



UNESCO Reports on Skill Development and Education

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Abstract

This study examines UNESCO's contributions to global skill development and education using data from the Global Education Monitoring (GEM) Report 2024/25 and UIS SDG 4 indicators. Moving beyond a descriptive summary, the study analyzes foundational, technical (TVET), and digital skills to identify structural gaps in global education systems. It highlights disparities in access and reveals a mismatch between educational attainment and labor market needs. The findings indicate an imbalance between basic education and employability-oriented skills, emphasizing the need to shift from access-based to outcome-based skill development policies.

Keywords: UNESCO, skill development, education, technical and vocational education and training (TVET), digital skills, lifelong learning, SDG 4.

Introduction

Education and skill development are widely recognized as key drivers of personal, social, and economic development. Equitable access to education contributes not only to individual growth but also to the creation of inclusive and knowledge-based societies. Global policy frameworks increasingly emphasize the need to integrate foundational, technical, and digital skills to prepare learners for rapidly changing economic and technological environments.

Over the decades, UNESCO (United Nations Educational, Scientific and Cultural Organization) has played a significant role in shaping global education policies through its monitoring reports and strategic frameworks. Landmark reports such as the Faure Report (1972) and the Delors Report (1996) highlighted the importance of lifelong learning and inclusive education systems. More recent initiatives, including the Global Education Monitoring (GEM) Reports and SDG 4 indicators, provide data-driven insights into global progress in education and skill development.

Despite these efforts, significant challenges remain. Many education systems continue to prioritize basic literacy and completion rates, while technical and digital skills—essential for employability—receive comparatively less attention. Furthermore, disparities across regions and socio-economic groups persist, limiting access to quality skill development opportunities and creating a mismatch between education outcomes and labor market needs.

While existing studies and UNESCO reports provide extensive descriptive data on global education trends, they often lack critical analysis of the relationships between different skill domains and the extent to which these align with real-world economic demands.

Therefore, this study aims to analyze UNESCO's SDG 4 indicators to identify gaps and imbalances across foundational, technical, and digital skills, and to provide a more critical understanding of global skill development patterns.

Review of Related Literature

Education and skill development are widely recognized as essential components of personal, social, and economic development. Over the decades, UNESCO (United Nations Educational, Scientific and Cultural Organization) has emerged as a central institution in promoting inclusive, equitable, and quality education globally. Studies such as Jemeli and Fakandu (2019) emphasize that equitable access to education is fundamental for building a knowledgeable society and achieving sustainable human development. UNESCO's reports and publications provide important evidence-based guidance for policymakers and educators, particularly in shaping education systems and skill development initiatives.

The evolution of UNESCO's reporting mechanisms reflects its strong commitment to global education monitoring. Spaulding and Chaudhuri (1999) highlight the role of UNESCO's World Education Reports in tracking educational progress and informing international policy. Similarly, King (2009, 2016, 2020) critically examines UNESCO's role in linking education with economic development, particularly through the promotion of vocational and informal-sector skills. These studies suggest that UNESCO has been influential in expanding the scope of education beyond formal schooling to include employability and lifelong learning.

Technical and Vocational Education and Training (TVET) remains a key focus of UNESCO's skill development agenda. Research indicates that TVET is essential for equipping learners with practical and job-relevant skills (Preckler Galguera, 2018). Additionally, the Global Report on Adult Learning and Education (GRALE) highlights the importance of lifelong learning in enabling individuals to adapt to changing labor market demands (Panagiotopoulos & Karanikola, 2017; Akther, 2020). These frameworks demonstrate UNESCO's emphasis on integrating digital literacy, critical thinking, and problem-solving skills into education systems.

However, despite these contributions, the literature also points to persistent challenges. Studies reveal significant disparities in access to quality education, limited participation in adult learning, and a growing mismatch between education systems and labor market needs (Buckler & Creech, 2014; Burnett, 2010; Wheeler, 2017). While UNESCO provides extensive data and policy recommendations, much of the existing literature remains descriptive and does not critically examine variations across different skill domains or assess the effectiveness of these frameworks in addressing real-world employment challenges.

Overall, the literature confirms UNESCO's important role in shaping global education and skill development policies. However, there is a clear gap in critically analyzing how different dimensions of skill development—foundational, technical, and digital—interact and whether current policy frameworks adequately address imbalances between education outcomes and labor market requirements. This study seeks to address this gap by providing a comparative and analytical interpretation of UNESCO's SDG 4 indicators.

