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The impact of generative artificial intelligence on academic assessment in Bhutanese higher education: Lecturers' perspectives

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ABSTRACT

This study explored the impact of general artificial intelligence (GenAI) on assessment in Bhutanese higher education through lecturers' perspectives. A mixed-methods research design was employed, combining quantitative survey responses from 76 lecturers with qualitative data from open-ended questions. The findings indicated that lecturers recognize the increasing use of GenAI tools by students in academic tasks. While many perceive educational benefits when such tools are used responsibly, there are significant concerns about potential undermining of academic integrity through plagiarism, over-dependence, and skill erosion. The results also suggest a strong willingness to adapt assessment approaches to account for GenAI; however, levels of preparedness vary due to limited familiarity with GenAI tools and institutional support. Furthermore, the study highlights a notable gap in institutional support systems. Although lecturers are open to change and innovation, institutional responses lag behind the pace of technological adoption. To ensure effective integration of GenAI in higher education, institutions must develop clear policies and invest in faculty development initiatives that promote informed use of AI technologies. The study provides a foundational understanding to inform future policies, teaching innovations, and institutional planning in the era of GenAI-advanced education in Bhutan.

Contribution/ Originality: The first study of its kind in Bhutan makes the insights locally significant. It offers guidance for future policy and practice in assessment design, especially regarding academic integrity and pedagogical adaptation in the age of AI. Additionally, it augments global understanding of how evolving technologies intersect with education systems in developing countries.

1. INTRODUCTION

1.1. Background

Generative Artificial Intelligence (GenAI), a subset of artificial intelligence technologies, has emerged as a powerful tool capable of generating new content such as text, images, music, and code (Chiu, 2024). Unlike conventional AI systems that focus on data analysis and pattern recognition, GenAI is designed to produce novel outputs based on training data (Barrett & Pack, 2023). The advancement and use of GenAI tools, particularly ChatGPT, have enabled a transformative period for higher education (Al-Zahrani, 2024). This change implies a move towards improved efficiency and customization, though it is accompanied by a set of complex ethical matters (Chiu, 2024; Perera & Lankathilake, 2023). AI's incorporation into education is already changing how learners engage with information and how educators embrace instruction (Chen, Chen, & Lin, 2020; Zhang & Aslan, 2021). As GenAI

becomes more integrated into the academic system, its ability to personalize learning and provide real-time feedback expands, positioning it as a significant force in educational transformation (Chiu, 2024; Su & Yang, 2023).

The upsurge of GenAI in higher education presents both opportunities and challenges, particularly in the field of academic assessment. Traditional assessment methods, which are classically manual, time-intensive, and teacher-centered, are progressively becoming inadequate for assessing student learning in a digital age (Broadbent, 2017; Knight & Drysdale, 2020). GenAI presents innovative approaches to assessing students' performance, but concurrently obscures issues of academic integrity. Tools such as ChatGPT facilitate students in completing tasks like essays and exams with ease, raising concerns over plagiarism and the authenticity of submitted work (Moorhouse, Yeo, & Wan, 2023). Moreover, educators face challenges in differentiating between AI-generated and student-produced outputs, undermining the trustworthiness of traditional assessment practices (Chan & Hu, 2023). As higher education institutions contend with these advances, there is a pressing necessity to reform assessments and develop new policies that uphold academic standards while obliging technological transformation (Hodges & Kirschner, 2024; Rajaram, 2023). Despite the swift incorporation of GenAI, research into its specific impacts on assessment remains inadequate, indicating a critical gap in the prevailing body of literature (Chiu, 2024).

The discourse on the effect of GenAI on assessment in higher education is a developing conversation (Alasadi & Baiz, 2023; Bannister, Santamaría-Urbieta, & Alcalde-Peñalver, 2023; Kasneci et al., 2023; Michel-Villarreal, Vilalta-Perdomo, Salinas-Navarro, Thierry-Aguilera, & Gerardou, 2023), and addressing challenges related to assessment in the GenAI context has become a research focus that entails a greater focus (Chiu, 2024).

Bhutanese HEIs are entering a critical stage, where the prevalent use of GenAI in academic settings is restructuring traditional approaches to learning and assessment. While the global academic community continues to face the implications of AI-driven tools, Bhutanese HEIs are no exception to the challenges and opportunities presented by this technological shift. Yet, despite the increasing indications of GenAI usage in educational settings, research on its impact on academic assessment in Bhutan remains insufficiently explored, leaving institutions ill-equipped to navigate the complexities of such tools.

The deliberation on the use of GenAI by students is divided; some claim its adoption augments learning by offering students innovative ways to engage with knowledge, while others caution that it weakens originality, critical thinking, and the integrity of academic assessments. Accordingly, this research aims to address the existing gap by examining Bhutanese lecturers' perceptions of the effects of GenAI tools on academic assessment, the adjustments in their assessment strategies, and the level of institutional support available to ensure ethical and responsible use in higher education. The study seeks to provide actionable recommendations to ensure that assessment frameworks evolve alongside technological developments while safeguarding the principles of fairness, transparency, and continuous improvement. The following objectives and questions will guide the study to establish a nuanced understanding of the impact of GenAI on academic assessment in Bhutanese higher education.

