ABSTRACT

Students come to the secondary mathematics classroom with a variety of motives. These motives shape the goals a student holds, and the actions that a student performs within the classroom. Ultimately, the approach that a student takes towards learning is a direct consequence of his or her motives. Given the significance of student motive for learning, it is important to understand better the relationship between actions, goals, and motives. The research presented in this thesis aims to do just that. More specifically, it looks closely at student actions in high school mathematics classrooms with the aim of identifying student goals and motives, and further, analysing the relationships between students’ actions and their motives. Using an ethnographic perspective and methods, student actions in three different secondary mathematics classrooms were observed and in situ informal interviews were conducted. Data were first organised and analysed according to actions performed in each activity setting. Then, using classical activity theory, 10 students’ actions and goals in multiple activity settings were analysed to ascertain his or her motives in mathematics class. Finally, the motives and actions of all participants were re-examined from two different perspectives: first, looking at the performed actions of all students holding a given motive in each activity setting; and second, examining the relationships between similar student actions and different motives in one activity setting. This ‘crossover’ approach revealed that similar student actions can be driven by different motives, and that the same motive does not always manifest in similar student action.

Keywords: Student behaviour; secondary mathematics; ethnographic approach; activity theory;