

## Prof Robert Ferguson



The core of Prof Ferguson's innovation is the adaptation of continuous quality improvement (CQI) techniques from industry to the large lecture classroom. In so doing, Prof Ferguson shifts the balance of authority and builds a collaborative learning culture within the class.

This innovation stresses repeated formative course evaluations involving two specific techniques: *Quality Circles (QC)* and *Line-Stops*. This innovation is also rooted in the content of the Science, Technology and Society course delivered by Prof Ferguson and thus is an innovative example of content matching learning process.

These CQI techniques lever students' experiential knowledge of instruction through their apprenticeship of observation of teaching of a wide range of instructional styles. Using this knowledge, students are empowered to stop the 'learning production process' when they identify problems – this is the line-stop technique. Once this 'line-stop' occurs, students form QC teams whose function is to identify and solve the learning production problem. It is important that the instructor promptly implements any practical and beneficial student-generated solutions. When there are contradictory suggestions, these need to be investigated further to see if consensus is possible. Once an innovative solution has been adopted, students are then required to adopt an iterative action research cycle of problem definition/reflection, planning, action and observation/reflection so as to continually develop the quality innovation.

By being small, these innovations require few resources but the incremental nature of the process builds up and produces a large learning gain.

In using these techniques, there is an empowering shift in the authority of knowledge towards students. Other changes in pedagogical design, such as establishing shared learning goals, need to be implemented alongside these techniques so that learning messages are consistent.