: The availability of essential technical infrastructure, such as university computer laboratories and high-speed internet. In Zimbabwe, these conditions are critical in ensuring that acceptance does not worsen the digital divide [23].

- Hedonic Motivation: The perceived satisfaction resulting from utilising AI. When students find AI tools intellectually motivating or visually engaging, their psychological attachment to the technology deepens [26].

- *Price Value:* The cognitive trade-off between the perceived benefits of AI and related costs, such as mobile data subscriptions, a critical factor in resource-constrained educational contexts [23, 26].

UTAUT2 as a Lens for Digital Wellness in Higher Education Institutions

In the context of Zimbabwean universities, the UTAUT2 model provides a robust lens for understanding the "Digital Divide in Wellness". While high *Performance Expectancy* compels students to adopt AI for academic survival, it simultaneously introduces unique psychological stressors.

The relentless drive for efficiency often manifests as "Ethical Panic"—a state of heightened anxiety where students utilise AI to meet rigorous demands but live-in perpetual fear of "algorithmic judgement" or plagiarism detection [4, 16]. Furthermore, high *Effort Expectancy* (ease of use) can inadvertently foster an "Intellectual Crutch" phenomenon, where technological usefulness overrides the cognitive struggle necessary for deep, transformative learning [14]. This theoretical grounding facilitates the design of organisational policies that exceed mere technical regulation, moving towards a human-centred approach that preserves the mental resilience of the student body.

RESEARCH METHODOLOGY

This exploration employed a Pragmatic Research Paradigm (PRP), a philosophical framework that prioritises practical, real-world solutions to complex socio-technical phenomena over rigid ontological debates. In alignment with this paradigm, a Mixed-Methods Convergent Parallel Design (MMCPD) frequently termed, the Triangulation Model (TM) was used [21]. As illustrated in Figure 1, this design facilitated the simultaneous collection and independent analysis of both quantitative and qualitative data. These distinct datasets were subsequently merged during the interpretative phase to provide a robust validation of findings through cross-verification [23]. By integrating these modalities, the research bridges the critical gap between the statistical breadth of Artificial Intelligence (AI) adoption (the ‘what’) and the intricate pedagogical, psychological, and ethical implications (the ‘how’ and ‘why’) within the Zimbabwean higher education landscape [22].

Research Design and Triangulation Logic

The study employed Methodological Pluralism to mitigate the inherent biases and ‘blind spots’ associated with mono-methodological designs [24]. Quantitative data provided a generalisable map of AI prevalence and frequency, while qualitative ‘thick descriptions’ captured the nuanced complexities of lived experiences—particularly user perceptions, mental health considerations, and the ethical dilemmas increasingly shaping academic practice [25].

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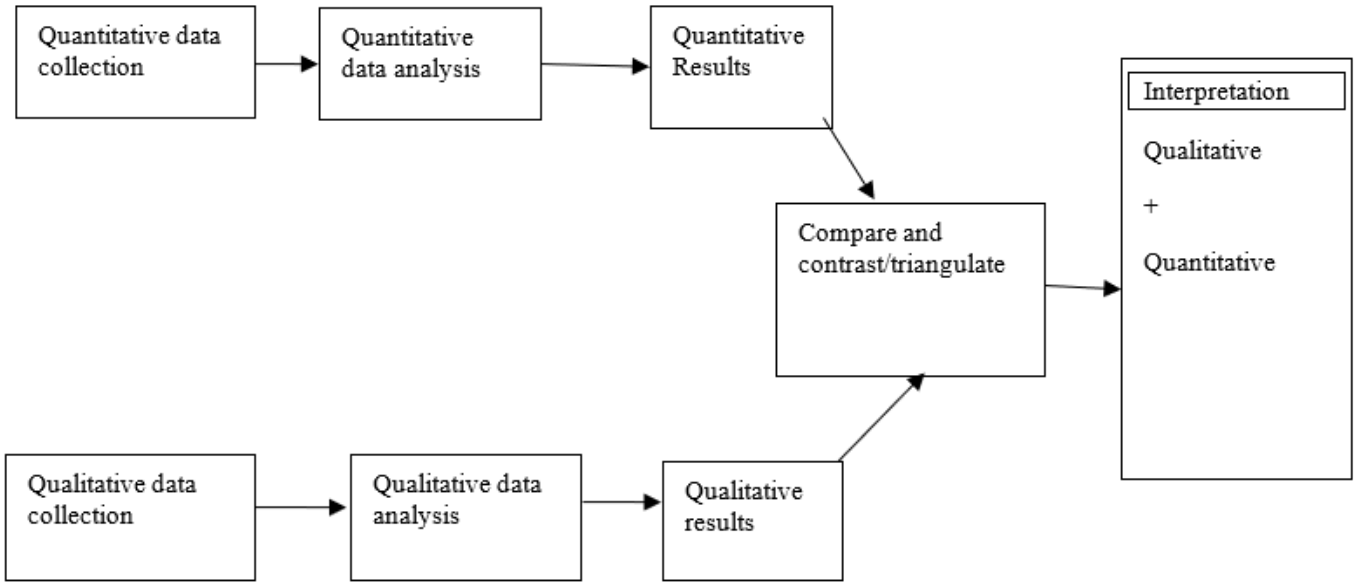
Figure 2: Convergent Parallel Mixed-Methods Design (Triangulation Model)



Source: Adapted from Creswell (2007).

