

Navigating Responsibility and Acceptance: Students' Engagement with GenAI Writing Tools

Introduction/need for research

Generative Artificial Intelligence (GenAI) has revolutionized the writing landscape, offering increased creativity and productivity. Defined as a system's ability to interpret external data, learn from it to achieve specific goals through adaptation (Kaplan & Haenlein, 2019), GenAI like Chat GPT has gained popularity since its launch in 2022. In education, ChatGPT has generated interest due to its potential to enrich the learning experience of students by providing timely, personalized responses and improving the understanding of complex concepts (Montenegro, et al, 2023). Marzuki et al. (2020) reported improvements in English as a Foreign Language (EFL) students' writing quality when AI writing tools were used. Barnett and Pack (2023) found teachers and students disagreed on the acceptable use of GenAI writing tools and indicated a need for explicit usage guidelines. "While AI-based tools can be useful for brainstorming and generating initial drafts, there is concern about the potential for academic dishonesty" (Yeralan & Lee, 2023, p.110). This study aligns with the National AAE Research Priority Area 4: Meaningful, Engaged Learning in All Environments (Edgar, et al., 2016).

Conceptual or theoretical framework

TAM2, an expanded version of TAM, is grounded in perceived usefulness or the belief a technology will enhance an individual's performance and perceived ease of use or the belief a technology will require low effort. TAM2 acknowledges how external social factors influence perceived usefulness (Venkatesh & Davis, 2000). In this study, social factors may impact students' sense of responsibility for appropriate use of GenAI due to improved work quality. Students may disregard ethical considerations due to the ease of use. Social influence from peers or instructors may shape acceptance and responsibility beliefs. Training, clear guidelines, and institutional policies may further influence students' perceptions (Venkatesh & Davis, 2000).

Methodology

Participants form an upper-level, undergraduate agricultural communications course (N = 149) completed pre- and post-assessments on GenAI awareness and perceptions. The course was selected because students represented 11 of the 14 offered majors and represented freshman to senior classifications. The pre-assessment was administered prior to a class lecture on the use of AI tools in academic and professional settings. Students utilized ChatGPT as a tool to connect communication theory to their academic disciplines. Students were tasked with using the ChatGPT output as an outline for a reflection-based writing assignment. On the assignment due date, students completed the post-assessment. The pre- and post-assessments contained four scenarios describing tools for writing and students determined if AI was involved. The pre-assessment provided statements to collect student perceptions using a 5-point agreement Likert Scale (*strongly agree* to *strongly disagree*). The response rate for the pre-assessment was 86% and the post-assessment response rate was 74%. The study aimed to understand students' awareness and perceptions of GenAI as a writing tool, examining changes in AI identifications (pre-/post-assessments) and describing responsibility based on pre-instruction perceptions.

Results/findings

A comparison of students' ability to correctly identify the use of AI in email and academic writing showed the percentage of correct responses increased for all four scenarios. Each scenario and frequencies of pre- and post-assessment accuracy are reported in Table 1.

Table 1

AI Identification Accuracy Pre-Instruction and Post-Instruction

Scenario	Pre-Accuracy	Post-Accuracy
<i>You used an application to compose an email. It provided suggestions for completing sentences and recommended appropriate greetings and closings.</i>	96 (75%)	91 (82%)
<i>You submitted your academic paper to a platform for review. The platform offered feedback on writing style, grammar, and structure.</i>	94 (73%)	96 (87%)
<i>While working on an academic paper, you used a tool that automatically suggested citations based on the content you wrote.</i>	105 (82%)	95 (86%)
<i>You employed a writing tool to improve the grammar and style of your academic paper. The tool corrected errors and suggested enhancements to improve your writing.</i>	102 (80%)	97 (87%)

When asked if responsibility for ensuring work was not AI tool generated, students 41% ($n = 52$) neither agreed nor disagreed, 27% ($n = 35$) somewhat agreed, 16% ($n = 20$) somewhat disagreed it was the teacher's responsibility. When asked about the responsibility of students to ensure work was not AI generated, 41% ($n = 52$) somewhat agreed, 31% ($n = 40$) were neutral, and 23% ($n = 29$) strongly agreed. Respondents indicated they agreed (395, $n = 50$) or strongly agreed (23%, $n = 30$), and 26% ($n = 33$) were neutral when the statement indicated students had the right to use AI tools when educational institutions did not clearly state policies for use. Only 9% ($n = 11$) somewhat disagreed and 2% ($n = 3$) strongly disagreed with the statement.

Conclusions/Implication/Recommendations

The study revealed students' ability to identify writing scenarios involving AI tools improved after receiving instruction and utilizing AI writing tools. This supports perceived usefulness indicating as students become more familiar with AI writing tools, they may perceive those tools to be useful and be more attentive to identifying them (Venkatesh & Davis, 2000). While almost half of students expressed neutrality (40%) and some agreed (27%) it was a teacher's responsibility, the majority (64%) indicated it was a students' responsibility to ensure work was not AI generated. Thirty-one percent of respondents were neutral on responsibility. Through the lens of TAM2, students' perceived feelings of responsibility may be the result of social influence such as the instruction provided during class (Venkatesh & Davis, 2000). While 26% of respondents were neutral, most (62%) indicated agreement, and only 11% disagreed about it being a student's right to use AI tools when policies were unclear. This underscores the necessity of clear campus policies and procedures as TAM2 facilitation conditions indicate guidelines directly influence the technology user. Future research should explore how instructors' varied views on AI tools influence students' acceptance, increasing our understanding of social factors in AI technology acceptance.

References

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