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Bernadette Baker (Bernadette.Baker@drake.edu), **Clare Hemenway*** (chemenwa@uwc.edu) and **Maria Trigueros** (trigue@itam.mx). *On Understanding of Transformations, Domain, and Range of Functions*. Preliminary report.

There has been much research on student understanding of functions. As a result, there have been many suggestions of working with multiple representations of functions and graphing calculators to help students increase their understanding of functions and their properties. This research project examines students' interview responses to questions about domain, range, and transformations. Twenty four students were interviewed at the end of a college algebra course where the emphasis was on studying families of functions, their graphs, and other properties. The research questions addressed in this study examined the effects on student understanding of graph transformations to students' construction of function concepts. This project uses APOS theory to analyze the student responses. The results indicated that while the use of multiple representations seemed to be accessible to the students during the course, it did not appear to help them as much as expected in constructing a rich function concept but did show that most students expressed a clear preference for the graphical context. (Received October 03, 2000)