Abstract

The doctoral dissertation focuses on the use of an e-learning platform as a tool supporting the creation of a knowledge management system in a chemical industry enterprise. The topic was chosen because of a research gap identified in the literature: despite the growing importance of e-learning, previous analyses have focused primarily on its application in academic education, omitting the industrial context, particularly in the chemical industry in Poland.

The chemical industry marks out with particularly high-quality requirements, procedures, and complex organizational structures. These types of conditions make effective knowledge management requires solutions adapted to the specifics operational needs of the sector. One of the potential tool supporting this process is e-learning, which, when properly designed, can increase the effectiveness of knowledge transfer while ensuring compliance with applicable safety norms and standards.

The aim of the research was to develop and empirically verify an e-learning model that supports knowledge management processes in a chemical enterprise, responding to both organizational requirements and employees needs and expectations. Particular emphasis was placed on safety, the standardization of knowledge transfer, and availability of training for various user groups.

The research uses a mixed method, combining qualitative methods (in-depth interviews) and quantitative methods (survey). The subject of the analysis were employees of Grupa Azoty ZAK S.A. - one of the key players in the Polish chemical sector. The research allowed to identify end-user needs and preferences, as well as their attitudes towards e-learning, including artificial intelligence-based solutions. Thanks to this, it was possible to take into account the latest technological trends and current challenges in implementing such systems in industrial environments.

The results obtained enabled the development of practical implementation guidelines and provided data for designing an e-learning model that realities of chemical industry enterprises. The analysis brings a significant contribution to the existing literature, filling the gap regarding the use of e-learning as a knowledge management tool in the industrial sector, taking into account the specific characteristics of the chemical industry.

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