CHESTER WEATHERBY, Wilfrid Laurier University
Underprepared for first year Mathematics: Now what?

There is a growing concern about a continuing decline in mathematics achievement and the current and future participation in STEM-based disciplines and careers. International standardized tests are showing many countries, including Canada and the US, lagging behind in terms of mathematics achievement across youth and adults. Studies from the US suggest that many students studying post-secondary mathematics are at least two levels behind in their readiness to engage with the content (Strother, Campen, and Grunow, 2013). Many students are simply not prepared for first-year mathematics classes when they arrive on campus. We will present some findings from a cross-institutional analysis of practices of 31 Departments of Mathematics across Canada. In our presentation we will look at efforts aimed at promoting student success through remediation, streaming procedures, integrated and engaged learning, retention and recruitment. We will also discuss updated pedagogies in (and out of) the post-secondary mathematics classroom which are being implemented and tested as part of a larger statistical analysis aimed at quantifying the impact of adopting new teaching methods to help fill the gap for these struggling students. Implications for future research in the field will also be discussed. This is joint work with Donna Kotsopoulos and Doug Woolford.

Reference:

Strother, S., Campen, J. V., and Grunow, A. (2013). Community college pathways: 2011-2012 Descriptive report. Retrieved December 1, 2013. from `http://www.carnegiefoundation.org/sites/default/files/CCP_Descriptive_Report_Year_1.pdf`.