Objective of the Study

To study UNESCO reports on education and skill development and understand their impact on learning, skills, and access to education.

Significance of the Study

This study is significant because it helps to understand the role of UNESCO in promoting global education and skill development. By analyzing UNESCO reports, the study highlights best practices, challenges, and gaps in education systems worldwide. It provides useful insights for policymakers, educators, and students to improve learning opportunities, ensure equitable access, and promote lifelong learning. The findings can guide strategies for developing skills that meet the needs of individuals and societies, supporting sustainable personal, social, and economic growth.

Methodology

This study is based entirely on secondary sources and employs a descriptive review approach. It analyzes UNESCO reports, including the Global Education Monitoring (GEM) Report 2024/25, the UNESCO Institute for Statistics (UIS) SDG 4 indicator database, as well as relevant research papers, journal articles, and books to examine global trends in education and skill development.

The study focuses on selected SDG 4 indicators relevant to skill development, including Technical and Vocational Education and Training (TVET) participation (SDG 4.3.3), literacy rates (SDG 4.6.1), digital skills (SDG 4.4.1 and 4.4.2), completion rates (SDG 4.1.2), and teacher qualifications (SDG 4.c.1). These indicators were selected because they are commonly used in UNESCO reporting to describe key dimensions of education and skill development.

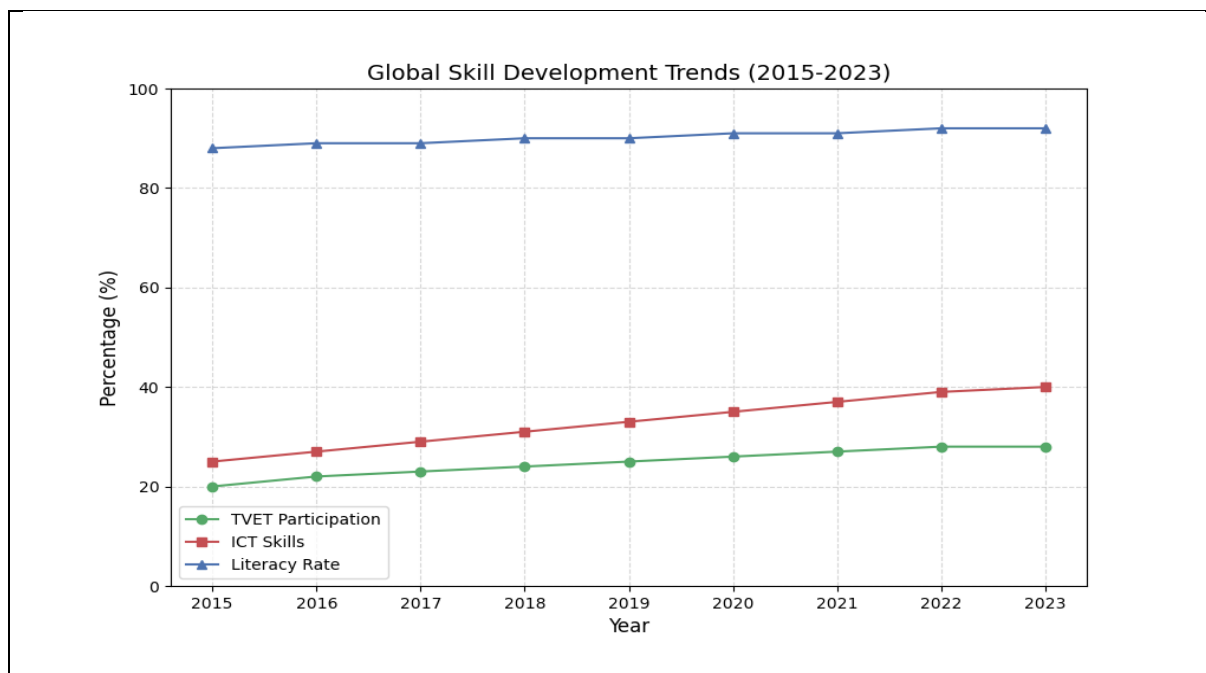
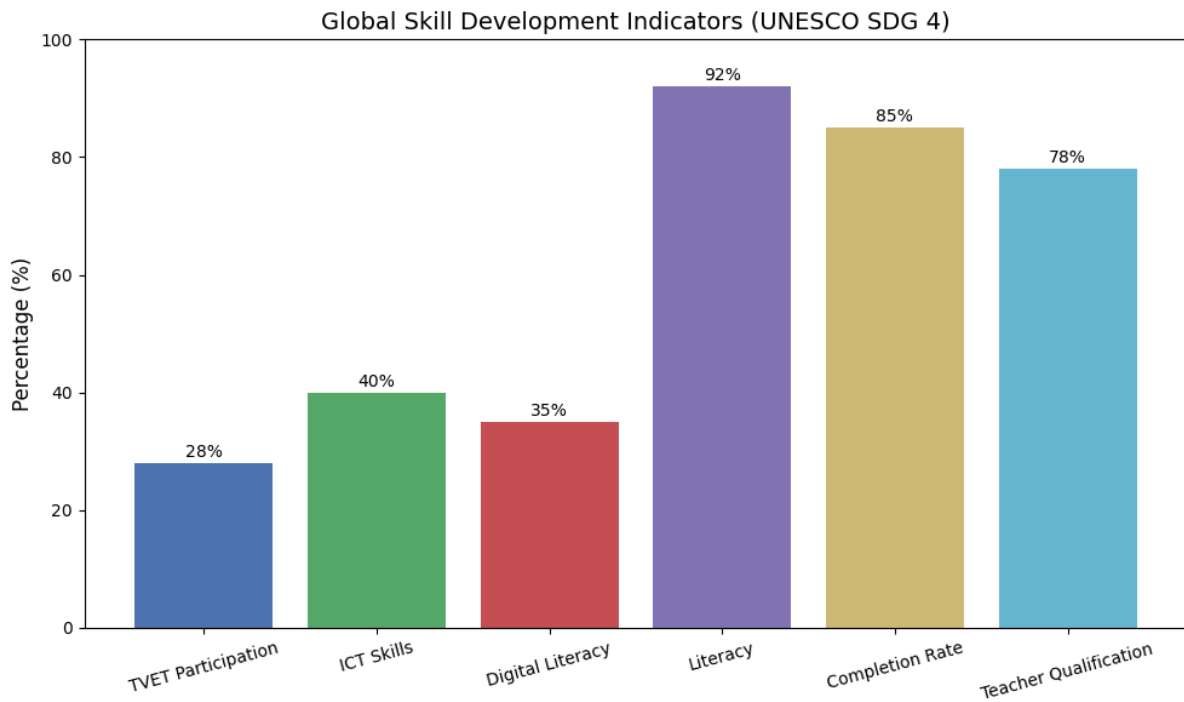
The research involves summarizing and synthesizing findings from existing reports and literature to present an overview of global trends in education and skill development. It also identifies commonly reported gaps and disparities in access, quality, and relevance of education across different regions, as discussed in the selected sources.