1.2. Objectives

1. To explore lecturers' insights on the usage of GenAI by students.
2. To examine lecturers' adaptation of assessment practices in response to the use of GenAI.
3. To identify institutional support available to faculty for promoting responsible use of GenAI.

1.3. Questions

1. What are the lecturers' perceptions of GenAI usage in academic works by students?
2. How are lecturers adapting their assessment practices?
3. What institutional support systems prevail in promoting the responsible use of GenAI?

2. REVIEW OF LITERATURE

2.1. Overview of GenAI in Education

GenAI includes a range of artificial intelligence technologies capable of producing updated content, including text generation and image creation. The development of GenAI can be traced back to the initial efforts in artificial intelligence, where early work focused on symbolic reasoning, which later shifted towards neural networks and machine learning frameworks. Significant advancements in computational models have led to the emergence of powerful language models, particularly large language models (LLMs) such as OpenAI's ChatGPT, which are distinguished by their ability to comprehend instructions and generate contextually relevant content (Ahmad, Murugesan, & Kshetri, 2023).

The conceptual foundation of AI and its generative capabilities arises from neural network designs that mimic human cognitive processes. This has led to a proliferation of applications in various fields, including education, where GenAI has the potential to drive personalized learning experiences by automating content creation and providing individualized feedback (Chen et al., 2020; Liu et al., 2023; Su & Yang, 2023). However, while technological advancements present numerous opportunities, they also require oversight into unethical use and the need for AI literacy among educators and students alike (Ng, Leung, Chu, & Qiao, 2021; Prinsloo, 2020).

The applications of GenAI within educational contexts are diverse and substantial. They range from serving as personalized tutors to creating adaptive learning environments that respond to each student's specific needs. For instance, GenAI tools can facilitate language learning through contextual language generation, thus improving students' listening and speaking skills (Luo, 2024). Moreover, studies suggest that AI chatbots positively influence student learning outcomes, mainly within higher education, highlighting GenAI's potential as a supplementary teaching assistant (Wu & Yu, 2024). Additionally, GenAI has been harnessed to develop instructional materials that align with curricula, provide real-time feedback, and promote engagement by adapting to learner preferences (Tang, Deng, Huang, Wang, & Zhang, 2025). The integration of GenAI in administrative tasks can automate routine processes, allowing educators to focus more on teaching rather than administrative burdens (Nurjanah, Salsabila, Azzahra, Rahayu, & Marlina, 2024).

On the other hand, the incorporation of GenAI into educational environments raises important challenges, predominantly pertaining to ethical considerations and data privacy. Studies demonstrate the importance of addressing issues such as algorithmic bias, transparency in decision-making processes, and the potential for waning the role of human instructors (Coto-Fernández & Coto-Jiménez, 2022; Prinsloo, 2020). Additionally, embracing AI literacy is critical to prepare both students and educators to engage effectively with these technologies, ensuring they reap their benefits responsibly (Chan & Hu, 2023).

Another pressing issue is the observed difference in the use of GenAI across different educational contexts. While some institutions successfully integrate GenAI, others lag due to insufficient technological infrastructure or resources, raising concerns about equity within the education system (Fahimirad & Kotamjani, 2018). The implications of these disparities echo larger societal inequalities and underscore the need for systemic solutions to integrate GenAI effectively across diverse educational settings.

2.2. Academic Assessment in Higher Education

Traditional assessment practices in higher education have often relied heavily on standardized testing and summative assessments. These methods are rooted in a behaviorist paradigm that emphasizes memorization and recall, aiming to measure learning through specific metrics such as grades and test scores. Historically, these assessments have been criticized for their limited ability to address the complexities of student learning and for fostering a culture of surface learning (Mislevy & Oliveri, 2019; Whetton, 2011). For instance, the emphasis on rote memorization can hinder the development of higher-order cognitive skills, which are essential for success in increasingly complex knowledge economies (Brown, 2015).

Furthermore, traditional assessments often fail to accommodate diverse learning styles and backgrounds, potentially leading to inequities in educational outcomes (Mislevy & Oliveri, 2019). This is particularly concerning in an era that increasingly values inclusivity and diversity. Although some institutions have begun to integrate formative assessment practices that focus on feedback and continuous improvement, these methods are still evolving and are not yet universally adopted (Brown, 2015; Mislevy & Oliveri, 2019).

Currently, evolving trends in assessment indicate broader shifts in educational philosophy and technological advancements. The growing incorporation of AI in assessment practices highlights a transformative trend that presents both opportunities and ethical challenges (Potluri & Kilaru, 2024). AI technologies present potential efficiencies in grading and personalized learning, yet they raise concerns about data privacy and the equitable treatment of diverse student populations (Potluri & Kilaru, 2024; Wahiu & Mesmer, 2023).

Assessment in higher education is an area of ongoing development characterized by a tension between traditional methodologies and emerging practices focused on inclusivity, efficacy, and technology integration. Literature emphasizes the importance of assessments based on valid, reliable, and fair principles, along with an awareness of current trends that mirror an increasingly interconnected and digitally driven academic environment.

2.3. GenAI's Impact on Academic Assessment in Higher Education

GenAI is swiftly transforming higher education through innovations in teaching, learning, and assessment processes. As educators increasingly incorporate GenAI tools into classrooms, it is important to critically analyze their impact, focusing on benefits, risks to academic integrity, and changes in assessment design.