As shown in Figure 2, the methodology follows a rigorous parallel track where Quantitative Data Collection and Qualitative Data Collection occur concurrently but remain independent during the initial analysis phase. The critical juncture of this methodology is the Compare and Contrast/Triangulate stage. This synthesis allows a meta-inference during the interpretation phase that is more sophisticated and multifaceted than either method could achieve in isolation [23].

Target Population and Sampling Framework

In a bid to address the issues concerning generalisability and the limitations of single-department inquiries, the study's scope was expanded to encompass three distinct faculties at Midlands State University (MSU), Zvishavane Campus: The Faculty of Arts and Humanities (FAH), the Faculty of Education (FED), and the Faculty of Development Studies (FDS). This multidisciplinary structure ensures that findings reflect diverse disciplinary cultures and pedagogical contexts. Thus, the total target population (N) comprised 1,250 individuals.

To ensure statistical rigour and a 95% confidence level, Slovin's Formula was applied to determine the quantitative sample size (n):

$$n = \frac{N}{1 + N(e^2)}$$

$$n = \frac{1250}{1 + 1250(0.0025)} = \frac{1250}{4.125} \approx 303$$

Using a margin of error (e) of 0.05, the calculation yielded a statistically significant sample of 303 students. A stratified random sampling technique was employed to ensure proportional representation across these three faculties. For the qualitative phase, the study used purposive and convenience sampling to select 30 lecturers (10 per faculty) and 72 students for focus group discussions (FGDs) [27]. Greater emphasis was placed on Level 4

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(final-year) students, as their sustained involvement in research-based learning and dissertation preparation makes them key informants for exploring AI-mediated academic development.

Data Collection Instruments

A multi-instrument approach was adopted to enhance validity and reliability in line with established research protocols [26]. The instruments included:

- Questionnaires: Semi-structured digital instruments were administered via Kobo Collect. A pilot test (n=20) produced a Cronbach's Alpha of 0.82, confirming strong internal consistency.
- Focus Group Discussions (FGDs): Six FGDs were conducted (two per faculty). Each group had 12 participants, balanced by gender, and included students actively involved in Work-Related Learning (WRL) to capture perspectives on AI use in professional and fieldwork contexts.
- In-depth Interviews: Semi-structured interviews were conducted with 30 lecturers to explore evolving pedagogical practices and concerns related to assessment integrity [25].
- Direct Observation: Non-participant observation was conducted during in-class assignments, focusing on real-time interaction with AI tools, particularly mobile-based Meta AI and WhatsApp-integrated tools.

Data Analysis and Systematic Coding Process

Quantitative data were analysed using descriptive and inferential statistics with SPSS and Microsoft Excel. Qualitative data followed Braun and Clarke's (2006) six-step thematic analysis, implemented through iterative coding cycles.

Table 1: The Thematic Coding Process (Lecturers + FGDs)

Phase	Activity	Outcome
Coding I (Open)	Line-by-line identification of key phrases.	45 initial codes like WIFI Data bundle prices, Turnitin anxiety & fear.
Coding II (Axial)	Grouping codes into conceptual categories.	12 categories (e.g., Economic/Financial Access", "Academic Integrity").
Coding III (Selective)	Refining categories into overarching themes.	3 Core Themes: (1) Ethical Ambivalence; (2) Digital Inequality; (3) Pedagogical Evolution.

To ensure transparency and systematic verification, a formal Data Integration Plan was established (Table 2) to align findings across the parallel tracks.

Table 2: Data Integration and Verification Matrix

Phase	Instrument	Analysis Method	Verification/Reliability
Quantitative	Kobo Questionnaire	Descriptive & Inferential Stats	Cronbach's Alpha (0.82)
Qualitative	Interviews & FGDs	Thematic Coding Process	Inter-rater Reliability Checks
Observation	Observation Guide	Descriptive Narrative	Triangulation with Survey Data

Ethical Considerations and Research Limitations

The research adhered strictly to international ethical protocols, with formal clearance granted by the MSU Research Ethics Committee (2025). Written informed consent was obtained prior to any data solicitation. The study acknowledges Self-Reporting Bias as a limitation, as students may minimise disclosure of AI use due to fear of academic penalties; this was mitigated through absolute guarantees of anonymity and data encryption [28]. While single-site bias was addressed by expanding the faculty scope, the study remains limited to one

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campus. Future research is recommended to involve cross-institutional comparisons across Zimbabwe to further strengthen generalisability and policy relevance within the context of the national AI strategy.

FINDINGS AND DISCUSSION

The findings of this study emerge from an integrated analytical framework that harmonises quantitative statistical trajectories with qualitative, lived-experience narratives. This convergent methodology elucidates the multifaceted relationship between Artificial Intelligence (AI) adoption and student mental health within the multidisciplinary ecosystem of Midlands State University (MSU), specifically across the Faculties of Arts and Humanities (FAH), Education (FED), and Development Studies (FDS).

By synthesising empirical data from a refined sample (n=303) with the thematic insights gathered from students and academics, the research reveals a digital landscape defined by an emotional dialectic: the relentless pursuit of algorithmic efficiency versus profound psychological strain. This tension is situated within Zimbabwe's Education 5.0 transition, where the institutional imperative for innovation frequently collides with the socio-economic and ethical vulnerabilities of the student body.

Demographic Architectures and Digital Identity

The demographic profile of the participants offers the essential platform for comprehending their digital engagement within the studied settings. The application of a multidisciplinary data from the three faculties guarantees that these findings are representative of the wider university setting, providing a generalisable narrative of the modern-day Zimbabwean higher education experience.

