

## **Abstrakt** (anglicky)

Fractions are one of the critical areas of mathematics at the primary school. The aim of this diploma thesis is to describe didactic practices used when teaching fractions (focusing in particular on additive operations with fractions) and find out what strategies are used by pupils at selected tasks focusing on fractions, what difficulties are an obstacle in their successful solutions and what images of fractions the pupils have. The theoretical part contains considerations about the teaching and learning of mathematics, the overview of the historical development of the concept of fraction and operations with fractions and also selected research related to fractions. The practical part begins with the analysis of the textbooks where their semantic and structural models used for fractions are identified as well as ways of teaching operations with fractions. My own research consists of semi-structured interviews with five experienced teachers (one of whom is not qualified) on the topic of teaching fractions, the difficulties of pupils with fractions and of clinical interviews with three pupils from different primary schools. Interviews with the pupils were focused on the solution of the diagnostic tasks in the field of fractions. Transcripts of both interviews were analyzed by techniques based on grounded theory. It was found that the teachers use not only conventional practices which are offered by textbooks but that they also create their own teaching approaches and procedures. These practices and procedures are one of the results of the diploma work. Furthermore, it was found that the researched pupils have no difficulties with the calculations with fractions but their failure in the solution of the diagnostic tasks is caused by the lack of understanding what fractions represent.