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# A LEARNER-CENTRED CASE STUDY OF GENAI TOOL USE IN APPLIED PROFESSIONAL STUDIES

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## INTRODUCTION

This case study explored the experiences and perceptions of students using generative artificial intelligence (GenAI) for learning in two Applied Professional Studies courses at Toi Ohomai Institute of Technology, Aotearoa New Zealand. The wider study was the subject of the lead author's dissertation research (de Villiers, 2024). The case study courses were Adult Teaching Practice, and Mentoring and Supervision for Professionals. Of the 16 students who took part, 15 were experienced teachers, and one was from a social work background. Most were international students. The increasing use of GenAI for learning and organisational purposes made the study particularly relevant to those who took part. Although participants were students at Toi Ohomai, they could also reflect on GenAI use from the practitioner perspective. How to leverage the benefits of AI *for* learning, while managing the risks of AI use *to* learning, are 'hot topics' for teachers.

A mixed-method design was used, with data collected through pre- and post-questionnaires and focus group sessions. The 4E GenAI adoption framework (Shailendra et al., 2024) was used to guide the study. The four phases: embrace, enable, experiment, and exploit, guide institutions in adopting GenAI (Shailendra et al., 2024). Applying the model at cohort level was expected to inform the wider adoption of GenAI at Toi Ohomai. In the embrace phase, institutions articulate their intent and vision for GenAI adoption, to create the foundation for implementation in alignment with the personal expectations of users (Shailendra et al., 2024). The enable phase focuses on preparing faculty and students through training, and the development of policies that address ethics, privacy, and academic integrity. The experiment phase aligns with phenomenological research, capturing the lived experiences of students and staff interacting with GenAI systems. Finally, the exploit phase involves scaling the integration of GenAI across the institution. The parameters in Shailendra et al.'s (2024) academic evaluation matrix (AVM) were used to develop the questionnaire instrument measuring participants' awareness of and readiness to adopt GenAI.

Participants' dual perspectives as both learners and teachers made their insights especially valuable to this study. The findings suggest an increase in student confidence, better management of time during study, and reduced stress associated with coursework, especially for international students navigating studies in English. Nonetheless, ethical concerns were prevalent and uncertainty around institutional practices created emotional discomfort among the students. By capturing these students' voices and delving into the practicalities of using GenAI for learning, the findings of this study contribute student-led insights to inform responsible GenAI integration through policy, training, and support structures at Toi Ohomai and other tertiary education providers.

## RESEARCH AIMS AND QUESTIONS

The research arose from the need to understand how Toi Ohomai Applied Professional Studies postgraduate learners would respond to the guided use of GenAI, in the context of the institute's efforts to maximise its

benefits for educational and organisational purposes, while managing the concomitant risks.

The research questions were:

> What are the experiences of students in the Applied Professional Studies suite of programmes at Toi Ohomai, in using selected GenAI tools to support their learning?
>
> What are students' perceptions regarding the future role of GenAI tools in learning and assessment at Toi Ohomai, as a result of these experiences?

## LITERATURE REVIEW

The literature review canvassed the potential of GenAI use in education, how students might prepare themselves for an AI-driven future in the workforce, and the impact of GenAI adoption in New Zealand.

### The potential of GenAI to support learning and teaching

GenAI can personalise learning and facilitate interactive engagement (Kadaruddin, 2023; Koć-Januchta et al., 2022), supporting the construction and retention of knowledge. Baidoo-Anu and Owusu Ansah (2023) acknowledge the potential of GenAI tools to facilitate deeper learning in higher education. GenAI can foster creativity and innovation in learning (Creely & Blannin, 2023; Moorhouse et al., 2023; Zawacki-Richter et al., 2019) and develop critical thinking as students evaluate and interpret AI-generated outputs (Petrovska et al., 2024). Petrovska et al. (2024) also position GenAI as a learning companion rather than a replacement for student effort. Postgraduate students have positively embraced tools such as ChatGPT, appreciating their convenience and ability to save time (Al-Smadi, 2023). Concerns still remain. Walczak and Cellary (2023) agree that GenAI can support learning, but caution that it may disrupt traditional methodologies. McDonald et al. (2024) recommend further study on the long-term pedagogical implications of GenAI. Bahroun et al. (2023) advocate for GenAI's transformative role in education, while emphasising the need to address its ethical use. Krause et al. (2024) confirm the many benefits of using GenAI, but warn that concerns about unethical use are very real, specifically when students use GenAI recklessly. Therefore, higher education institutions are obligated to adopt policies and procedures setting out how responsible and ethical use of GenAI is to be achieved in academic work (Krause et al., 2024).

