
Sunitha Prabhu and Ken Louie - Transforming the “sage on the stage”: a student-centred approach to learning mathematics

Waikato Institute of Technology (Wintec)

sunitha.prabhu@wintec.ac.nz

Sunitha has over 20 years’ experience teaching Information Technology in New Zealand. She is currently a Senior Academic Staff Member in the Centre for Information Technology (CFIT) at Waikato Institute of Technology (Wintec). Sunitha completed her Masters in Computing and Mathematical Sciences at Waikato University, a Bachelor of Engineering (Electronics) Degree at Marathwada University, India.

The transition from secondary to tertiary-level mathematics is perhaps the most difficult of all STEM (science, technology, engineering and mathematics) subjects for learners. A key reason for this is the phobia many learners have developed from their previous math-related courses. To allow learners to overcome their reservations and to facilitate a positive learning experience we have taken the approach of shared leadership between the learner and the facilitator. The aim is to acknowledge and actively include the diverse student population, diverse in terms of age, ethnicity, experience, and personal responsibilities, with their learning and hence successful completion of the course. This presentation will describe the implementation and preliminary findings of our efforts in using this shared leadership approach in two mathematics courses taken by prospective Engineering (Level 3 Certificate) and Information Technology (Level 6 Degree) students. This was done by shifting the emphasis from the teacher being the locus of knowledge and control in the classroom to giving learners the independence to choose how, when and where their learning will occur. Preliminary results suggest a small improvement in class performance but a high level of student satisfaction with this approach. With further refinement of this approach it is hoped to improve retention and completion rates for these courses.