Table 3 : Demographic Profile of Respondents (n=303)

Variable	Category	Frequency (n)	Percentage (%)
Faculty	Arts and Humanities	104	34.3%
	Education	98	32.3%
	Development Studies	101	33.4%
Age Bracket	18–22 years	77	25.4%
	23–27 years	209	69.0%
	28+ years	17	5.6%
Level of Study	Level 1–3	63	20.8%
	Level 4	240	79.2%

(Source: Field Data, 2025-2026)

The equitable distribution across faculties validates the stratified random sampling method, mitigating identified biases. Notably, the sample is dominated by Level 4 students (79.2%), a statistic of primary importance. These individuals are currently navigating high-stakes dissertation research; and their reliance on AI tools as well as the attendant anxieties concerning critical thinking and research ethics that are currently at an evolving stage. Figure 2 shows the distribution of students population by age.

As depicted in Figure 3, the student population is overwhelmingly dominated by the 23–27 age bracket (69.0%), followed by the 18–22 group (25.4%), with negligible representation of those below 18.

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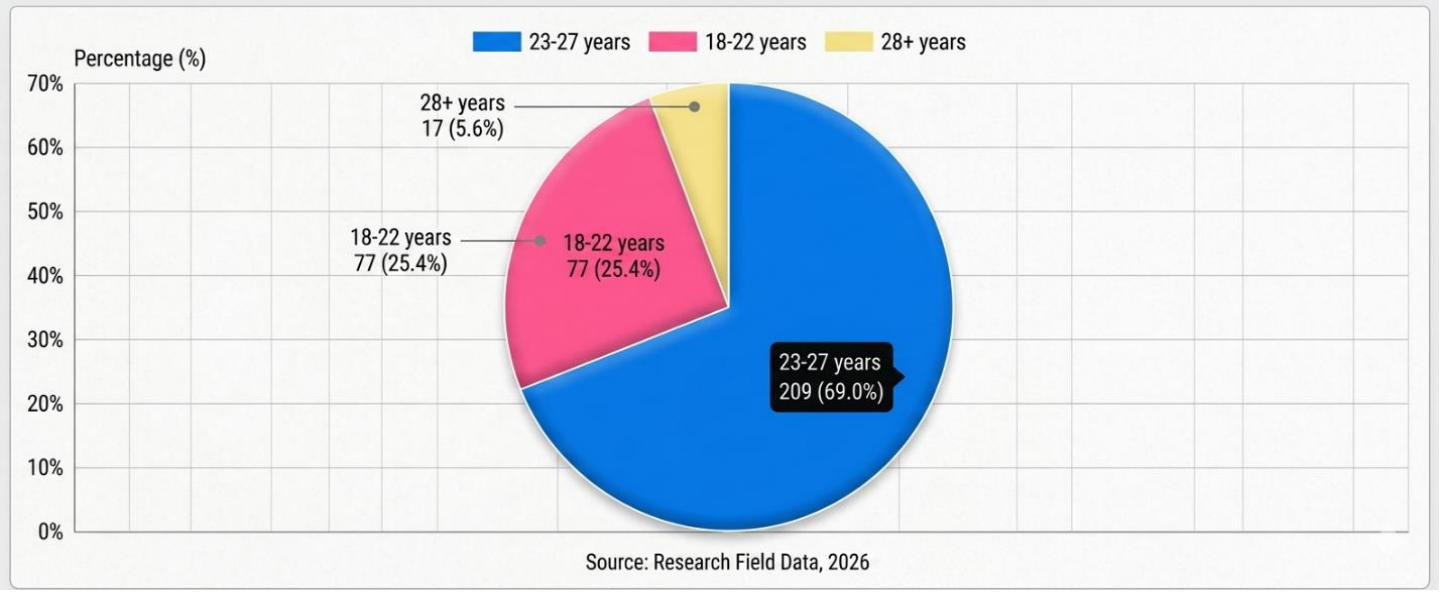
Figure 2: Demographic Characteristics by Age



As shown in Figure 3, the student population is overwhelmingly dominated by the 23–27 age bracket (69.0%). This distribution characterises the sample as a group of "developed digital people", who are not simply inactive technology -users but are actively infusing digital tools into their professional and academic work. Within this "Mental Stage," the sample shows a high-Performance Expectancy, perceiving AI as a non-negotiable partner in their academic activities.

Gendered Dimensions of AI Adoption and Anxiety

The population is significantly skewed toward females (59.1%) compared to males (40.9%), reflecting broader enrolment trends within the Faculties of Education and Development Studies. This demographic composition is vital when analysing the psychological dimensions of the study.

Qualitative insights from Focus Group Discussions (FGDs) indicate that female students frequently reported higher levels of "Turnitin Anxiety" which is a specific form of academic integrity stress aggravated by the perceived imperviousness of AI-detection algorithms. Female participants demonstrated a greater tendency to utilise AI for both instructional and emotional support, indicating that for this group, AI functions as a "digital companion" that mediates the stress of high-stakes academic requirements. One of the female participants from the Faculty of Arts and Humanities commented that:

"I really thank AI innovators for bring this user-friendly technology to our classroom, I download a lot of relevant information through ChatGPT, Google Gemini and can easily cross check language issues through Grammarly but umm! The panic when lecturers put it to test plagiarism eish I hesitate to see the Turnitin report, the red colours showing its not original work but AI production…"(Participant S6,Faculty of Arts and Humanities)

While these female students greatly appreciate the merits of the AI tools, they however, feel some mental torture when their work is tested for plagiarism and originality. If the percentage is above the expected index the entire work would be returned for reworking. On the contrary, male participants often framed AI use through the lens of efficacy and technical optimisation. Despite these differing motivations, both genders articulated a shared anxiety about the "Policy Awareness Gap", with 33.7% of the total sample feeling uninformed about institutional AI regulations. The general perception was that the AI policy for the studied institution was not very clear about how students should apply AI tools in performing their academic assignments.

