

Developing Professional Competencies for Occupational Safety and Health in Kazakhstan: A Risk-Based Approach

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ABSTRACT

This research focuses on developing a risk-based approach for professional competency development in occupational safety and health (OSH) in Kazakhstan. The study analyzes the current state of OSH training and education in the country and explores international experience in organizing and conducting training for employees in this field. Based on the analysis, the study identifies general principles for applying a risk-based approach in developing professional competencies, including prioritization of competency improvement, continuity of training, frequency of advanced training, preventive learning outcomes, consideration of professional risks, mutual responsibility of individuals, society and the state, integration with international OSH standards, and employer obligation to organize competency improvement. The study also identifies problems and proposes solutions for updating current legislation, occupational classification systems, and OSH education quality. The research recommends the creation of an Educational and Methodological Center to maintain registers for training centers, lecturers, and certificates for testing OSH knowledge, and the elaboration of a Unified OSH knowledge recognition center. Finally, the study suggests the mandatory inclusion of an OSH module in higher education programs. Overall, this research aims to contribute to the improvement of OSH professional competencies in Kazakhstan and enhance the country's OSH management system. **Objective:** to identify and analyze the current state of OSH training and competency development in Kazakhstan; to explore international best practices and trends in OSH training and competency development; to develop general principles for applying a risk-based approach in developing professional competencies in OSH; to propose recommendations for improving the current system of OSH training and competency development in Kazakhstan. **Methods:** Literature review of national and international laws, regulations, and guidelines related to occupational safety and health (OSH) training and competency development; Analysis of OSH training programs in different countries including USA, Great Britain, Germany, Japan, South Korea, Portugal and APOSHO members; Identification of the main trends in OSH training and competency development, including lifelong learning, adaptive learning, and strengthening the relationship between theory and practice; Identification of general principles for applying a risk-based approach in developing professional competencies in OSH, such as prioritization of competency improvement, continuity of training, and integration with international OSH standards. **Findings:** The current system of OSH training and competency development in Kazakhstan needs improvement in terms of updating the norms of the current legislation, updating the National Classifier of Occupations, and updating the occupational risk assessment system and the Labour Code. International best practices suggest the need for lifelong learning, adaptive learning, and strengthening the relationship between theory and practice in OSH training and competency development. A risk-based approach is essential in developing professional competencies in OSH, including prioritization of competency improvement, continuity of training, and integration with international OSH standards.

The creation of an Educational and Methodological Center can help maintain the quality of OSH training and competency development in Kazakhstan by maintaining the Register of Training Centers and lecturers, the Register of certificates for testing knowledge in OSH, conducting lecturer training, and developing test tasks for conducting a final assessment of knowledge on standard curricula.

Keywords: risk-based approach, oriented to risks, OSH Competency, evolution of study, OSH in Kazakhstan.