The integration of GenAI within educational frameworks offers notable benefits, primarily in personalized learning, feedback generation, and assessment automation. GenAI tools create tailored learning pathways that accommodate individual student needs, allowing for the provision of customized content and guidance. This personalization enhances the efficient learning experience by promoting engagement and improving outcomes (Francis, Jones, & Smith, 2025; Monzon & Hays, 2025; Wang & Xue, 2025). For example, a study highlights the potential of GenAI to optimize learning experiences by generating personalized feedback and facilitating adaptive assessments that cater to different learning styles (Fuller & Barnes, 2024). Furthermore, the interactive nature of GenAI can make learning more dynamic, providing real-time support that reflects learners' instant needs (Ogunleye, Zakariyyah, Ajao, Olayinka, & Sharma, 2024; Potluri & Kilaru, 2024).

Moreover, studies suggest that GenAI supports enhancing students' cognitive skills, improving problem-solving, analytical thinking, and metacognitive abilities, thus equipping learners with competencies essential for their academic endeavors (Kangwa, Msafiri, & Zhang, 2025; Ogunleye et al., 2024). These tools enable educators to adopt a more facilitative approach, positioning them as guides rather than providers of information, thereby encouraging learner-directed learning (Benjamin et al., 2024; Perkins, Furze, Roe, & MacVaugh, 2024). Additionally, the potential for automating assessments liberates educators from mundane grading tasks, enabling them to focus more on pedagogy and individualized instruction (Francis et al., 2025; Perkins et al., 2024).

Despite the advantages presented by GenAI, significant risks to academic integrity must be critically studied too. The ability of GenAI tools to generate text that mimics human writing raises considerable ethical concerns regarding plagiarism and dishonest practices in assessments (Barrett & Pack, 2023; Benjamin et al., 2024). Notably, findings indicate that while GenAI can enhance student engagement, it simultaneously poses challenges to outlining the boundaries of acceptable use in academic work (Francis et al., 2025). This duality demands the establishment of strong ethical frameworks and policies to curb misuse, as many students express concerns about overreliance on these tools, potential academic dishonesty, and the integrity of their educational credentials (Maxwell, Oyarzun, Kim, & Bong, 2025; Yusuf, Pervin, & Román-González, 2024).

Cultural differences also play a pivotal role in perceptions of GenAI's risks and benefits, as students from diverse backgrounds may hold varying views on academic ethics and standards of integrity (Yusuf et al., 2024). The discourse

surrounding GenAI often reflects a larger need for creating responsible usage policies that address both technological innovation and the ethical implications of its integration (Chan & Lee, 2023; Hauske & Bendel, 2024). Thus, educators are called to implement policies that empower students to leverage GenAI effectively while maintaining academic standards.

To adapt the integration of GenAI into academic assessment, substantial modifications in assessment design are required. Educational institutions are urged to reconsider evaluation methodologies to incorporate GenAI's capabilities while addressing the related risks of misuse (Perkins et al., 2024; Petraki, 2024). As educators adapt assessment tasks to leverage GenAI, they must balance innovative practices with the need to uphold academic integrity. This includes designing assessments that require higher-order thinking tasks that GenAI may support but cannot fully automate, thus retaining the essence of academic evaluation (Francis et al., 2025; Putri & Naf'ihima, 2025). Eventually, a forward-thinking approach to assessment design is essential, promoting an environment where GenAI serves as a complementary tool in learning rather than a substitute for academic rigor.

3. METHODOLOGY

3.1. Research Design

This study employed a mixed-methods approach, combining quantitative survey data and qualitative open-ended responses to gain a detailed understanding of the topic. The quantitative component provides generalizable data, while the qualitative component offers in-depth insights.

3.2. Participants

A total of seventy-six teaching faculty members participated in this study. A random sampling method was used to ensure a representative sample across the population. Table 1 presents the demographic information of participants (N=76)

Table 1. Demographic information of participants (N =76).

Demographic	Value	Frequency	Percentage
Gender	Male	55	72.4
	Female	20	26.3
	Other	1	1.3
Designation	Lecturer	53	69.7
	Professor	17	22.4
	Dean	6	7.9
Years of teaching experience	Less than a year	7	9.2
	1-5 years	23	30.3
	6-10 years	7	9.2
	11-15 years	9	11.8
	Over 15 years	30	39.5
Type of Institution	Public	51	67.1
	Private	25	32.9

3.3. Data Collection

An online survey questionnaire, along with open-ended questions, was administered to the teaching faculty in HEIs across the country. A structured survey questionnaire with a five-point Likert scale, ranging from strongly agree to strongly disagree, was used to collect quantitative data.

3.4. Data Analysis

Quantitative data were analyzed using descriptive and inferential statistics in SPSS to summarize and present the overall trends in responses using frequencies and percentages. Thematic analysis of qualitative data was

performed using NVivo, an open-source qualitative data analysis software. Open-ended survey responses were uploaded to the platform, and initial codes were generated systematically, highlighting meaningful text segments. These codes were then refined and categorized into principal themes through iterative comparison, allowing for the identification of patterns relevant to the topic under focus. The results were subsequently compared and triangulated to gather a comprehensive understanding of the research topic.

