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Online Tools for Enhancing Math Education

First-year students often have difficulties in learning the material in university calculus courses. One of the reasons for such difficulties is that students do not have sufficient knowledge and confidence in the fundamental mathematics skills that are essential for the success in these courses. To address this issue, the Math and Statistics Learning Centre at University of Toronto Scarborough developed 12 online modules to be used as self-directed learning support for mathematics skill development. Modules 1-8 cover foundational concepts, and modules 9-12 cover advanced concepts. For upper level mathematics courses, we developed a journal named "Math In Action" which provides students studying mathematics and statistics with a platform to share their work. Math In Action could be used for research assignments in senior undergraduate and graduate mathematics courses. It is our hope that this journal will help foster greater student engagement in mathematics programs. It will also give researchers the opportunity to interact with students and inspire greater interest, with the hope of creating stronger generations of future researchers. In this session, design and implementation of the various components of learning modules in multiple support contexts and Math In Action Journal will be presented.