

ABSTRACT

This thesis looks into inquiry-based learning in chemistry classes at elementary schools. The objective was to design an inquiry-oriented task on the topic of *acids and bases* which would comply with the goals of inquiry-based science education while at the same time achieving the compulsory outputs of this topic, as defined by The National Curriculum. The theoretical part of the thesis focuses on the characteristics of teaching chemistry in primary schools and the definition of inquiry-based learning specifics. The practical part firstly describes the exact course of the proposed task. Subsequently, the results obtained in cooperation with eighth-grade students are verified and assessed.

To evaluate the task, several materials were used: the outputs created by the pupils during the activities, the initial and final knowledge tests, and IMI (Intrinsic Motivation Inventory) questionnaires which focus on the students' perception of the task. Based on the obtained data, the task was evaluated from several points of view. The implementation of the task successfully led students to learn about concepts related to the topic, as well as various methods of pH measurement. The effect on their skills for planning and carrying out a chemical experiment was also positive. The shortcomings of the task, as observed during the implementation, mostly amounted to a too limited space for students' discussion and presentation of the results of their research. The pupils' progress in the newly acquired theoretical knowledge was also only slight. The proposed task thus fulfills the activity-oriented outputs of the topic as defined by The National Curriculum; however, regarding the required theoretical knowledge, it is insufficient.