

## **Abstract**

The aim of this thesis is to explore the factors influencing the usage of modern technologies in teaching Mathematics. Modern technologies have been gradually earning their place in Czech schooling for a while now, but they are not always used in the way we might expect. To address such a question, upon consulting various literary sources, this thesis presents a model of factors which influence the usage of technologies in teaching Mathematics and aims to answer the following questions. What factors influence the intended usage of technologies in teaching Mathematics? How do these factors influence the intended usage of technologies in teaching Mathematics? What are the differences between the intended usage and the real usage and what factors influence them? How do these factors influence the real usage in teaching Mathematics? The individual factors have been further explored by a multiple-case study of three Czech Mathematics teachers during their teaching and subsequential interviews. It was the form of a multiple-case study which allowed for deeper observation of the mutual relationships between the individual factors in teachers with very different approaches to teaching and modern technologies. The differences between the considered cases then provided an insight into what could help teachers to incorporate technologies into teaching Mathematics, taking their personality differences into consideration. Additionally, this thesis discusses the impact a seminar of the Further Development of Teachers system had on a group of 300 Mathematics teachers. The seminar focused on implementing modern technologies, namely the GeoGebra programme, into teaching.