

Chapter 7

Artificial Intelligence in Addressing Educational Inequality Dimensions in Higher Education Institutions (HEIs): A Critical Review

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ABSTRACT

A key pressing social issue that higher education institutions (HEI) have consciously attended during recent years is the educational inequalities, hindering prospects of marginalized and underrepresented groups in society. Educational inequalities encompass both structural and outcome-related aspects. Two major educational inequality exist, the inequality of outcomes and inequality of opportunities. This chapter focuses on the inequality of outcomes, which is mainly the outcome of unequal distribution of academic resources. The chapter critically reviews the existing literature, with the objective of discussing various dimensions of educational inequality in the higher education sector, and the role of artificial intelligence in addressing educational inequalities. It is crucial to ensure that the use of AI is guided by ethical frameworks and transparency to prevent the reinforcement of existing biases and further marginalization of disadvantaged groups.

DOI: 10.4018/979-8-3693-2185-0.ch007

INTRODUCTION

Education is a human right, a powerful driver of development, and one of the strongest instruments for reducing poverty and improving health, gender equality, peace, and stability (World Bank, 2023). People very much appreciate education since it enables them to behave decently and respond wisely to uncertain economic and social incidents (Wouterse and Badiane, 2019). Education promotes sustainable development, ensures equity, social cohesion, and inclusive growth. Higher Education Institutions (HEIs) should play a fundamental role in achieving the international 2030 sustainable development (SD) agenda (Elmassah et al., 2021). In modern economies, people's livelihoods are based on skills acquired through education (Blanden et al., 2022). A strong educational system broaden access to opportunities, bolster the resilience of communities and institutions, drive long-term economic growth, reduce poverty and spur innovation (Bulathwela et al., 2023). However, the promise of education as an equalizer is still elusive; some sections of society are still deprived of their rights for education, for many reasons. The outcome is educational inequality, an uneven distribution of academic resources.

Educational achievement results from two factors, the access to education, and cognitive skills of learners. Access to education is influenced by many factors, the most important among them is the parents' socio-economic status. Cognitive skills are the outcome of the learning process, which often is influenced by the availability of resources at various levels of education. Achievement gaps among students ideally ought to solely the outcomes of their abilities and efforts. However, most educational systems reported notable achievement discrepancies among students, resulting from students' social and economic backgrounds, such as race/ethnicity, gender, rural/urban residency, or immigration/migration status (Broer et al., 2019). Luo et al., (2022) pointed out that Inter-group inequality is the main source of overall educational inequality in regions, urban–rural areas, and genders. Jong (2022) observed that children from families with high socioeconomic backgrounds were on average 1.4 to 1.76 times more likely to be admitted to top universities. The outcome of empirical reviews also highlighted that a rapid expansion of higher education system, in terms of number of HEIs and the programs offered, does not necessarily mean an expansion in educational opportunities and reduction in educational inequalities (Wu et al., 2020). Wealth, gender, ethnicity and location, plays an important role in shaping opportunities for education and life (UNESCO, 2023). The summary of empirical findings points out to the multitude of reasons behind educational inequality that exists in society, which has a far-reaching impact on the social, cultural, and economic arena of underdeveloped, developing and developed nations.

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