


# Chapter 2

## Ethical AI Integration in Academia: Developing a Literacy–Driven Framework for LLMs in South African Higher Education

**Zander Janse van Rensburg**

 <https://orcid.org/0000-0001-9822-8860>  
*North-West University, South Africa*

**Sonja van der Westhuizen**

*North-West University, South Africa*

### **ABSTRACT**

*The chapter explores the transformative potential and challenges of integrating large language models (LLMs) into higher education. It highlights the opportunities AI presents for enhancing academic literacy, writing, and pedagogy, while also acknowledging the risks to traditional educational values and practices. It proposes a framework, developed with the guidance of academic literacy, information literacy, digital literacy, and academic integrity, aimed at leveraging AI's capabilities to support academic success without undermining foundational skills. The discussion extends to the implications of AI in the South African educational context, addressing the digital divide and advocating for equitable access to technology. This chapter encapsulates the essence of the proposed proactive framework for navigating AI's impact on academia, focusing on adaptation, critical engagement, and the cultivation of an advanced form of academic literacy that integrates AI technologies responsibly.*

DOI: 10.4018/979-8-3693-1054-0.ch002

## **INTRODUCTION**

With the emergence of artificial intelligence (AI) technologies, particularly Large Language Models (LLMs), in late 2022, academic literacy as a practice and pedagogy is on the cusp of transforming (Grassini, 2023). In the face of these advancements, higher education institutions (HEIs) are confronted with what Gimpel et al. (2023: 28) describe as the “educator’s dilemma” where decisions need to be made on either banning such tools or fostering their responsible usage. The core of contention is the rapid content generation capability of LLMs (Elkhatat et al., 2023; Chen et al., 2024), which presents a contrast to traditional research and education practices of HEIs. This situation necessitates careful consideration and strategic planning for the integration and adaptation of AI technologies, especially within a South African context.

This chapter, therefore, proposes an integrative framework designed to harness AI’s potential while anchoring educational values in the relevant digital, academic, and information literacies. Simultaneously, it emphasizes alignment with the bedrock principle of academic integrity. Our aim is not merely to equip learners with the tools of the future but to ensure these tools amplify, rather than eclipse, the functional and foundational academic skills requisite for success in higher education. It is, however, important to underscore the progressive and anticipatory nature of our endeavor. This chapter does not claim to provide conclusive research outcomes; instead, it aims to offer a proactive framework for navigating the burgeoning AI revolution in academia, particularly within the distinct South African literacy context. In doing so, our aim is not just to keep pace with rapid developments but also to develop a constructive critique that influences the trajectory of educational development, ensuring that our institutions remain adaptable, critical, relevant, and forward-thinking. Our approach, therefore, is more than conceptual; it’s a commitment to cultivating an advanced form of existing literacies that leverages the positive aspects of LLMs. We provide educators with actionable insights for integrating these technologies into assessment design and curriculum development, thereby enriching the academic experience, and preparing students for a future intertwined with AI advancements.

### **The Integration of Large language Models Into Higher Education**

Generative AI and Large Language Models (LLMs) represent yet another step in the evolution of academic technologies. Earlier steps in this evolution include tools such as Microsoft Word’s grammar support, Google and Wikipedia. Initially received with skepticism, due, largely, to concerns about a “plagiarism epidemic,” these technologies have, over time, proven to be enriching for both teaching and learning

24 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage: [www.igi-global.com/chapter/ethical-ai-integration-in-academia/345997](http://www.igi-global.com/chapter/ethical-ai-integration-in-academia/345997)

## Related Content

---

### Community and Stakeholder Engagement in Human-AI Learning Ecosystems

S. Magesh, S. Vijayalakshmi, V. Nivedha, P. S. Rajakumar and R. Manikandan (2026). *Collaborative Paradigms of Generative AI and Human Intelligence for Equitable Learning Futures* (pp. 299-354).

[www.irma-international.org/chapter/community-and-stakeholder-engagement-in-human-ai-learning-ecosystems/410440](http://www.irma-international.org/chapter/community-and-stakeholder-engagement-in-human-ai-learning-ecosystems/410440)

### An Ambient Intelligence Based Multi-Agent System for Alzheimer Health Care

Dante I. Tapias and Juan M. Corchado (2009). *International Journal of Ambient Computing and Intelligence* (pp. 15-26).

[www.irma-international.org/article/ambient-intelligence-based-multi-agent/1369](http://www.irma-international.org/article/ambient-intelligence-based-multi-agent/1369)

### An Intelligent and Dynamic Decision Support System for Nonlinear Environments

S. Uma and J. Suganthi (2012). *International Journal of Intelligent Information Technologies* (pp. 43-61).

[www.irma-international.org/article/intelligent-dynamic-decision-support-system/74829](http://www.irma-international.org/article/intelligent-dynamic-decision-support-system/74829)

### Enhancing Stock Market Analytics in Real Time With Apache Kafka

Lavanya Kandasamy, Swarnava Dey, Debdyuti Mitra and Dhaivat Jambudia (2026). *AI-Driven Decision-Making for Diversity, Equity, and Inclusion in Marketing* (pp. 219-238).

[www.irma-international.org/chapter/enhancing-stock-market-analytics-in-real-time-with-apache-kafka/400549](http://www.irma-international.org/chapter/enhancing-stock-market-analytics-in-real-time-with-apache-kafka/400549)

### Metaverse and Its Underlying Challenges in Higher Education: A Case Study-Based Approach

Sonia Mukherjee (2025). *AI Applications and Strategies in Teacher Education* (pp. 321-352).

[www.irma-international.org/chapter/metaverse-and-its-underlying-challenges-in-higher-education/358902](http://www.irma-international.org/chapter/metaverse-and-its-underlying-challenges-in-higher-education/358902)