ABSTRACT

This bachelor thesis focuses on investigating the relationship between defining and classifying mathematical concepts in case of increasing sequences. The thesis examines how two different methods of defining affect students' ability to correctly classify mathematical objects and whether active participation in the defining process can improve their mathematical understanding and analytical skills. The theoretical background presents literature related to classification in psychology and mathematics didactics, as well as an analysis of the interaction between defining, explaining, and classifying, which was the focus of the study described in the article by Alcock and Simpson (2016). The practical part of the thesis includes qualitative research in which an experiment was conducted with students who were divided into groups based on two approaches to defining. The results show that students who formulated their own definitions did not achieve significantly better results in classification of sequences than those who worked with predefined definitions. However, we found that students were unsure of their own definitions, and therefore did not work with them at the same level as those who received a correctly formulated definition. The conclusions of the thesis offer implications for mathematics education, benefits for educational practice, and possible follow-up studies.