INTEGRATING GENERATIVE TECHNOLOGY WITH WRITING PRAXIS IN HIGHER EDUCATION TO IMPROVE LEARNERS' DIGITAL FLUENCY

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ABSTRACT

A leading goal of higher education institutions is to imbue students with academic literacy, integrity, and self-efficacy in learning by which we mean understanding, knowing, and sharing information; this integrity is eroded by increased plagiarism and malpractice enabled through misuse of generative technologies such as AI. Plagiarism is considered a threat to "universities' credibility as producers of knowledge and as places in which young thinkers are educated, undermining the quality and value of education itself" (Mphahlele, 2019, p.1079). Students may exhibit digital literacy skills using variable suites of generative AI tools to build a framework and base logic to their writing but then the real and arguably human work of persuading the reader begins and requires a sophisticated blend of rhetoric and curated, balanced evidence. The writer and reader relationship functions on a contract of assumed expectations that conform to different genres and "when new text technologies appear, those terms have to be renegotiated" for the content to make sense (Fyfe, 2022). The discovery, ease of access, and wide use of generative AI tools put new writers at risk for not understanding the relationship of researching diverse ideas and perspectives and writing as sensemaking to form new, persuasive forms of scholarship.

Though educators have been challenged to lead by setting expectations and modeling usage of digital tools in diverse learning environments, historically, students and educators exhibit resistance to using digital tools to discover, design, or create in digital learning environments. Digital Literacy and plagiarism share complex and ill-structured natures and are complicated by the lack of a unified definition as well as a multitude of approaches toward understanding the complex nature of the problem and best practices to educate and resolve incidents. Educators share the belief that "ignoring the problem of plagiarism in students' work is not an ethical option for the student or the academic" (Volkov, 2011, p.23). The unique rhetorical situations of academic institutions create a dichotomous response to AI plagiarism. Educational institutions share a fundamental understanding of the importance of academic integrity and consequences of plagiarism but also retain "detailed individual understandings of what plagiarism constitutes", [...] the elements of the plagiarism definition, and the [best] academic practices" (Ronai, 2020, p.41).

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The aim of this research is to understand how generative AI tools change students' development of digital fluency and the systems of plagiarism detection used in Higher Education. Previous research (Caton, et al., 2022) identified three learning barriers preventing digital fluency: 1) digital tool adoption, digital fluency, and transfer of digital knowledge to help learners solve complex and ill-structured problems; 2) to deal with uncertainty; and, 3) to adapt emotionally and culturally. The theoretical approach to the current research problem is rooted in constructivism stemming from Jean Piaget's theory of cognitive development (1929). Writing as a process and praxis begins through inquiry and reflection from our experiences. The craft of research based writing requiring integrated citations calls into practice active learning and problem based learning methods (PBL) (Barrows, 1998). Employing constructivism and PBL enables reflective and evaluative review of how we access, process, and ethically use information to construct new scholarship in higher education. The analysis performed in this paper uses soft systems methodology (SSM) (Checkland, 1998) and the systems of systems (SoS) approach to explore the systems involved with plagiarism violation in higher education institutions and explore the concept of digital literacy fluency as a pathway to integrating generative technologies and as an opportunity to educate students about generative AI tool use in academic writing and not as a technological problem to solve in combating plagiarism.

The findings highlight the need for a systematic solution to reducing plagiarism in higher education and must focus on proactive learner education and technology implementations that mirror the values of serving the learner. Increasingly complex information environments create various barriers for student learning, and as our learning and working industries continue to evolve and integrate technologies, students must overcome these barriers by bridging learning needs and technology expectations. Learners' ability to transfer knowledge technically, socially, and cognitively across disciplines and industries using digital literacies is the culmination of skills needed for digital literacy fluency. As the volume and types of information about learners is collected through various data streams and learning analytics, it is likely that a combination of both AI engines and human teachers will be necessary to achieve more effective instruction. While each can be effective independently, as a combined model the AI engine can be used to inform the teacher with insights, which can help the teacher to make effective decisions.

Keywords: Cognitive fluency, digital literacy, generative technology, digital plagiarism

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