3.5. Validity and Reliability

To ensure validity, subject matter experts evaluated the survey questionnaire contents to determine whether the items accurately measured the intended content areas. For reliability, Cronbach's alpha was calculated, yielding a coefficient of 0.75, which indicates acceptable internal consistency among the items.

3.6. Ethical Considerations

Ethical approval was sought from the deans of research and academics. Participants were informed of the study's purpose, and responses were collected following a due process of ethical consideration, and the responses were anonymized to ensure confidentiality. The HEIs involved were Gyalpozhing College of Information Technology, Sherubtse College, College of Natural Resources, Jigme Namgyel Engineering College, College of Science and Technology, Arura Academy of Health Sciences, Apollo Bhutan Institute of Nursing, Royal Thimphu College, Jigme Singye Wangchuck School of Law, Faculty of Traditional Medicine, Gedu College of Business Studies, Paro College of Education, and Samtse College of Education.

4. RESULTS

4.1. Lecturers' Perceptions of GenAI use in Academic Works by Students

To understand lecturers' perceptions of the use of GenAI in academic works by students, survey questionnaires were administered.

In response to the statement, "I have observed students using GenAI in academic tasks," the findings revealed that most respondents have observed students using GenAI in academic tasks. Specifically, 48.7% of the participants strongly agreed with this statement, while 39.5% agreed. A smaller proportion remained neutral (6.6%), and only a few respondents disagreed (1.3%) and strongly disagreed (3.9%), as indicated in Figure 1.

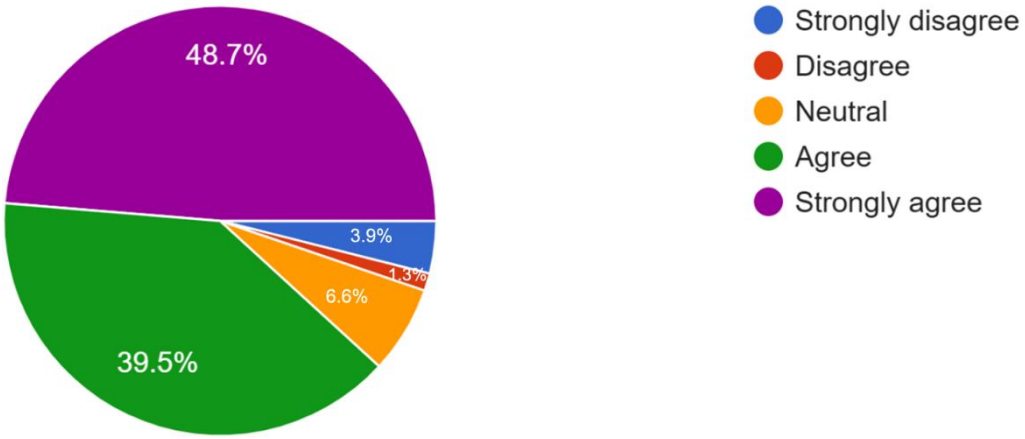

Figure 1. Use of GenAI in academic works by students.

Moreover, a one-sample proportion test was performed to assess whether the proportion of respondents who observed students using GenAI in academic tasks was significantly greater than 50%. The results indicated that 88.2% (n = 67) of the participants reported such observations, and this difference was statistically significant ($p <$ .001).

In response to the statement, *"I am concerned about GenAI contributing to academic dishonesty among students,"* as illustrated in Figure 2, a majority expressed concern with 42.1% of respondents strongly agreeing, and 32.9% agreeing with the statement. In contrast, 15.8% remained neutral, and only 3.9% strongly disagreed, while 5.3% disagreed.

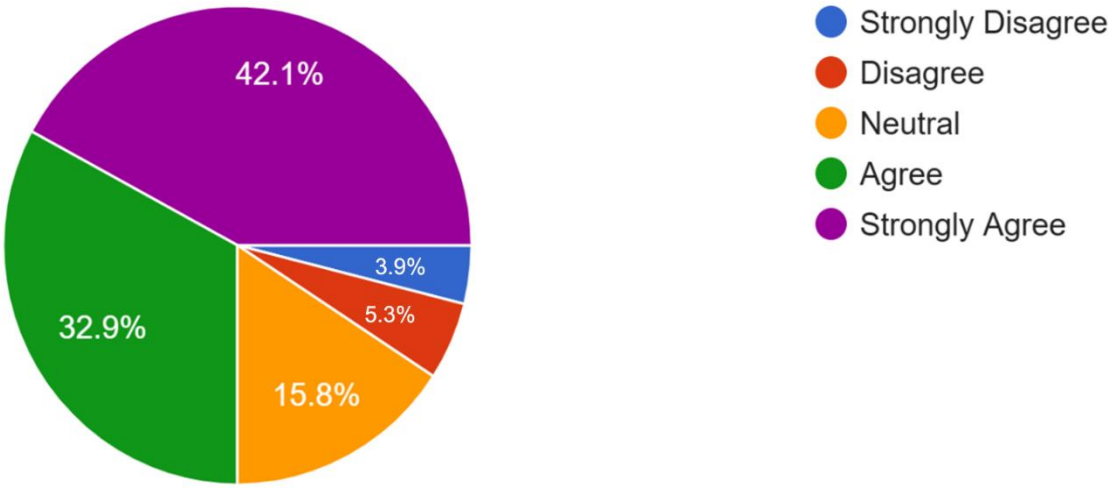

Figure 2. Concern about GenAI contributing to academic dishonesty.

