In the mathematics education literature, there exists limited research regarding motivation of future mathematics educators at the tertiary level (Wæge, 2009). Our study aims to add to this discussion. Hannula (2004) defined motivation as being “a potential to direct behavior that is built into the system that controls emotion. This potential may be manifested in cognition, emotion and/or behavior.”

Introduction to RUME courses are sometimes offered within mathematics departments to help shape and educate graduate students who will teach or research at the tertiary level. The purpose of this study is to classify students’ motivations for enrolling in and participating in a graduate-level RUME course. We are especially interested in the similarities and differences in motivations between RUME- and non-RUME-track students.

Seven individual semi-structured interviews, up to 30 minutes in length, were conducted. The individuals were students from a large Midwestern university who were enrolled in an Introductory Mathematics Pedagogy Research (Intro to RUME) course. A research team member who was not enrolled in or teaching the course recruited the participants and conducted the interviews. In these interviews, students were asked the following questions:

- Why did you choose to take the course? What were your goals coming into it?
- Have they changed? In what way?
- What do you expect to take with you from this course?

We had anticipated that RUME students would be more intrinsically motivated than non-RUME students. However, our results indicate that the opposite might be true. Six of the seven students had some sort of intrinsic motivation for taking the RUME course; the exception was a RUME student. Two non-RUME students expressed no ideas that were coded as externally regulated motivators, while two RUME students were coded as having more than one externally regulated motivator.

One reason our hypothesis was false may have been that this was an elective course. Thus, non-RUME students may need an intrinsic motivation to consider enrolling in it, as non-RUME students may not have as many extrinsic reasons (e.g., job-related, requirement of degree) to take a RUME class. Perhaps, if there were more extrinsic motivators for non-RUME students to take an Intro to RUME course, then more students may take them. Moreover, those graduate students may enhance their pedagogical perspective, which may carry on to their professional careers, benefiting mathematics students at all levels of the university.

A significant limitation of this study was that there were no pre-interviews regarding motivations. It is recommended that future work do pre- and post-course interviews. Another limitation was the choice of interview questions. Our questions regarding motivations towards the end of the course actually asked about goals, which may be different from motivations. For future research, we would like to extend the continuum into a 2D plot with a y-axis measuring the strength of the different motivation classifications.

Limitations/Future Research

**References**

Herrington, A. H. (2003). Where have all the students gone? Participation of doctoral students in authentic mathematical activity as a necessary condition for persistence toward the Ph.D. Educational Studies in Mathematics, 50(2), 177-212.