1035-Z1-1541 **Firooz Khosraviyani*** (FiroozKh@TAMIU.edu), 5201 University Voulevard, Laredo, TX 78041-1900, and **Terutake Abe**, **Faridoun Farrokh**, **Juan R. Lira** and **James J. McCarry**.
Functions, how well are they understood? Preliminary report.

The concept of a function is one of the most fundamental in mathematics. Research literature demonstrates the existence of much concern about learners' limited comprehension of the concept of functions. There exist common and widespread misconceptions about functions among students and even among mathematics professionals, as results of surveys indicate: in a recent survey 100% of the respondents missed an item on a questionnaire, which the authors believe to be of central importance to the understanding of functions. The results of the surveys conducted will be presented here. Conclusions, implications and recommendations based on these data will be explored.

Furthermore, a review of current textbooks also shows deficiencies in the definition of a function when functions are introduced. In this article we analyze these definitions from the point of view of the precision expected from mathematics using linguistics analysis and considering learner / reader's expectations from the written word. Then the authors offer suggestions for strengthening the definition of function in textbooks to address these weaknesses. (Received September 20, 2007)