In addition, to determine whether the proportion of respondents expressing concern (i.e., those who agreed or strongly agreed) was significantly greater than 50%, a one-sample proportion test was conducted. The results showed that 57 out of 76 respondents (75%) expressed concern about GenAI's potential to contribute to academic dishonesty. The analysis revealed that this proportion was statistically significant.

In response to the statement *"I believe GenAI can enhance student learning when used responsibly,"* a strong majority of the respondents articulated an optimistic viewpoint. As shown in Figure 3, 46.1% agreed and 43.4% strongly agreed, resulting in a combined 89.5% of participants confirming the potential educational benefits of GenAI when used appropriately. Only 6.6% were neutral, and a minimal disagreement was observed, with just 2.6% strongly disagreeing and 1.3% disagreeing.

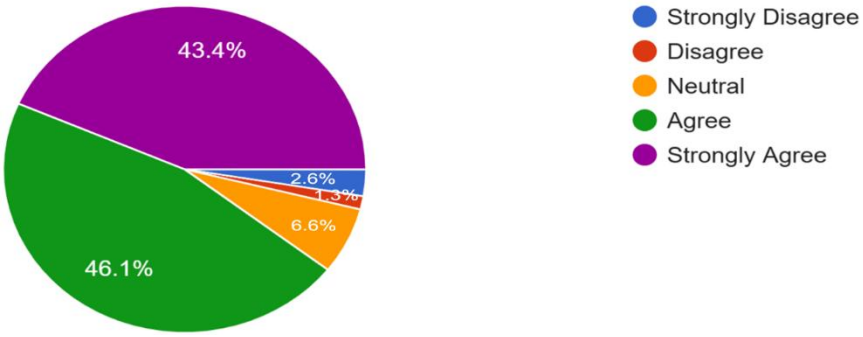

Figure 3. Enhancement of student learning when GenAI is used responsibly.

Furthermore, the results showed that 68 out of 76 respondents agreed or strongly agreed with the statement. One-sample proportion test revealed a statistically significant result ($p < 0.001$), demonstrating that most respondents recommend the responsible use of GenAI for enhancing learning.

On the other hand, to gain a deeper understanding of the lecturers' perception of the use of GenAI by students, they were asked to share their concerns regarding the impact of GenAI on academic integrity. The analysis of qualitative data revealed key themes capturing the main concerns about GenAI's impact on academic integrity. Each theme is reinforced by examples from the responses to illustrate the concerns.

4.1.1. Plagiarism

This was the most frequently articulated concern across responses. Participants voiced worries about students' direct copy-paste behavior without acknowledgment and misrepresenting AI output as original work, undermining authenticity and genuine intellectual contribution. Respondents were also anxious about the upsurge of untraceable AI-assisted plagiarism tools corroding trust in submitted assignments. For instance, one respondent shared, *"Students are becoming complacent, and they are just copying the text generated by AI and submitting the assignment as their work"* (Response 22).

4.1.2. Over-Dependence

Many respondents expressed concerns that students are becoming excessively dependent on GenAI, which may lead to reduced learning efforts, complacency in their learning approach, lack of authentic learning, and diminished motivation for independent thinking. Respondents indicated that self-learning, effort, and ownership of work decline as AI becomes the primary thinking partner, as shown in the following statements.

"Students use GenAI smartly and submit assignments or do homework without any opportunity to pause, brainstorm, justify, or create their solutions" (Response 60).

"Students become overdependent, therefore compromising their own learning" (Response 14).

4.1.3. Skill Erosion

Respondents frequently noted that dependence on GenAI for generating answers and completing assignments could hinder students' critical thinking, analytical skills, and creativity. Respondents believe that students skip the reflective process, which might hinder the development and application of essential higher-order cognitive skills central to academic and future success. One respondent noted, *"I don't have an in-depth understanding of GenAI. However, I see the loss of creativity and analytical thinking in students" (Response 37).*

4.2. Adaptation of Assessment Practices

When asked whether lecturers are prepared to modify their assessment modalities to account for the use of GenAI by students, a significant majority (78.9%) either agreed or strongly agreed with the statement, with 53.9% choosing "Agree" and 25.0% "Strongly agree." A smaller portion (18.4%) remained neutral, while only 2.6% strongly disagreed, as illustrated in Figure 4. Notably, none of the respondents selected "Disagree," indicating a generally positive sentiment toward the statement.