The study found that a systemic disconnect exists between university policy and lived reality. While the university seeks to professionalise pedagogy by migrating to official Learning Management Systems (LMS), the

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transition inadvertently penalises the socio-economically disadvantaged. The "Data Costs" functions as a gatekeeper, turning Education 5.0 into an exclusive digital enclave for those who can afford the high cost of participation. This perceived inadequacy creates a sense of being less prepared than their laptop-owning peers, highlighting that the digital divide has evolved from a simple lack of internet connectivity into a more complex and corrosive "Divide in Wellness."

This hardware-based wellness gap is most evident in the significant correlation between technological access and mental resilience. Students without consistent laptop access reported markedly higher levels of "Turnitin Anxiety", a specific academic distress where the inability to perform high-level verification makes the submission process feel like a precarious gamble against plagiarism detection algorithms. This stress is compounded by the high cost of participation; with 58.8% of the sample identifying data costs as a prohibitive barrier, the hardware hierarchy further entrenches academic inequality.

Techno-Exhaustion

The results show that the hardware divide creates a secondary "labour rift" among staff, where the burden of verifying AI-generated work conflicts with restricted resources and individual limitations.

Staff Digital Poverty

Limited financial resources do not only apply to students. The qualitative focus group discussions with lecturers shows that some lecturers do not afford WIFI data to work through Google Classroom, portals and process Turnitin results for students. The following sentiments were shared by one lecturer from the Faculty of Development Studies.

"Really, we can’t afford to be (consistently) on the Google Classroom, portals, and Turnitin... it's just not sustainable with the current WIFI data costs." (Participant L04, Male Lecturer, Development Studies).

The results suggest a need for the institutions to adequately provide both students and lecturers with sufficient AI resources and infrastructure required for efficient and effective deployment of AI into instructional practices across disciplines.

Gendered Techno-Stress

Furthermore, female lecturers felt they were congested with a lot of domestic chores at home to the extent that they failed to find adequate time to concentrate on verifying students’ AI-generated content. For instance, a female participant from the Faculty of Education(L03), echoed the following sentiments:

"With all the household chores expected of a woman like myself, having time to conduct and verify students’ AI-generated content... is irksome. At times I just ignore and score." (Participant L03, Female Lecturer, Education)

The admission of the "ignore and score" phenomenon by L03 is a chilling indicator of how hardware and time poverty erode academic quality. The intersection of gendered domestic labour and the new demands of AI-verification creates a state of Techno-Exhaustion. When the gatekeepers of quality cannot afford consistent access, the entire pedagogical structure of Education 5.0 is certainly threatened.

The Hardware Hierarchy and Wellness Equity

The results indicate that hardware access was recognised as far more than a matter of technical convenience. It was shown as a vital determinant of wellness equity. This study construed wellness equity as the capacity of a student or academic to maintain psychological resilience and academic efficacy under the growing pressures of digital transformation. Findings confirm that the digital landscape at MSU is characterised by a rigid hierarchy of technological tools. Figure 4 displayed the primary gadgets utilised by students for their academic work including assignments and dissertations.

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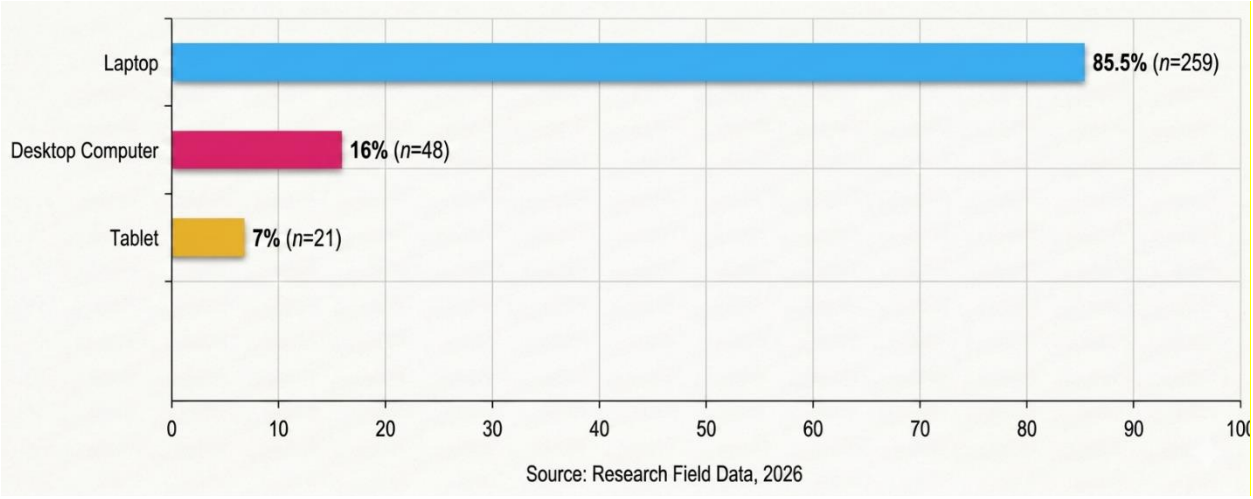
Figure 4: Primary Gadgets Used by Students for Academic Work (n=303)



As shown in Figure 4, data analysis indicates that the laptop has emerged as the undisputed "academic station" for the vast majority of respondents (85.5%, n=259). While the desktop computer remains a relevant secondary resource (16%, n=48), largely due to the availability of institutional computer laboratories, tablets (7%, n=21) and smartphones occupy marginal, often insufficient positions within formal academic processes. This disparity creates a "Hardware Hierarchy," where students relying solely on mobile devices are "technologically hollowed-out" and ill-equipped for the complexities of AI-integrated research.