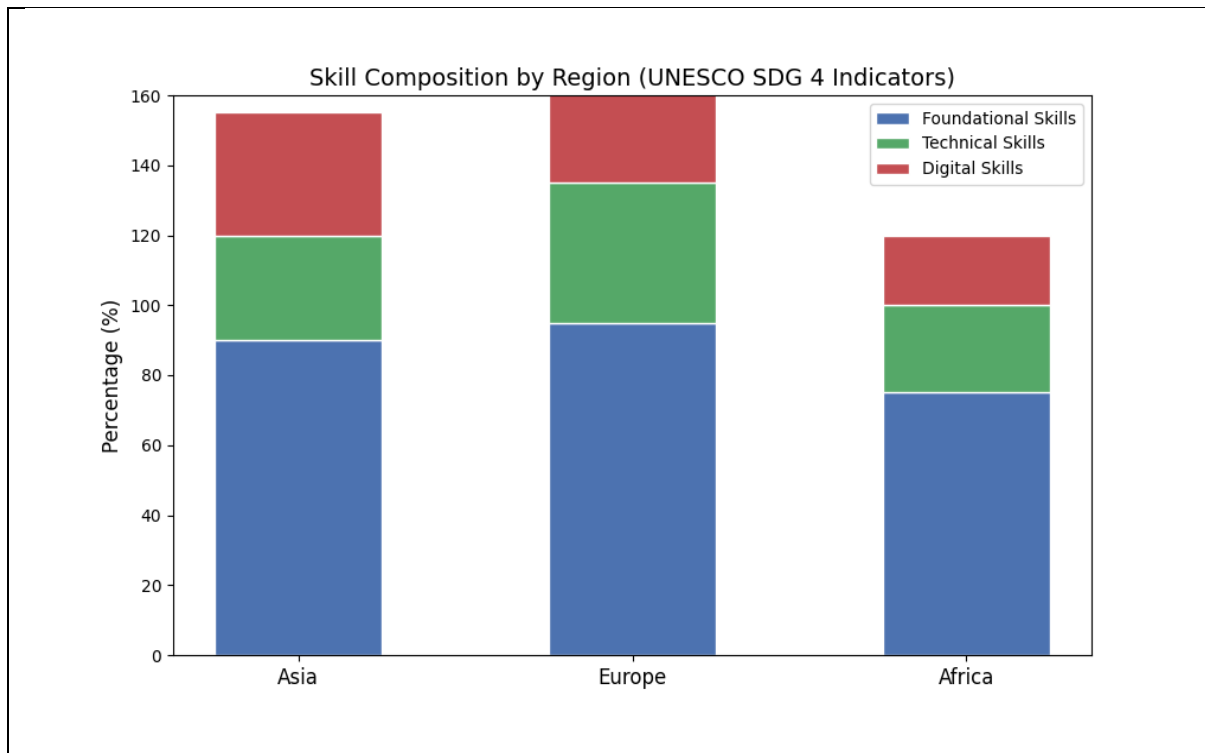
Overall, this descriptive review provides an overview of UNESCO's contributions to global education and skill development based on existing published literature and secondary data sources.

