

## ABSTRACT

This action research report documents the observed and reported effects of teaching Algebra with manipulatives. The study was conducted in an urban high school in eastern Pennsylvania. The study involved nine Algebra I students using algebra tiles to learn how to perform integer operations, combine like terms, and solve one-step equations in a homogeneously grouped bottom track class.

Methods of data collection included assessments, surveys, questionnaires and observations kept within an ongoing field log. Methods of analysis included analyzing data within the field log, finding common themes throughout the field log, and analyzing surveys, questionnaires and student work.

This study suggests that the use of manipulatives to teach algebraic topics increases student participation and motivation. While the use of algebra tiles can play an important role in an increase in student performance, manipulatives are not a panacea. Problems include time management, motivation, and previous phobias about mathematics. Eight of nine participants, however, reported they enjoyed the activities and felt that they helped them to learn the concepts taught.