Patterns of Generative AI Engagement and the Paradox of Convenience

The integration of Artificial Intelligence (AI) within the MSU academic ecosystem has moved rapidly from the periphery to the core of student activity. This represents a fundamental alteration in the nature of academic engagement.

Cross-Faculty Frequency of AI Engagement

Quantitative data indicates a pervasive "normalisation" of AI tools. As shown in Table 4, usage patterns are remarkably consistent across the three surveyed faculties, indicating that AI adoption is a university-wide phenomenon regardless of discipline.

Table 4: Student Frequency of AI Usage by Faculty (n=303)

Frequency	FAH (n=102)	FED (n=95)	FDS (n=106)	Aggregate %
Daily	25	22	28	**24.8%**
Several times per week	49	46	52	**48.5%**
Rarely	15	18	16	**16.2%**
Never	13	9	10	**10.5%**

The data reveals that **73.3%** of the total sample engage with AI tools at least several times a week. Qualitatively, AI is described as an "invisible tutor" that compensates for a lack of one-to-one human academic support. This trend was corroborated by faculty observations; a senior lecturer (L07) noted: *"The speed at which students are turning around complex abstracts has increased... they are no longer spending weeks in the physical library; they are spending hours prompting these machines."*

The functional application of Artificial Intelligence (AI) at Midlands State University (MSU) reveals a prioritisation of conceptual comprehension over content generation. As illustrated in the quantitative results, 61.3% (n=186) of students utilised AI to comprehend complex concepts, while 21.5% (n=65) confirmed applying these tools for ideation (Figure 5).

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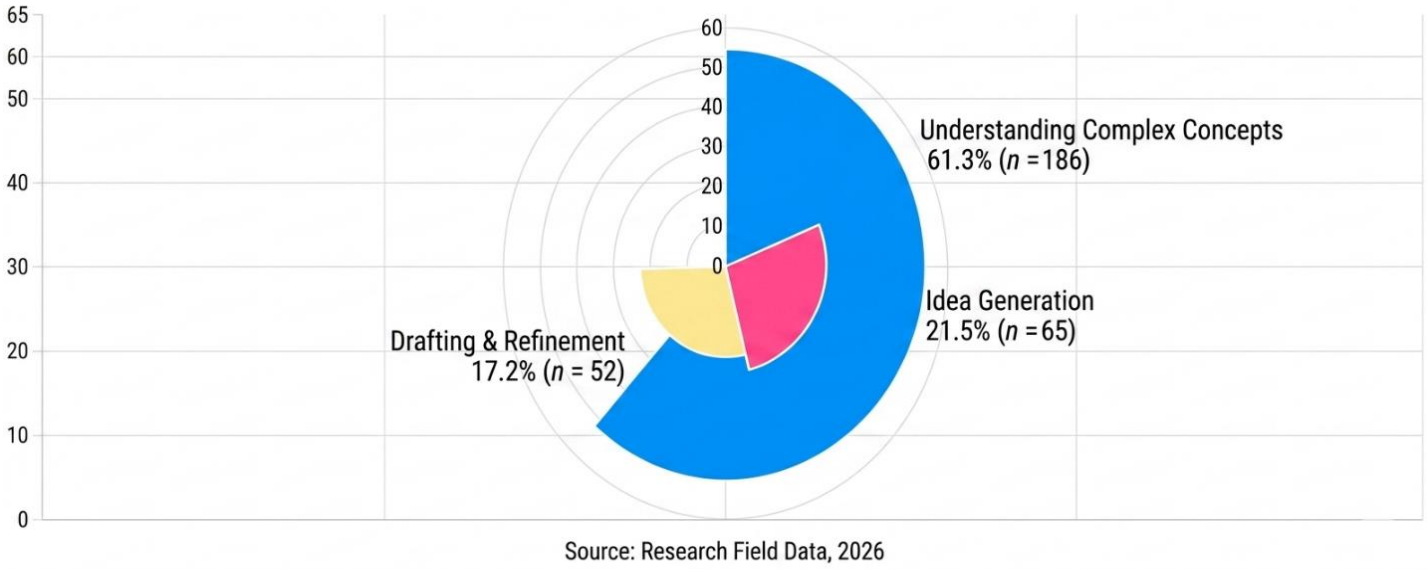
Figure 5 Students' Utilisation of AI-tools



Source: Research Field Data, 2026

Notably, only 17.2% (n=52) indicated that they used AI tools for the actual drafting and refining of assignments and dissertations.

Qualitative data reinforces this trend, suggesting that students prefer AI as a cognitive "scaffold" for clarifying difficult terminology rather than a primary writing assistant. For instance, a final-year student from the Faculty of Arts and Humanities observed:

"AI tools like ChatGPT and Google Gemini are excellent for defining and clarifying difficult concepts... and restructuring new ideas. However, when it comes to drafting and refining my work, I can do so easily... though Turnitin reports will detect that I paraphrased the content."

This assertion reflects a significant degree of "Turnitin Anxiety" and "Integrity Dread," where the fear of algorithmic detection prevents students from fully exploring AI's drafting capabilities.