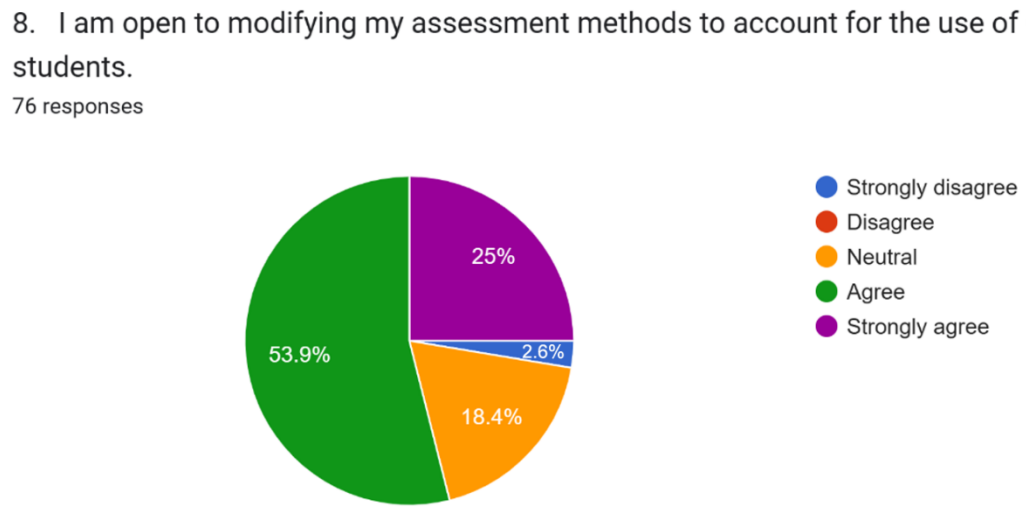

Figure 4. Lecturers' readiness to modify their assessment modalities.

Moreover, the one-sample proportion test revealed strong statistical evidence that the respondents supporting the statement is significantly greater than 50%.

On the other hand, to have a profound understanding of the lecturer's readiness to adapt and amend their current assessment practices, open-ended questionnaires were administered. Upon analyzing the qualitative data, several key themes were identified. Each theme is corroborated with participants' statements to demonstrate their viewpoints.

4.2.1. Varied Levels of Preparedness

Responses revealed a varied range of preparedness levels among lecturers. While some stated high confidence and readiness to adapt their assessment approaches, others felt ill-prepared or uncertain, often due to limited knowledge or the absence of institutional support. This theme highlighted unequal levels of confidence and experience, underscoring the necessity for targeted guidance and capacity-building, as shown in the following statements:

"I am well prepared and update my assessment approach when required" (Response 6).

"I think I am less prepared. I will rate myself 2 out of 5" (Response 10).

4.2.2. Assessment Challenges

Respondents expressed challenges in distinguishing genuine student work from AI-generated content and faced difficulties in evaluating authentic student learning. Respondents further emphasized that traditional assignments may no longer be effective, and there is a need to redesign assessment strategies. One respondent *said GenAI's "fundamental threat" to essay assessments has forced a shift toward in-class or oral work.*

Furthermore, when responses regarding the use of strategies to mitigate the misuse of GenAI by students in academic works were analyzed, two predominant themes emerged.

4.2.3. Reliance on Detection Tools

Many respondents reported depending on different AI detection tools, including Turnitin, to recognize potential misuse, as one respondent shared, *"We have software called Turnitin installed in our VLE, which helps detect plagiarism. Besides, I use CopyLeaks and AI Text Classifier."* While some respondents expressed skepticism about the efficacy of these tools, including their compatibility with local languages such as Dzongkha.

4.2.4. Assessment Redesign

Respondents reported a strategic shift from product-oriented tasks to performance-based and process-oriented assignments, which are more resistant to GenAI misuse and promote deeper learning. They expressed the need for more authentic, context-specific, or progressive assessments. They suggested that the most common strategy involves fundamentally changing assessment methods to make outsourcing to AI difficult: shifting to in-person, timed, handwritten work; performance-based tasks; multi-stage processes; and emphasizing higher-order thinking, personal reflection, and practical application. For example, one respondent noted, "*I focus on designing assignments that require critical thinking and personal reflection, which are harder for AI to replicate.*"

While the other expressed, *"Progressive assessment-based assignments are better than adopting summative assessment-based assignments to tackle AI-related issues in assessment".*

4.3. Institutional Support Systems

When asked whether the institution has guidelines on the responsible use of GenAI in academics, the survey responses from participants indicated mixed opinions, as shown in Figure 5. Specifically, 21.9% of respondents strongly disagreed, 26.3% disagreed, and 31.6% remained neutral, together comprising nearly 80% of the total.

Meanwhile, only 17.1% agreed, and 3.9% strongly agreed, as shown in Figure 5. This distribution reflects a critical or indifferent stance, with limited favorable support among the participants.

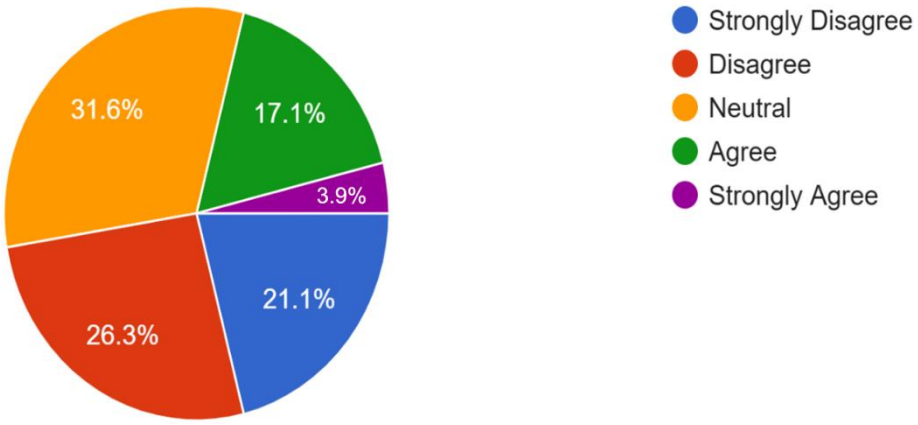

Figure 5. Existence of an institutional support system.