### Preparing students for an AI-driven future

The future workforce will rely on AI literacy, placing the onus on tertiary institutions to ensure graduates can effectively use AI tools. De Silva et al. (2024) explain that "AI literacy" is still a very new concept; it refers to an individual's competence in understanding, assessing, and utilising AI tools, irrespective of their ability to develop actual AI models. They point out that to develop this essential skill, students should engage ethically and responsibly with AI both personally and professionally.

### Impacts of GenAI in New Zealand

Gabriel et al. (2022) state that using developing technologies in education, including automation and artificial intelligence, prepares future employees and the wider population to adapt to changes in society. New Zealand, Scotland, and Singapore have embraced AI in the classroom by implementing learning analytics and data-driven decision-making (Gabriel et al., 2022). New Zealand's Ministry of Education is partnering with education providers and employers through initiatives such as ICT (Information, Communication and Technology) and Māori and Pasifika Trades and Training programmes (New Zealand Ministry of Education, 2023) to equip learners for the modern workforce.

Gavaghan et al. (2021) report AI's disruption to traditional work and potential learning processes, underscoring the importance of careful implementation in education. Houkamau and Sibley (2019) assert that Māori and

Pasifika perspectives should be recognised when the impact of AI in New Zealand is evaluated. Matapo (2021) reminds us that, for Pasifika peoples, education takes place in various contexts, rooted in indigenous knowledge systems that remain vibrant. The methodology chosen for this research helped uncover diverse learning processes among participants as they shared their understanding and use of various tools during the study.

## METHODOLOGY

### Research design

The mixed-methods research design aimed to gain a comprehensive understanding of participants' experiences and perceptions (Creswell, 2015) in adopting GenAI tools for learning. The 4E GenAI adoption model phases embrace, enable, experiment, and exploit (Shailendra et al., 2024) provided the framework for the introduction, use, and evaluation of GenAI tools. Two data collection instruments developed for the study tracked participants' awareness of, readiness for, and use of GenAI. The pre- and post-questionnaire instrument (de Villiers, 2024) incorporated the parameters from Shailendra et al.'s (2024) AVM. Participants responded to the survey prior to the eight-week adoption period (introduction, training, and use) and again after the eight-week period of use. The pre- and post-survey instrument complemented the phenomenological case study approach (Hyett et al., 2014) and aided in triangulating the data (Csiernik & Birnbaum, 2024) from the focus group interviews. The interview instrument (de Villiers, 2024) was used to facilitate two focus group discussions, which took place after the eight-week usage period, to explore participants' experiences of using GenAI tools for learning, and their perceptions regarding the use of these tools. The mixed methods supported the development and testing of the instruments and helped interpret the situation (Walliman, 2018).

### Ethics approval

Ethics approval was granted by the Toi Ohomai Research Ethics Committee (TRC PG2024.037). No alteration of course learning outcomes or institutional policies was required for the study to proceed. Participation was voluntary, with informed consent obtained. No incentives were offered. Data were anonymised and stored securely.

### Participants, scope, and implementation

The study population was selected using purposive sampling. Students in the two postgraduate classes (PROF.8016 Adult Teaching Practice and PROF.8014 Mentoring and Supervision for Professionals) were invited to participate and 16 were recruited. Participants were not anonymous; however, their identities were kept confidential (Carter, 2018).

Following recruitment, informed consent was obtained from participants. They then completed the pre-questionnaire to measure their awareness of, and readiness to adopt GenAI. The researcher visited classes to facilitate initial discussion on the ethical use of GenAI tools for learning. As a starting point, she introduced selected EdTech tools (Elicit, MyBib, and LinkedIn Learning) and provided ethical and practical guidance in their use. In both classes, students were encouraged to experiment with these tools, and invited to use others presented by their classmates in a weekly class EdTech/IT tool slot. The presenter added an entry to a dedicated EdTech/IT tools Moodle Glossary to display information and links to tutorials on the demonstrated tool. The class tutor duplicated each entry in the other class glossary, so all learners could access an up-to-date list of the shared items. Students could also use other GenAI/EdTech tools they had found, while ensuring that academic use complied with Toi Ohomai guidelines. Ethical use of GenAI tools was regularly revisited and discussed during the study period. For example, although a student identified Quillbot as useful (for tasks such as similarity checking), it is blacklisted by Toi Ohomai due to other functions that compromise academic integrity. This was addressed in class. In another instance, the tutor explained that Adult Teaching Practice students could try lesson plan generators,

or use conversational AI to gather activity ideas, but needed to develop their own lesson plans. GenAI outputs students had referred to were added to assessment work as appendices.

