

THE DEPARTMENT OF MATHEMATICAL SCIENCES PROUDLY PRESENTS

COLLOQUIUM

SPRING 2021

Their Voices, Their Lived Experiences and What Influence Them: A Mixed Methods Study on Students' Perceptions of Required General Education Mathematics

Jonathan López Torres
North Carolina State University



03/11/2021

Non-science, technology, engineering, or mathematics (STEM) undergraduate students tend to have pervasive math anxiety, negative attitudes, and low mathematics self-efficacy beliefs, (Klinger, 2008). To address these issues and promote quantitative literacy, researchers have designed curricula for non-STEM undergraduate students. However, results are either non-significant or their analyses lack rigor (Clinkenbeard, 2015; Tunstall et al., 2016). To better understand how non-STEM undergraduate students perceive their experience of taking general education mathematics courses, a multi-phased exploratory sequential design (Qual → QUAN → Qual) was conducted. A phenomenological study was conducted first, followed by a quantitative and then qualitative extension of this exploration. Results from the first phase, along with theory, were used in the second phase of this study to develop a survey-type instrument that was administered to students enrolled in a general education mathematics course. Significant differences between different student factors are reported to identify factors influencing their experience. The third phase, consisting of focus group interviews, allows for deeper descriptions of the essence of being a non-STEM student in such a general education mathematics course based on different profiles. That is, rather than understanding one point of view from the entire sample, this type of inquiry will consider group differences when explaining the essence of the lived phenomenon. Major contributions include a description of the essence of being a non-STEM undergraduate student in such mathematics courses disaggregated by student characteristics and a quantitative instrument focused on students' perceived utility of the content of the general education mathematics course, mathematics anxiety, and two of the sub-theories of Ryan and Deci's (2017) Self-Determination Theory: Basic Psychological Needs Theory and Organismic Integration Theory.

Enlace: meet.google.com/urm-rhmx-dhw

Hora: 10:30 am PATRONO CON IGUALDAD DE OPORTUNIDADES DE EMPLEO – M/F/V/I

AN EQUAL OPPORTUNITY EMPLOYER M/F/V/H

