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Evaluating AI as a Pedagogical Assistant in Military Staff Exercises: A Kirkpatrick-Based Approach to ICT Integration in PME.

This study investigates the pedagogical implications of integrating generative artificial intelligence (AI) tools into professional military education (PME), focusing on their role as educational assistants during operational staff exercises. Conducted within the framework of the Norwegian-Swedish praxis arena Comprehensive Shield 2025, the research is part of a broader experimental design involving multiple study areas. This abstract presents the scope and methodology of the pedagogical study on the use of information communication technology. The study applies Kirkpatrick's four-level model of training evaluation—reaction, learning, behavior, and results—to assess how military students interact with and benefit from AI tools during complex planning tasks. Data collection includes post-exercise questionnaires, structured observations, and semi-structured interviews, enabling both quantitative and qualitative analysis. The research aims to generate actionable insights into how AI can enhance learning outcomes, support knowledge development, and foster critical thinking in PME contexts. By triangulating student perceptions, observed behaviors, and instructional feedback, the study could on completion make empirical-informed recommendations for practical-pedagogical integration, as well as ethical considerations, of AI into PME curricula and operational training frameworks. This work contributes to the evolving discourse on digital transformation in defense education, offering a structured analysis for evaluating emerging technologies in complex, high-stakes learning environments.

References

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). Evaluating Training Programs: The Four Levels. Berrett-Koehler.

Laurillard, D. (2012). Teaching as a Design Science: Building Pedagogical Patterns for Learning and Technology. Routledge.

Neelen, M. & Kirschner, P.A. (2020). Evidence-Informed Learning Design: Creating Training to Improve Performance. Kogan Page Ltd.

Luckin, R. (2018). Machine Learning and Human Intelligence: The Future of Education for the 21st Century. UCL Institute of Education Press.

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