In the focus group interviews, participants listed an array of GenAI tools they had employed for different purposes (Table 1). ChatGPT was commonly mentioned for its versatility in both personal and academic instances. In most cases, participants appreciated the tailored responses and ideas generated by ChatGPT that they could further explore. Now (in 2025), for academic and organisational purposes, Toi Ohomai staff and students are expected to use their Toi Ohomai Microsoft and Google accounts to access Copilot and Gemini, rather than ChatGPT and/or unpaid versions of tools that may train on their data. Users can also enter their data into Toi Ohomai's instance of Cogniti, knowing that their work remains private. Ultimately, as Table 1 shows, participants used a wide variety of tools. Most were GenAI or hybrid, with some non-generative tools.

| **Tool** | **Category** | **Primary Function** |
|---|---|---|
| ChatGPT | Generative | Conversational GenAI |
| Canva (with AI) | Generative | Design platform with text/image generation |
| Cogniti | Hybrid | A customisable chatbot based on a protected OpenAI GPT environment hosted by the University of Sydney and used at Toi Ohomai |
| Connected Papers | Hybrid | AI-assisted literature discovery, summarisation, and visual mapping |
| Editor App | Generative if text is rewritten or enhanced | Grammar and style editing |
| Elicit | Hybrid | Research assistant |
| Explain Paper | Hybrid | Explains academic papers in simpler language |
| Gemini | Generative | Conversational GenAI |
| Grammarly | Hybrid | Grammar and style suggestions |
| Kahoot | Hybrid | Game-based learning |
| Kura Plan | Generative | Lesson plan generator |
| LinkedIn Learning | Hybrid | Online learning platform with personalised coaching |
| Mendeley | Non-generative | Reference manager |
| Mentimeter | Non-generative | Interactive polling and audience engagement |
| MyBib | Non-generative | Rule-based citation and bibliography generator |
| Otter.ai | Generative | Transcription and summarisation |
| Paperplan | Generative | Academic writing assistant |
| Quillbot | Generative | Paraphrasing and summarising |
| Quizziz (now Wayground) | Generative | Quiz tool able to auto-generate new content |
| Research Rabbit | Hybrid | Literature discovery, mapping, and summarisation |
| Snapchat (My AI) | Generative | Text-based assistant |
| Socrative | Non-generative | Formative assessment and student response tool |
| Zotero | Non-generative | Reference management tool |

Table 1. AI tools by category. Note: Hybrid tools incorporate both generative and non-generative AI.

## DATA COLLECTION

Following recruitment into the study, participants completed the pre-questionnaire, a self-assessment measure incorporating the eight AVM parameters: awareness, readiness, ethics and privacy, equitable access, academic integrity, professional development, participation, and progression (Shailendra et al., 2024). A six-point Likert scale gathered participants' perceptions on their exposure to and use of GenAI (Kusmaryono et al., 2022). The same questionnaire was completed after the eight-week period when students were actively using GenAI and AI-assisted tools for learning purposes as described earlier. At the end of the eight weeks, participants elected to attend one of two in-person focus groups. For the focus group interviews, the researcher developed six open-ended questions to facilitate discussion of participants' experiences and perceptions of using AI tools (de Villiers, 2024). These were pilot-tested to assess their suitability. The focus group discussions were recorded and transcribed using Toi Ohomai's Microsoft Teams. A paper sentiment technique (three words on a card) was used to close each of the sessions (de Villiers, 2024). The collected data are stored in Toi Ohomai's secure cloud storage and will be retained for three years to accord with ethical guidelines. As the study was confidential, not anonymous, a code was used to identify individual participants' data (Elliott, 2018).

