Abstract

This qualitative research study investigated the observed behaviors and reported experiences of 3rd grade students when implementing dialogue in a mathematical problem solving class. Eighteen students participated in the study. Problem solving activities involving logical and reasoning skills, higher level thinking, multiple step word problems, Sudoku puzzles, and number equations involving number sense and choosing correct operations were completed as a means of producing dialogue and discussion in small collaborative groups. Data were gathered using observation of dialogue between the students and student work was collected and analyzed. A pre-survey and post-survey measured student attitudes and perceptions and also one-on-one student interviews were conducted to gather more specific information. This study suggested that when students are organized in collaborative groups and given the opportunity to discuss mathematical problem solving their depth of mathematical understanding improves. The study also suggests that when students are given autonomy to choose their assignments it solidified their mathematical vocabulary and increased their motivation and self-confidence.