Policy Ambiguity and the Need for AI Awareness

The findings further highlight a critical deficit in AI literacy and institutional guidance. Many students remain unclear regarding the boundaries of ethical AI usage, as evidenced by the conflicting pedagogical approaches encountered across different modules. A first-year Development Studies student highlighted the confusion stemming from the absence of a specific university AI policy:

"It's quite confusing what our university policy says... Some lecturers just endorse and put a mark... but in our common module, a lecturer was bitter about the use of AI-generated content. She said she will not mark AI content. I'm stuck really."

This "legal vacuum" contributes to a "Digital Divide in Wellness," where students experience "Techno-stress" due to inconsistent expectations. There is an urgent requirement for AI-awareness sessions and a formalised institutional policy, aligned with the National AI Strategy (2026–2030), to guide both students and lecturers on the acceptable parameters of AI integration across various disciplines. These findings mandate a shift from passive observation to active strategic intervention. The evidence suggests that the current "Education 5.0" implementation must be fortified with specific digital wellness safeguards.

Structural Barriers: The Hardware Gap and Psychological Distress

Despite the clear pedagogical necessity for dedicated "academic stations," the "hardware gap" remains a significant source of psychological distress within the student body. The high cost of laptops renders them a

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luxury for many, establishing a "Hardware Hierarchy" where access to quality research tools is dictated by socio-economic status. As Participant S12 from the Faculty of Education lamented:

“I always fail to get access to a user-friendly machine for verifying AI outputs against my individual research drafts. The laptops in Gweru city are selling for more than $500 USD, which is almost equivalent to my semester fees! It’s unaffordable, really”.

The study confirms that while laptops are viewed across genders as essential for effective AI employment, the lack of funding for such hardware creates a structural barrier to success. Students without access to laptops are effectively forced into a state of "secondary scaffolding," relying on smartphones that are insufficient for processing large volumes of AI-generated content or maintaining rigorous scholarship standards. Addressing these infrastructural disparities is essential to fulfilling the National AI Strategy goals while protecting the cognitive resilience, mental health, and academic agency of the Midlands State University community.

Barriers to Digital Wellness Equity: A Thematic Analysis

The transition towards the 'Education 5.0' paradigm at Midlands State University (MSU) has illuminated a profound systemic disconnect between institutional digitisation strategies and the socio-economic realities of the student body. While the migration to official Learning Management Systems (LMS) and Google Classroom is intended to professionalise pedagogy, the empirical evidence suggests these transitions inadvertently marginalise students from lower socio-economic backgrounds.

Table 5: Qualitative Thematisation of Barriers to Digital Wellness Equity

Barrier Type	Representative Narrative (Student S09)	Implications for Student Wellness
Institutional Friction	*"University barring WhatsApp... authorised platforms like Google Class are difficult to access."*	Heightened feelings of psychological exclusion and alienation from the formal academic community.
Data Imparity	*"11 gigabytes cost ZW501.00 ($13 USD equivalence) and won’t last for a week."*	Chronic financial anxiety, resource-induced stress, and acute academic precarity.
Hardware Stratification	*"Lack of smartphones or user-friendly gadgets... we can't afford them."*	Internalised inferiority; a perception of being fundamentally disadvantaged compared to affluent peers.

As evidenced by these findings, "Data Costs" function as a formidable digital gatekeeper, effectively transforming the university into an exclusive enclave rather than an egalitarian space. This suggests that without targeted socio-economic intervention, technological advancement may exacerbate existing social inequalities.

The ‘Shadow Side’ of Integration: Socio-Academic Erosion

Despite measurable gains in efficiency, AI adoption is fraught with significant psychological and ethical friction. Table 7 highlights a concerning trend towards the erosion of traditional academic rigour and social cohesion.

Table 6: Ranked Negative Consequences of AI Engagement

Rank	Consequence	Response Count (n)	Percentage (%)
1	Diminished personal effort in peer-to-peer study	108	35.6%
2	Anxiety regarding plagiarism and detection	72	23.8%
3	Exposure to incorrect or 'hallucinated' information	58	19.1%
4	Cognitive dependency (difficulty writing without AI)	46	15.2%
5	No negative experiences reported	19	6.3%

The integration of Artificial Intelligence within the academic sphere at the studied context has precipitated a notable "withering" of collaborative learning, marked by a significant 35.6% reduction in peer-to-peer study engagement. This shift suggests that students are increasingly substituting human interaction with AI as a

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primary "peer," a trend that fosters social isolation and weakens the communal foundations of education. Participant S22 from the Faculty of Development Studies emotionally illustrated this erosion of social bonds, observing that students now sit in the same physical spaces yet remain siloed, interacting with their devices rather than with one another.