## DATA ANALYSIS

The pre- and post-questionnaire data (ordinal level) was analysed via Microsoft Excel statistical functions, to generate pivot tables, and checked for reliability using IBM SPSS 29 software (IBM, n.d.). The internal consistency of the questionnaire was assessed using a Cronbach's alpha analysis with a coefficient of 0.859 reported, indicating that the questionnaire was a reliable measure (Carter, 2018). Manual thematic analysis of focus group transcripts (Hyett et al., 2014) and triangulation (Csiernik & Birnbaum, 2024) strengthened the study's findings.

## FINDINGS

Analysis of the post-questionnaire data indicated that participants were more informed and insightful regarding GenAI tools than earlier in the semester, with a 66.7 percent increase in the GenAI "awareness" parameter items and a 55 percent increase in the "readiness for GenAI adoption" measure. Overall, the growth in respondents' awareness and willingness to adopt GenAI technologies was 62.5 percent (de Villiers, 2024). In both the pre- and post-questionnaires, the vast majority of students responded positively on measures of engagement, motivation, commitment, and completion for the "participation" parameter.

"Equitable access" parameter items evaluated how accessible GenAI technology is across Toi Ohomai, compared to similar organisations and geographic regions. "Agree" and "strongly agree" responses for this parameter rose by 50 percent in the post-survey; however, the number who were unsure had also increased. Two parameters measured participants' perceptions that the number of "academic integrity" and "ethics and privacy incidents" were a concern. More agreed or strongly agreed with the relevant scale items in the post-questionnaire survey, with a 62.5 percent increase across the measures, indicating that concern about these issues increased in the post-questionnaire. This suggests a positive relationship between GenAI awareness and use, and concerns about academic, ethical, and privacy breaches.

These findings have implications for Toi Ohomai in relation to provision of GenAI tools, and for the support required by both students and staff to understand and engage effectively with GenAI technologies. Analysis of the qualitative data from the focus group discussion echoed these concerns. Students' opinions were influenced firstly by their fear of engaging with the technologies, considering institutional guidelines and the warnings in some settings that AI use was forbidden, and, secondly, due to lack of knowledge of how these technologies can be implemented.

Data from the survey and focus groups was integrated according to the AVM parameters measured by the pre- and post-questionnaires. These parameters and the associated themes drawn from the two sets of questionnaire responses, interview data, and the paper sentiment tool, are presented in Table 2. The integrated data provides insights into participants' awareness, willingness to adopt, usage of, and concerns regarding GenAI technologies.

| **Parameter** | **Themes** |
|---|---|
| Awareness of GenAI technologies | Initial reactions/perceptions—mixed feelings<br>Value for learning identified<br>Satisfaction increased by use |
| Readiness for GenAI adoption | Willingness to use a range of GenAI tools (see Table 1)<br>Preferred tools |
| Ethics and privacy | Ethical concerns—impact on creativity and originality of work<br>Ethical challenges—privacy risks |
| Access | Multilingual contexts—translation functions made dense academic material more accessible and lowered stress<br>Institutional support<br>Access to GenAI tools required |
| Academic integrity | Impact on teachers and teaching<br>Ethical concerns regarding academic integrity<br>Caution required when using AI in academic work<br>A framework for responsible use of AI is needed |
| Professional development and training | Frustration and negative emotions<br>Training opportunities and supports needed |
| Participation | Enhanced learning<br>Motivation and engagement increased<br>Benefits of AI in learning<br>Effective completion of coursework |
| Progression | Effect on learning—ability to plan and manage tasks<br>Availability of immediate feedback<br>Challenges and limitations |

Table 2. Academic Evaluation Matrix (AVM) questionnaire parameters and related themes.

Participants' responses to the paper sentiment tool, completed during the focus group discussion, are visualised as word clouds in Figures 1 and 2. These word clouds display words and phrases recorded by participants as they reflected on their interaction with GenAI technologies. The prominence of each word or phrase in the cloud relates to how frequently it appeared. These responses directly informed the thematic analysis.

