



A Comparative Analysis of the High School Chemistry Curriculum Objectives in Czechia and Turkey based on the Revised Bloom's Taxonomy

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Abstract

This study aims to perform a comparative analysis of high school chemistry curriculum objectives in Czechia and Turkey based on the Revised Bloom's Taxonomy (RBT) by Anderson and Krathwohl in 2001. Even though it is defined differently, the curriculum is one of the musts of the education system. The curriculum can be thought of as a bridge between the teacher and students. Teachers try to bring their students to the pre-defined learning objectives through their curricula. Analyzing a curriculum can, therefore, give an idea about the learning objectives which are expected to be attained by students. To explore the intellectual demands, the authors examine the chemistry curricula from Czechia and Turkey, as well as describe their chemistry contents and teaching and learning processes. The unit of analysis is the learning objectives from both countries' curricula. Using the descriptive analysis of the objectives of both chemistry curricula, the authors assess the action verbs whether they are associated with the intended cognitive process dimension in the RBT, namely remembering, understanding, applying, analyzing, evaluating, and creating. Researchers also match each chemistry curriculum objective to the knowledge dimension in the RBT: factual, conceptual, procedural, and metacognitive. To ensure reliability, each chemistry curriculum objective was coded by at least two researchers and a bunch of them were translated into English for the third encoder – a member of the author team. The related agreement percentages were calculated, and within-country inter-coder kappa calculations were made. The results contribute to the insight into the structure of both chemistry curricula among the two educational systems with different tradition and influences. Both curricula share many similar visions and approaches to chemistry teaching. The lower three levels of cognitive processes are more common in the learning objectives of both countries' curricula than, the higher three levels of cognitive processes.

Keywords: Curriculum comparison, High school chemistry curriculum, Chemistry curriculum, Revised Bloom's Taxonomy, Curriculum objectives;