In order to assess the overall understanding of the concept of a function, we conducted an experiment with post-calculus math majors at our university. In an upper division problem solving course, the students were asked to present their understanding of a function in groups of 2 – 3. Specifically they were asked to create a presentation discussing functions, their characteristics, the role of the variable and typical misconceptions. The presentations were video recorded and then transcribed. Analyzing the transcripts, we will discuss our insights into student understanding of the function concept as well as some of the common learning difficulties that we have identified. (Received September 04, 2014)