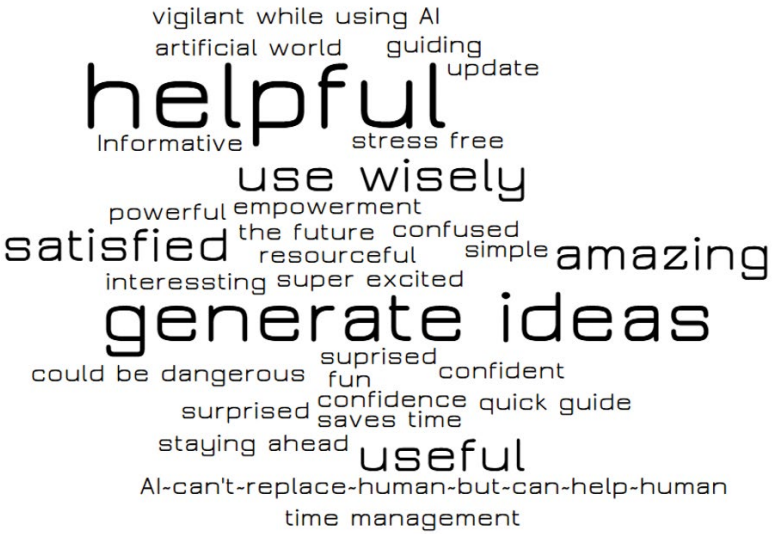


Figure 1. Experiences with GenAI—Sentiment output. Word cloud generated in WorditOut.com (Enideo, 2025).


Figure 2. Feelings and perceptions when using GenAI—Sentiment output.
Word cloud generated in WorditOut.com (Enideo, 2025).

The focus group discussions revealed complex, interwoven perspectives, showcasing diverse emotional responses. Use of GenAI tools during the case study generated positive emotional responses and feelings such as "happy," "excited," and "enthusiastic." Furthermore, emotions such as "relieved" and "relaxed" indicate a possible reduction in stress levels.

However, participants also responded with words such as "anxious," "worried," "confused," and even "angry." In their orientation participants had been strictly prohibited from using GenAI. Once they consented to participate in the study and were using GenAI, some expressed anger, perceiving that they had previously been deprived of effective learning tools, especially those that could give simplified explanations of course material. This functionality was seen as highly valuable to increase understanding. Also, GenAI tools such as Cogniti were available 24/7 when participants had a 'burning question.' Yet, having been warned not to use AI, learners in the study were still worried and confused as to whether this use was ethical. In addition, some Adult Teaching Practice participants expressed unease about using the Cogniti chatbot available in their Moodle site, which was customised to provide feedback on their teaching philosophy and critical reflection. They were fearful that their tutor might judge them for their 'weaknesses' by checking their interaction with the chatbot. Once the tutor was made aware of these concerns, they reassured students that this would not be the case, and actively encouraged them to engage with Cogniti before submission of their final assessment.

Overall, the study illustrated the value of GenAI for the participants, notwithstanding their concerns about ethical principles and the need for structured support for GenAI use from Toi Ohomai. Some participants shared that, when first entering the unfamiliar territory of GenAI, they felt hesitant. However, this hesitation soon transitioned to an appreciation of the practical benefits GenAI tools could offer in overcoming language barriers and improving academic performance. Participants acknowledged their concerns about the potential for over-reliance on GenAI and for ethical and privacy breaches. They themselves had earned their qualifications without using GenAI, and could reliably critique GenAI outputs, but worried that newer learners might not be able to do this. Participants further expressed discomfort at how GenAI may impact academic integrity in the future in terms of authentic assessments, critical thinking, and the genuine learning experience. Nonetheless, they were motivated by their newfound access to knowledge and information and the positive impact GenAI had on their work-life/study-life balance. These findings aligned with the results of the questionnaire data analysis.

## DISCUSSION

This case study offers learners' perspectives on GenAI adoption at programme level. While existing research highlights the potential of AI use from an institutional or policy standpoint (Chan, 2023), this study considered how postgraduate students experienced the emotional, ethical, and practical scenarios of adopting GenAI for learning.

The use of the 4E framework (Shailendra et al., 2024) at the student level was a novel contribution. The study demonstrated how the enable and experiment phases were experienced personally by the students, while the AVM provided a structured method to measure perceptions and concerns. In the embrace phase, the study received faculty and ethical approval, demonstrating the institution's intent and commitment to adopt GenAI (Shailendra et al., 2024). The students' intent was signalled via the informed consent process, although the selection and degree of AI tool use was freely chosen by the participant. The enable phase focused on preparing the students by introducing GenAI tools into the learning and formative assessment process and providing practical support and ethical guidance on their use. In addition, participants shared GenAI tools they personally had identified as useful in a weekly class EdTech/IT tool presentation, and added them to their class Moodle Glossary for access by all students. During the experiment phase, participants engaged with the GenAI tools for their course work; participant data was received through the questionnaire (pre- and post-) and via the focus group discussions.