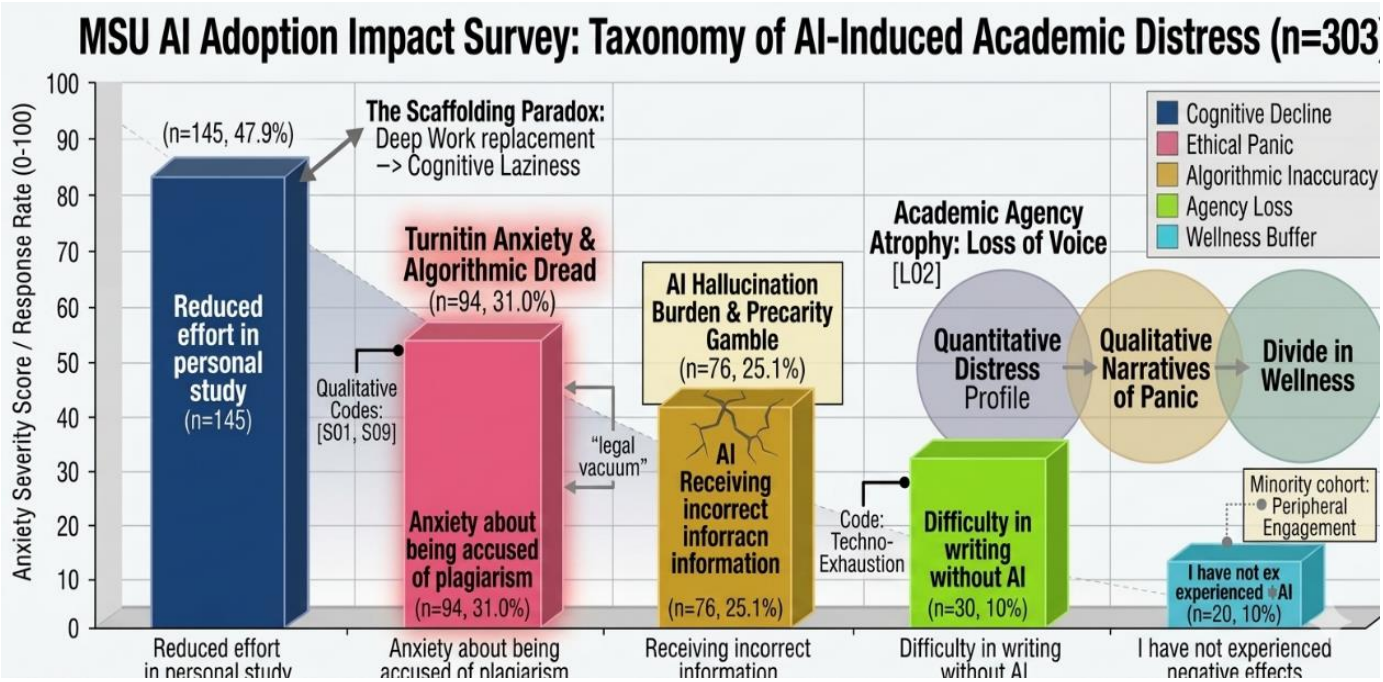
Furthermore, the study identifies a pervasive climate of "Ethical Panic," where 23.8% of respondents experience acute "Turnitin Anxiety". This distress is significantly exacerbated by a critical "Policy Awareness Gap," as 33.7% of students report feeling entirely uninformed regarding institutional AI regulations. This lack of clarity transforms a potentially innovative tool into a source of psychological dread, as students navigate a landscape where the boundaries of academic integrity remain poorly defined.

Finally, the onset of cognitive dependency represents a burgeoning challenge to information integrity, with 15.2% of participants admitting an inability to perform original writing tasks without AI assistance. This reliance is particularly precarious when contrasted with the 19.1% of users who have faced academic humiliation due to AI "hallucinations"—the generation of factually incorrect or fabricated data. These findings collectively highlight a troubling progression toward academic agency atrophy, where the convenience of automation risks compromising both the accuracy of scholarship and the cognitive resilience of the student body.

Taxonomy of AI-Induced Academic Distress

Figure 6 shows the elements of AI-induced academic distress summarising the results of a AI adoption impact survey at the chosen university revealing a diverse range of concerns. At the forefront of these concerns is the "Scaffolding Paradox," which influences approximately 47.9% (n=145) of the sampled population. This phenomenon describes a significant reduction in personal study effort as students increasingly outsource "Deep Work" to generative AI tools.

Figure 6 Taxonomy of AI-Induced Academic Distress(n=303)



The resulting cognitive decline suggests that while AI provides a functional support structure, it simultaneously encourages a form of "cognitive laziness" that threatens the development of foundational academic skills.

Secondary to cognitive concerns is the emergence of "Ethical Panic," primarily manifesting as "Turnitin Anxiety" and "Algorithmic Dread" for 31.0% (n=94) of respondents. Students report persistent fear regarding false accusations of plagiarism, a situation exacerbated by a perceived "legal vacuum" where institutional policies have not yet adapted to the nuances of AI-assisted authorship. This atmospheric dread is compounded

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by the "Hallucination Burden," affecting 25.1% (n=76) of the cohort, who struggle with the "Precarity Gamble" of receiving and potentially submitting incorrect information generated by AI.

Furthermore, the data indicates a critical erosion of academic self-reliance, termed "Academic Agency Atrophy". Approximately 10% (n=30) of students now report an inability to write effectively without the intervention of AI, leading to a profound "Loss of Voice" and chronic "Techno-Exhaustion". These metrics underscore a widening "Divide in Wellness" between the majority of students experiencing these stressors and a small minority cohort (10%) who remain in a "Wellness Buffer" due to peripheral engagement with the technology.

Ultimately, these quantitative distress profiles, mapped across the Faculties of Arts and Humanities, Education, and Development Studies, demand a strategic institutional response. The findings suggest that the integration of AI within the "Education 5.0" framework must be balanced with robust mental health safeguards and clear ethical guidelines. To prevent students from becoming "technologically hollowed-out," MSU must address the hardware hierarchy and provide the qualitative "thick descriptions" needed to help students navigate the psychological impact of digital innovation.

