

## ABSTRACT

This qualitative action research study documents the observed and reported experiences of nineteen third grade students and their teacher as they explored how to facilitate mathematical thinking process through written expression. The author shares the NCTM's (2000) philosophy that indicates when students gain insight into their thinking they are more effectively able to connect different mathematical strategies to a variety of situations. All the participants received instruction on specific math communication strategies throughout the study within their regular education classroom in a suburban elementary school. The study examines how the students utilized the modeled strategies in explaining their mathematical thinking process as they progressed through the different math communication levels. The study focuses on the scaffolding methods that were implemented in instructing each of the students at his/her developmental level. The data suggests that the teacher needs to scaffold instruction not only in reference to the student's ability within the specific communication level but also in connection with his/her understanding of the specific math concept that he/she is being asked to explain. In addition, the study advocates the need for students to have the opportunity to naturally progress through the distinct communication stages in order to be more successful in independently explicating complex math topics at a later phase. Finally, the researcher ponders what additional strategies she can implement in assisting her students develop their mathematical thinking

process. She also questions what supplementary scaffolding methods she would need to employ in working with students who require specialized instruction and/or **ESL** students in communicating their mathematical thinking process.