

# International Conference on Science, Technology, and Innovation (ICSTI 2026)

Conference Proceedings

March 20 - 21, 2026 - Virtual

## Issues of AI and Human Resource Development: Applications in Education and the Arts

Eun Jin Jung

Korea Research Institute for Vocational Education and Training (KRIVET), Sejong, Republic of Korea

### Abstract

This study examines how artificial intelligence (AI) transforms human learning, creativity, and ethical engagement, with implications for future Human Resource Development (HRD). Drawing on Computational Creativity theory, a cross-domain case study analysis—including educational tools (e.g., Jill Watson, Cognii) and generative art platforms (e.g., AICAN, DALL·E)—reveals the dual role of AI as both cognitive collaborator and autonomous agent. The paper structures its discussion around three key dimensions: education (personalized learning vs. development of metacognitive competence), arts (co-authorship dilemmas vs. preservation of human originality), and ethics (regulatory gaps in professional education). Through these domains, the study highlights interdependent tensions and synergies, and argues that AI integration calls for reconceptualizing human-machine interaction in HRD. It then proposes the AI-Human Synergistic Creativity and Learning Framework, which emphasizes collaborative creativity, ethical reflection, and adaptive learning for workforce development. The findings offer actionable insights into curriculum design, policy formulation, and institutional training strategies in AI-augmented contexts.