Abstract

A CDRom for casual Mathematics and Statistics tutors (teaching assistants) was developed with links to a tutor training and orientation package at the University of Wollongong. The CD was designed for tutors who do not have prior training as teachers, and who for logistical reasons may not be available for face-to-face induction programs. The highlight of the CD is the section called In the Classroom which contains video clips of tutorial demonstrations within the school, highlighting features of how to begin tutorials and facilitate learning in this particular environment.

Context

When teaching large subjects (100-600 students) high quality teaching is imperative but often extremely difficult in technical disciplines such as Mathematics and Statistics. Subjects with large numbers within the School of Mathematics and Applied Statistics typically adopt a pattern of 2-4 lectures per week supplemented by 1-2 hour laboratory and/or tutorial classes. Laboratory and tutorial classes may be taken either by experienced tutors or inexperienced honours and postgraduate students. Some rudimentary training/orientation is essential for the novice tutor if there are to be quality teaching and learning outcomes.

Provision of training and orientation for these tutors is difficult. Staff coordinating and teaching large classes are often too overwhelmed to have adequate time for such training.

There is no funding for tutors to attend training and there is a turnover of casualties each academic year/semester. A second challenge for subject coordinators is to develop comparable/equitable teaching standards across all tutorials/laboratory classes.

Aims

The initial aim of this project was to develop a CDRom that could provide tutors and part-time Statistics and Mathematics staff with an insight into how a good classroom learning environment can be structured. A second aim was to brief tutors as to policies and processes that were followed in the School of Mathematics and Applied Statistics. As stakeholders were consulted, these aims were extended to include a synopsis and link to University policies and introduction to the legal obligations of staff.

Outcomes

The outcome of this project has been the production of a CDRom ‘Tutor Training and Orientation CDRom’. This is provided to tutors by coordinators.

The CDRom has also been used by coordinators to demonstrate to tutors how classes should be taught.

Feedback from both tutors and coordinators shows they have found this to be a useful resource.
What was done?

Successful application for a University Educational Strategies Development Fund grant.

Identification of the issues that current tutors feel they need to deal with in the classroom.

Identification of the issues the lecturers want dealt with (e.g., encouraging critical thinking or learning to learn rather than rote learning).

Identification of the issues the Dean felt necessary for inclusion.

Collection of video footage of excellent tutors in Mathematics and Statistics.

Edited footage to exemplify good educational practice and strategies in a variety of settings (blackboard room, tutorials and laboratories) and in relation to the issues identified by the tutors.

Development of the html files.

Trial and evaluation of the CDRom with casual tutors in Spring session.

School seminar for final review and discussion.

Refinement and dissemination for use.

The Part-time Tutor Package

addresses the administrative requirements of the school;

summarises the legal and ethical issues tutors may encounter when teaching, with directions to appropriate University policy; and

includes video clips demonstrating effective teaching strategies in different types of classrooms (demonstrations, blackboard tutorials, traditional tutorials and laboratories) for different teaching issues e.g., establishing rapport, generating interaction and teamwork, getting students to respond, asking questions, reviewing material, clarifying student thinking, demonstrating solutions.

Critical Success Factors

Discussion of the project with other stakeholders has ensured that different perspectives have been included. The originators were primarily concerned with assisting tutors in the classroom context, letting them see good practice and dealing with localised issues such as where to access resources and how to get paid. Wider discussions with stakeholders led to the more thorough coverage of Legal Obligations and University Policy.

The teamwork and communication between the creators was also essential, as one picked up and carried on when the other tired. Each took turns in leading the project to completion.

Review and Improvement

Links are updated each year to direct staff to current policy.

Individual co-ordinators have the capability of adding the documents for their subjects to the CDRom.