SDG 4 Target	Indicator Code	Indicator Name (UIS Definition)	Skill Dimension	Data Source
4.3	4.3.1	Participation rate of youth and adults in formal and non-formal education (last 12 months)	Lifelong learning	UIS
4.3	4.3.3	Participation rate in technical/vocational programmes (TVET)	Technical skills	UIS
4.4	4.4.1	Proportion of youth and adults with ICT skills	Digital skills	UIS
4.4	4.4.2	Percentage achieving at least a minimum level of digital literacy	Advanced digital skills	UIS
4.6	4.6.1	Proportion of population achieving literacy proficiency	Foundational skills	UIS
4.1	4.1.2	Completion rate (primary, lower secondary, upper secondary)	Human capital base	UIS
4.c	4.c.1	Proportion of teachers with minimum required qualifications	System capacity	UIS

Source: Global Education Monitoring Report 2024/25

(Statistical Tables based on SDG 4 Indicators, UNESCO Institute for Statistics)





Data were sourced from UNESCO GEM 2024/25 and UIS SDG 4 indicators, covering literacy, TVET, digital skills, completion rates, and teacher qualifications. Data are presented using bar charts (global averages), stacked bar charts (regional disparities), and line charts (2015–2023 trends), supporting analysis of skill development gaps and policy implications.

Discussion

The review of UNESCO reports and related literature indicates that UNESCO plays a significant role in shaping global education and skill development policies. Evidence from the Global Education Monitoring (GEM) Report 2024/25 and UIS SDG 4 indicators shows that while access to education has improved globally, significant disparities persist across regions and socio-economic groups (Jemeli & Fakandu, 2019).

A key pattern emerging from the literature is the imbalance between different dimensions of skill development. Although foundational education such as literacy has improved in many contexts, technical and vocational education and training (TVET) and digital skill development continue to lag behind. UNESCO highlights TVET as an important mechanism for improving employability and supporting workforce development, particularly in developing countries (King, 2016; Preckler Galguera, 2018). However, existing literature suggests that participation in TVET remains uneven and often less prioritized compared to general education pathways.

Adult learning and lifelong education are also central to UNESCO's framework. The Global Report on Adult Learning and Education (GRALE) emphasizes that lifelong learning supports adaptability in changing labor markets (Panagiotopoulos & Karanikola, 2017; Akther, 2020). Despite this emphasis, the literature indicates that opportunities for adult education remain limited in many regions, particularly where institutional and economic constraints exist.

Persistent challenges are also highlighted across studies, including inequality in access to quality education, limited skill alignment with labor market needs, and gaps in policy implementation (Buckler & Creech, 2014; Burnett, 2010; Wheeler, 2017). While UNESCO provides comprehensive policy

guidance, the literature suggests that disparities in implementation continue to affect the effectiveness of skill development initiatives.

Overall, UNESCO's framework provides an important global reference for education and skill development. However, the reviewed literature highlights the need for stronger alignment between foundational education, technical training, and digital skill development, as well as more effective implementation of policies at regional and national levels.

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