On the other hand, the analysis of qualitative data regarding the existence of institutional support systems generated the following central themes.

4.3.1. Need for Institutional Policies and Guidelines

Respondents overwhelmingly stressed the urgent need for institutions to develop comprehensive, transparent, and formal policies and guidelines governing the ethical use of GenAI in academia. They indicated that these frameworks must clearly outline acceptable and unacceptable practices, set thresholds for AI-generated content, and define specific boundaries for both faculty and students, including mandatory disclosure and citation protocols. For example, one respondent expressed, *"Developing comprehensive guidelines on the DOs and DON'Ts of GenAI is crucial and urgent"*.

The respondents also expressed concern that the current lack of standardized guidelines risks creating inequity and enabling misuse, highlighting the necessity for institution-wide frameworks that promote a shared understanding of responsible GenAI integration.

4.3.2. Capacity Building Programmes

Respondents strongly emphasized the critical need for structured, practical training programs, including hands-on workshops and professional development (PD) sessions for faculty. One respondent shared, *"I strongly believe that hands-on training has to be provided so that we are confident in the assessment."*

They expressed that these programs should focus on building competencies in responsible GenAI usage, including ethical implications, prompt engineering techniques, AI literacy, designing AI-resistant assessments, and understanding detection tools.

5. DISCUSSION

5.1. Lecturers' Perceptions of GenAI Use in Academic Works by Students

The findings demonstrated strong perceptions among lecturers regarding the growing usage and implications of GenAI in student academic work. Quantitative results suggested that a significant majority (88.2%) of respondents had observed students using GenAI tools, with statistical analysis confirming this proportion to be significantly higher than the 50% benchmark ($p < .001$). This prevalent observation echoes the growing presence of GenAI in higher education settings.

Lecturers also expressed considerable apprehension about the potential for GenAI to contribute to academic dishonesty. 75% of respondents agreed or strongly agreed with this concern, with a statistically significant finding ($p < .001$). These concerns were echoed in the qualitative data, where plagiarism emerged as the most dominant theme, with respondents underscoring issues of unacknowledged AI-generated work and depreciated authenticity in student submissions. Additionally, lecturers mentioned over-dependence on GenAI, worrying that students may evade meaningful learning processes, leading to reduced motivation, effort, and independent thinking. Furthermore, the theme of skill erosion was identified, with respondents referring to the potential decline in students' critical thinking, analytical ability, and creativity due to heavy dependence on AI tools.

However, the findings also unveiled a nuanced perspective. A majority (89.5%) of lecturers agree that GenAI can positively boost student learning when used responsibly. This standpoint was supported by statistically significant results ($p < .001$), indicating that lecturers are not completely dismissive of GenAI but rather emphasize the importance of its responsible use in academic settings. Together, these findings imply that while lecturers recognize the educational benefits of GenAI, their insights are shaped by serious concerns over academic integrity, student engagement, and the development of essential academic skills. These perceptions underline the need for institutional guidelines, ethical frameworks, and pedagogical strategies to guide the responsible integration of GenAI in academic work.

The findings concerning lecturers' perceptions of GenAI in student academic work are consistent with prevailing research in the field. The observation that 88.2% of students use GenAI tools indicates a significant shift in academic environments, reflecting trends acknowledged in earlier studies (Al-Zahrani, 2024; Arowosegbe, Alqahtani, & Oyelade, 2024; Ifenthaler et al., 2024; Purnama, Putra, Arifin, & Azizah, 2024; Saúde, Barros, & Almeida, 2024). Furthermore, the findings align with previous research on academic dishonesty, emphasizing lecturers' concerns about plagiarism and skill erosion due to students' reliance on GenAI in higher education. Previous studies also acknowledge the potential benefits of GenAI when used responsibly, highlighting a balanced perspective (Akkaş, Tosun, & Gökçearslan, 2024; Barrientos et al., 2024; Chavez et al., 2024; Plecerda, 2024; Tan & Maravilla, 2024).

5.2. Adaptation of Assessment Practices

The findings indicated a generally high level of readiness among lecturers to adapt assessment practices in response to students' use of GenAI. Quantitative data revealed that 78.9% of lecturers agreed or strongly agreed with the need to adjust their assessment approaches, a result that was statistically significant ($p < .001$). This demonstrates a broad recognition of the necessity to respond to the evolving academic landscape shaped by GenAI.

Despite this positive disposition, qualitative responses revealed different levels of actual readiness. While some lecturers reported confidence and a proactive attitude in adapting their assessment strategies, others expressed feeling underprepared, citing inadequate awareness of GenAI technologies or an absence of institutional support. This disparity indicates unequal readiness levels, highlighting the need for capacity-building and targeted professional development.

Lecturers raised concerns about the shortcomings of traditional assessments in detecting AI-generated work. Many admitted that traditional assignments, such as essays, are increasingly vulnerable to GenAI misuse, urging a shift to authentic and process-oriented assessments. Lecturers reported shifting away from product-based assessments to progressive, multi-stage assignments that highlight the learning process over final outputs. These reformed strategies aim to encourage higher-order thinking, novelty, and personal engagement, which are challenging for AI tools to replicate. To address the challenges of GenAI, lecturers employ two main approaches: the use of detection tools and reforming assessment modalities. However, several respondents questioned the trustworthiness of such tools, particularly their limitations in detecting content written in local languages like Dzongkha.