CONCLUSION

The integration of Artificial Intelligence (AI) within the Zimbabwean higher education landscape represents a fundamental shift from a traditional instructional model to a high-intensity "Mental Age" defined by algorithmic mediators. While the adoption of tools like ChatGPT and Google Gemini has demonstrated significant "Performance Expectancy" by acting as "always-on" tutors that enhance academic efficiency, this study reveals that technological progress is currently decoupled from psychological safeguards. The transition toward Education 5.0 has inadvertently birthed a "Divide in Wellness," where the drive for innovation outpaces the development of affective support systems.

The findings highlight a "Hardware Hierarchy" that exacerbates socio-economic disparities, as mobile-only users often find themselves in a "technologically hollowed-out" state compared to peers with dedicated academic stations. Furthermore, the lack of a clear "legal vacuum" in institutional policy has fostered "Turnitin Anxiety" and a pervasive sense of "ethical panic" among students who fear algorithmic judgment. For faculty, particularly female lecturers, the shift has introduced "Techno-Exhaustion" as they navigate the increased rigors of AI-output verification alongside traditional domestic and professional responsibilities. Ultimately, if AI is to serve as a "collaborative apprentice" rather than a source of cognitive atrophy, institutions must move beyond mere technical regulation toward a human-centered framework that prioritizes the mental resilience and critical reflexivity of both students and educators.

Strategic and Context-Specific Recommendations

The findings of this study provide a critical empirical foundation for aligning institutional practice with Zimbabwe's National Artificial Intelligence Strategy (2026–2030) and the Education 5.0 philosophy. To ensure that the transition toward an AI-integrated campus does not compromise student mental health or academic integrity, Midlands State University (MSU) must implement the following functional, human-centered interventions:

Standardisation of Training: Cultivating Ethical AI Literacy

Institutional leadership must pivot the AI discourse from administrative regulation to active classroom integration.

- **Mandatory AI Literacy Certifications**: MSU should mandate "AI Literacy" certifications across the Faculty of Arts and Humanities, Education, and Development Studies to move beyond the current state of "ethical panic" and academic uncertainty.

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- **Critical AI Consumption**: Training must transition from basic technical operation to "critical AI consumption," teaching students to view generative tools as "collaborative apprentices" rather than cognitive replacements for human mentors.

- **Demystifying Boundaries**: Rather than focusing exclusively on the surveillance and "detection" of AI-generated content, universities should utilize workshops to provide students with clear, transparent guidelines, replacing the fear of the "Turnitin Trap" with principled partnership.

- **Faculty Empowerment**: Specific programs are required to mitigate "Techno-Exhaustion," particularly for female lecturers, by providing automated tools for high-volume AI-output verification and adjusting workloads to account for digital auditing rigors.

Pedagogical Evolution: Restoring the "Pedagogy of the Struggle"

Current pedagogical models should be reimagined to prioritize the rigorous process of inquiry over the final academic product.

- **Diversified Assessment**: Departments should shift weight toward "AI-assisted vivas" (oral examinations), proctored in-class writing tasks, and synchronous reflections that prioritize the visible process of critical thinking over the polished final text.

- **Human-Centric Grading**: Assessment rubrics must be redesigned to reward "human-exclusive" traits such as contextual nuance, indigenous knowledge systems, and original creative inventiveness that machines cannot yet replicate.

- **Reclaiming Cognition**: By reintroducing reflective learning journals, educators can encourage students to reclaim the cognitive "heavy lifting" that Generative AI frequently seeks to bypass.

- **Ethical Safe Harbours**: Institutional AI policies must be communicated through multiple channels to close the "legal vacuum," providing students with a clear "safe harbour" for the legitimate use of AI in preliminary research and brainstorming.

Wellness as Competency: Bridging the "Wellness Divide"

University wellness centres must begin to treat "techno-stress," "algorithmic anxiety," and "integrity dread" as legitimate psychological experiences requiring clinical attention.

- **Integrated Mental Health Frameworks**: Student support services should integrate "Digital Wellness" modules into their existing mental health frameworks to address the specific anxieties linked to AI-mediated learning.

- **Zero-Rated Academic Access**: In alignment with national goals for technological utility, the university should negotiate with telecommunications providers to provide "zero-rated" or subsidized access to approved academic AI platforms and digital library databases.

- **Hardware Equity Initiatives**: To dismantle the rigid "Hardware Hierarchy," the institution must expand computer laboratory hours and provide subsidised laptop schemes, ensuring mobile-only users are not left in a "technologically hollowed-out" state.

- **Connectivity Subsidisation**: Given that "Price Value" is a core construct influencing technology acceptance, reducing the financial burden of high-speed internet data is a direct intervention against chronic student academic anxiety.

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Ethical Considerations

- **Ethical Approval**: This research was conducted under the rigorous oversight of the Midlands State University Research Ethics Committee (Reference: 2025-EC2834-01R), ensuring all protocols met national and international standards for human-subject research.

- **Informed Consent**: Participation was approached as a collaborative engagement; all students and lecturers provided written informed consent prior to data solicitation, acknowledging their absolute right to withdraw from the study at any juncture without prejudice.

- **Conflict of Interest**: The authors declare no competing interests, financial or otherwise. This inquiry was driven solely by a commitment to advancing the understanding of the human impact of emerging technologies within the Global South.

Data Availability Statement

In the interest of academic transparency and the advancement of digital humanities research, the quantitative datasets supporting these findings have been separately attached as requested. However, to safeguard the personal narratives, unique digital footprints, and privacy of the participants—particularly regarding sensitive mental health disclosures and "ethical panic" narratives—the qualitative transcripts and recordings remain strictly confidential.

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