Chapter 5
Harnessing AI for Global Learning: Bridging Cultures Through Technology

ABSTRACT

The integration of artificial intelligence (AI) into education has transformed how students connect, learn, and collaborate across cultural boundaries. This chapter delves into the application and impact of AI tools in facilitating cross-cultural peer learning, an emerging area of significance for fostering global understanding and cooperation. Through an extensive literature review, the chapter synthesizes existing research on how AI technologies bridge cultural gaps and enhance peer learning among students from diverse backgrounds. The primary focus is to identify the AI tools currently utilized in cross-cultural peer learning, assess their effectiveness, and explore the associated benefits and challenges. By examining peer-reviewed articles, empirical studies, and theoretical papers from the past decade, the chapter provides a comprehensive overview of the current landscape and future potential of AI in this context.

INTRODUCTION

Background and Context

In today's increasingly interconnected and interdependent world, fostering cross-cultural understanding and collaboration has become a central imperative, particularly within educational settings (Deardorff, 2020). Globalization has drawn students from diverse cultural, linguistic, and socio-political backgrounds into

DOI: 10.4018/979-8-3693-8834-1.ch005

shared learning environments. However, traditional educational models—often built around monocultural assumptions—tend to fall short when addressing the nuances of intercultural communication and collaboration. As such, there is a growing need to reimagine education through innovative approaches that harness digital tools to create more inclusive and globally responsive learning ecosystems (Leask, 2015).

Artificial Intelligence (AI) is one such innovation that is rapidly transforming the educational landscape. With the advent of AI-driven tools—such as real-time translation applications, personalized learning platforms, and virtual peer collaboration technologies—educators now have unprecedented opportunities to support students in navigating cultural differences while enhancing global competencies. When applied thoughtfully, AI has the potential to bridge cultural divides and enrich cross-cultural peer learning experiences (Luckin et al., 2016).

Problem Statement

Cross-cultural peer learning, defined as the interaction between students from different cultural contexts to collaboratively construct knowledge, is often marred by significant barriers. These include language difficulties, divergent communication styles, conflicting educational expectations, and implicit cultural biases (Holliday, Hyde, & Kullman, 2010). Such challenges can create discomfort, misinterpretation, and reduced engagement, undermining the potential benefits of intercultural collaboration. While the educational community has long acknowledged the importance of global citizenship and intercultural competence, few practical, scalable solutions have been implemented to mitigate these persistent challenges—especially within peer learning contexts (Leask, 2015).

Purpose and Objectives

The purpose of this chapter is to explore how artificial intelligence can be effectively utilized to enhance cross-cultural peer learning in educational settings. By critically analysing current AI tools, the chapter seeks to assess their role in overcoming cultural and linguistic barriers while promoting more meaningful peer interaction across cultural boundaries. The key objectives include:

- Identifying the AI tools and platforms currently supporting cross-cultural peer learning;
- Evaluating the effectiveness of these tools in facilitating intercultural communication and collaboration;
- Exploring the benefits and limitations of AI integration in these contexts;