The final exploit phase involves scaling up the adoption of GenAI across the institution (Shailendra et al., 2024). This research provides valuable insights to inform GenAI adoption at Toi Ohomai. By applying the 4E framework at student level, this case study offers a perspective on how staged, ethically guided GenAI adoption can be supported in tertiary education.

Research question one asked about the experiences of Toi Ohomai Applied Professional Studies learners who were adopting GenAI tools for learning. The responses were largely positive, with many agreeing that GenAI tools added value and enhanced traditional learning approaches. Students showed a willingness to continue using and recommending GenAI for use in academic contexts. However, data analysis also revealed concerns around ethics, privacy, intellectual property, and academic integrity. While participants valued the support GenAI offered, these concerns highlighted the need for clear policies, guidelines, and clear communication across Toi Ohomai regarding ethical GenAI use.

Research question two explored participants' perceptions of the future role of GenAI tools in learning and assessment at Toi Ohomai, after using them during the case study. Overall, they were optimistic yet cautious. The students acknowledged GenAI's potential to facilitate and enhance learning, provided its use is balanced and guided by a structured framework. They advocated for institutional support, policy development, and GenAI literacy training to ensure future learners engage with GenAI responsibly and effectively. Participants expressed concern that other students might fall into the trap of misusing GenAI due to a lack of guidance. The findings revealed the need to ensure GenAI access and support are appropriate and consistent across the institution.

## IMPLICATIONS AND RECOMMENDATIONS

This study confirms that postgraduate students in two Applied Professional Studies courses found GenAI beneficial, while recognising the need for a regulated environment to enhance learning and assessment at Toi Ohomai. The following recommendations address the gaps revealed by the study:

1. Clear guidelines: Clear GenAI policies and guidelines should be available to staff and students on the use of AI technologies. The guidelines should refer to privacy and intellectual property laws, and facilitate awareness of ethical and responsible use of GenAI and protect the integrity of academic work.
2. Ethics and privacy training: The gap in understanding of acceptable AI use should be addressed through comprehensive training to protect students, staff, and the institution.
3. Improved support: Students reported limited support. Support should include both accessible systems and knowledgeable staff to assist with GenAI use.
4. Professional development and training: Training for both staff and students should be offered, to build a confident, knowledgeable AI user community where current and future learners are supported.
5. Ongoing monitoring: A monitoring process should be introduced to track GenAI's impact on learning and assessment, enabling informed, data-driven decisions on future use.

## LIMITATIONS

The sample size (n=16) of the study, specific to a single cohort in a specialised programme, limits the generalisability of the study findings; therefore, extending the study to different levels and additional programmes would be worthwhile. Participants (all but one student in the cohort) were self-selecting, and the study spanned only eight weeks of GenAI use. The study captured participants' experiences and perceptions within the semester; however, it cannot predict participants' long-term GenAI-related behaviours.

A notable limitation is that the final phase, exploit, which involves scaling up the adoption of GenAI across the institution (Shailendra et al., 2024) could not be tested due to time constraints and resources.

## CONCLUSION

By investigating how students within the Toi Ohomai Applied Professional Studies suite of programmes ethically interacted with GenAI tools to improve their study processes and outcomes, this case study adds a valuable learner-centred perspective to the conversation on the role of GenAI technologies in tertiary education.

Multilingual participants confirmed the potential for GenAI use to reduce study-related anxiety, increase efficiency, and support the learning process. However, the study also revealed negative perceptions and emotions that arose in relation to GenAI use, even when the use of specific tools had been encouraged. There is therefore a pressing need for consistent, transparent institutional guidance.

Insights from the research can inform Toi Ohomai and other tertiary education providers adopting GenAI to align with learner and industry needs. The findings suggest that successful GenAI adoption at the institutional level requires more than access to tools. A trusted framework and responsiveness to user needs are required. As education providers increasingly adopt GenAI and develop associated policies, procedures, and guidelines, this study provides a model for engaging learners in fair GenAI use.

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