The findings support earlier studies demonstrating a rising acknowledgment among educators of the need to adapt assessment practices due to technological advancements. However, the studies also suggest that the disparity in preparedness underscores the necessity for targeted professional development and institutional support to enhance readiness (Cabellos, De Aldama, & Pozo, 2024; Khlaif et al., 2024; Potter, Welsh, & Milne, 2023; Wang, Li, & Chen, 2024). Furthermore, the findings on the limitations of conventional assessment and the notable shift towards authentic, process-oriented assessments corroborate the existing literature. Lecturers are shifting towards multi-stage assignments that emphasize critical thinking and originality, making it more challenging for GenAI to copy student work (Ardito, 2025; Shishavan, 2024). A previous study also illustrated that current AI detection tools, such as Turnitin and Copyleaks, display low accuracy rates, mostly with manipulated content (Perkins et al., 2024). While the change to redesigned assessments offers prospects for deeper learning, challenges persist in ensuring these assessments are resistant to GenAI exploitation (Shishavan, 2024). Continuous evaluation of assessment practices is vital to adapt to the evolving landscape of GenAI technologies (Ardito, 2025).

5.3. Institutional Support Systems

The findings indicated a notable gap in the existence of institutional support systems for the responsible use of generative AI (GenAI). Quantitatively, survey responses from 76 participants showed limited institutional support, with only 21% (17.1% agreed, 3.9% strongly agreed) supporting the presence of guidelines on responsible GenAI use. In contrast, a substantial 79.8% either disagreed (26.3%), strongly disagreed (21.9%), or remained neutral (31.6%), reflecting an uncertain stance toward current institutional frameworks.

Qualitative data further expounded these findings with two key themes: the need for institutional policies and guidelines and capacity-building programmes. Respondents highlighted a need for policies that outline acceptable GenAI practices, set boundaries, and mandate disclosure and citation procedures to prevent misuse. The lack of such policies was perceived as a risk to academic integrity. Furthermore, lecturers urged for structured training through hands-on workshops and professional development sessions to build proficiencies in ethical GenAI use, AI literacy, prompt engineering, and designing assessments. These findings revealed that while lecturers were cognizant of the opportunities and risks posed by GenAI, the institutional ecosystem was yet to catch up. The lack of comprehensive policies and training programmes underlines a critical need for proactive institutional investment to ensure that the integration of GenAI in higher education is both ethical and effective.

The findings of a significant gap in institutional readiness to support the responsible use of GenAI in academic settings concur with previous studies. For instance, a study of 116 US universities revealed that 63% encouraged GenAI use, yet only 41% provided classroom guidance (McDonald, Johri, Ali, & Collier, 2025). Moreover, the absence of comprehensive guidelines is echoed in a systematic review, which highlights the lack of agreed-upon frameworks for GenAI usage in academia (Ogunleye et al., 2024). However, institutions confront challenges in framing effective GenAI policies, with many still in experimental stages of deployment (Idnay et al., 2025). The need for interdisciplinary collaboration is central to formulating comprehensive guidelines that address ethical concerns and enhance understanding among stakeholders (Ogunleye et al., 2024). The need for capacity-building programmes also aligns with existing research. For example, studies indicate a strong demand for structured training programs, including hands-on workshops and professional development sessions, to build competencies in ethical GenAI use, AI literacy, and prompt engineering (Al Zaidy, 2024; Atkinson-Toal & Guo, 2024; McDonald et al., 2025; Meakin, 2024; Ullah, Bin Naeem, & Kamel Boulos, 2024).

6. CONCLUSION

This study explored Bhutanese lecturers' perceptions of the impact of GenAI on academic assessment in the higher education ecosystem. The findings revealed that lecturers acknowledge the increasing use of GenAI tools by students in academic tasks. While many noted educational benefits when used responsibly, there was also significant

concern about its potential to undermine academic integrity, primarily through plagiarism, over-dependence, and skill erosion. The findings indicated a strong willingness to adapt assessment methods to account for GenAI; however, readiness levels varied, with many being ill-equipped due to a limited understanding of GenAI tools and institutional support. Furthermore, the study highlighted a substantial gap in institutional support systems, including the lack of formal policies, guidelines, and capacity-building programs to promote ethical and effective use of GenAI.

While the study offers important insights, several limitations must be acknowledged. First, the research relied on self-reported data, which may be influenced by individual interpretation of GenAI use. Second, the sample size of 76 lecturers may not have captured the diversity of perspectives across all higher education institutions in Bhutan. Thirdly, the study primarily explored faculty perceptions and did not include student standpoints.

Considering the findings, the following recommendations are proposed.

HEIs in Bhutan need to frame clear, enforceable policies that define ethical and responsible GenAI use for both students and staff. Institutions must prioritize professional development through hands-on workshops and training sessions that build faculty competence in the use of GenAI.

In conclusion, Bhutanese HEIs are at a critical moment where proactive, inclusive, and strategic actions are required to balance the benefits of GenAI with the protection of academic integrity. This research offers a foundational understanding to inform future policies, teaching innovations, and institutional planning in the era of GenAI-enhanced education.

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