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Situated Knowledge and Formal Science: Toward Transformative Learning of Chemistry in University Education

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ABSTRACT

This documentary study explored the relationship between situated knowledge and formal science in transformative learning of university chemistry. The objective was to analyze the literature on the integration of both to identify transformative pedagogical strategies. The methodology was based on the search, selection, and analysis of relevant academic sources, identifying key concepts, arguments, and pedagogical proposals from various authors. The results revealed a convergence on the importance of situated knowledge as a starting point for meaningful learning, as well as the need to articulate it with formal science through contextualization, inquiry, and critical reflection. The discussion highlighted how authors such as Lave and Wenger, Brown et al., Driver et al., and Mezirow emphasize the active construction of knowledge, the relevance of context, and the restructuring of meanings. Key pedagogical strategies were identified, and implications for educational practice were pointed out. The overall conclusions highlighted the need to value situated knowledge, articulate it with formal science, and foster critical reflection to achieve transformative learning in chemistry, enabling students to develop a deep and applicable understanding of the discipline.

Descriptors: Knowledge, situated, science, formal, learning, transformative Chemistry, University Education

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