



Chapter 3

Artificial Intelligence Educational Pedagogy Development: ICT Pedagogy Development for Education 5.0

Ugochukwu Okwudili Matthew

 <https://orcid.org/0000-0003-0828-9710>
Hussaini Adamu Federal Polytechnic, Nigeria

Jazuli Sanusi Kazaure

 <https://orcid.org/0000-0001-7681-2177>
Hussaini Adamu Federal Polytechnic, Nigeria


Charles Chukwuebuka Ndukwu

Michael Okpara University of Agriculture, Umudike, Nigeria


Godwin Nse Ebong

University of Salford, UK

Andrew Chinonso Nwanakwaugwu

 <https://orcid.org/0000-0002-2929-9638>
University of Salford, UK

Ubochi Chibueze Nwamouh

 <https://orcid.org/0000-0002-0320-3773>
Kampala International University, Uganda

DOI: 10.4018/979-8-3693-2314-4.ch003

ABSTRACT

The current digital society has witnessed important developments in robotics and artificial intelligence (AI) research being applied to several spheres of life in order to address multitude of issues. While there are numerous studies on human-robot collaboration on low- and high-level tasks with a focus on robot development, in the current study, the chapter focused on organizational issues arising from human-robot co-working on education and research with particular reference to research and education network (REN) for universities as leverage to human capital development. The chapter identified critical issues in the current REN and tried to solve them with human-robot collaboration from an organizational and pedagogical normalization perspective. The research described an AI-powered instructional robotics application and the development process that the current society can participate and impact the AI pedagogic literacy using deep learning, introducing organizational robotics research studies with an emphasis on education and human capital expansion.

1. INTRODUCTION

Society 5.0 is a civilization that prioritizes the needs of its citizens, strikes a balance between social and economic progresses, and does it through a system that is tightly integrated with both the real and technologies or digital worlds (Audrey & Paksi, 2022). The Society 5.0 also known as the “super-smart society,” aspires to a socio-economic development that is inclusively sustainable and supported by digital technologies like big data analytics, artificial intelligence (AI), the Internet of Things (IoT) and robotics (Schoitsch, 2019). A widespread technology paradigm supporting Society 5.0 is the “cyber physical system,” which firmly integrates cyberspace and physical space, which several people first thought the idea was a lofty vision with no clear indication of how it would truly play out (Oztemel & Gursev, 2020). The Fourth Industrial Revolution and the transition to Society 5.0 are considered to be analogous in that both terms relate to the current fundamental transformation of our economic system into a new paradigm (Oztemel & Gursev, 2020; Huang et al., 2022). However, Society 5.0 is a more comprehensive idea because it envisions a radical changes in how we live, propelling industrial revolutions aimed to separate human labour from that of machines. These machines, which we may refer to as robots, will eventually assume control of the majority of the labour-intensive, monotonous, or hazardous tasks currently performed by humans (Javaid, Haleem, Singh, & Suman, 2021).

27 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/artificial-intelligence-educational-pedagogy-development/336512

Related Content

Social and Cultural Impacts on Employee Job Satisfaction and Commitment to Organisations

Augustine Imonikheand Dane Lukic (2022). *International Journal of Applied Management Theory and Research* (pp. 1-16).

www.irma-international.org/article/social-and-cultural-impacts-on-employee-job-satisfaction-and-commitment-to-organisations/300343

The Competitiveness of Polish Apples on International Markets

Pawe Jakub Kraciski (2017). *International Journal of Food and Beverage Manufacturing and Business Models* (pp. 31-43).

www.irma-international.org/article/the-competitiveness-of-polish-apples-on-international-markets/185529

Regulatory Requirements and Financial Inclusion in FinTech Companies

Lilian Gichuruand Juliana M. Namada (2022). *International Journal of Applied Management Theory and Research* (pp. 1-13).

www.irma-international.org/article/regulatory-requirements-and-financial-inclusion-in-fintech-companies/300345

Change Management Revised

Rainer Erne (2016). *Organizational Change Management Strategies in Modern Business* (pp. 1-23).

www.irma-international.org/chapter/change-management-revised/140320

Self-Service Business Intelligence Adoption in Business Enterprises: The Effects of Information Quality, System Quality, and Analysis Quality

Mohammad Daradkehand Radwan Moh'd Al-Dwairi (2018). *Operations and Service Management: Concepts, Methodologies, Tools, and Applications* (pp. 1096-1118).

www.irma-international.org/chapter/self-service-business-intelligence-adoption-in-business-enterprises/192522