The focus of this action research project was students’ use of various seventh grade vocabulary words taken from the Arizona State Standards. The purpose of this action research project was to investigate the ability of seventh grade math students to assign meaning to new math vocabulary words and whether students were able to use the words correctly in a mathematical context. More specifically, the focus was on words that contain a specific mathematical meaning and one or more meaning(s) in other contexts (polysemy). Clear and coherent communication is an essential standard for 7th grade according to the NCTM (2000) and Arizona (2008) math standards. The research investigated whether students were able to identify new terms in a visual example, and whether they could describe what they saw using the correct terms after specific vocabulary instruction in math class. Additionally, the research shows how the addition of vocabulary instruction to the lesson changed the timing and flow of the lesson.

The data collected included qualitative and quantitative data in the forms of a vocabulary pre- and post-test, student interviews, student surveys, scores on benchmark test items, and student written solutions to a teacher-written problem involving usage of vocabulary terms. Study participants included two math classes whose median benchmark average scores from the previous school year were most similar to each other and to the median. Both classes received the same math instruction.

Combined vocabulary teaching strategies and math language strategies were used to discover effective ways to help students assign meaning to the some of the words they needed to know in 7th grade math. The knowledge gained in this area combined with a position of teacher leadership by the researcher benefits teachers and students. Since the results indicate that students who receive direct vocabulary instruction in math class were better able to distinguish the math definition of a word, the strategies used will be made available to other math teachers.