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# **Using Asynchronous Computer Conferencing to Support the Teaching of Computing and Ethics**

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## **EXECUTIVE SUMMARY**

Currently, there is tremendous impetus for using Information Communication Technologies (ICT) in education. Such impetus may be perceived to be being driven by both the “technological pull” and “political push” currently prevalent in initiatives to support lifelong learning. As such, students and tutors may access vast information resources, may communicate with experts in many fields, and may work collaboratively with others regardless of time or place. The challenge for educators is, it seems, not only to be aware of the appropriate use of the new technologies but also to facilitate awareness among their students of the ethical and legal issues related to their use. As such, many higher education (HE) institutions are now introducing computer ethics (CE) modules into the curriculum within certain relevant departments. This case study explores some of the techniques that were employed in seeking to deliver such a module in a pedagogically sound and ethically aware manner.

## **BACKGROUND**

The organization concerned is one of Britain’s largest universities having centres in three towns in the Midlands as well as being supplemented by an internationally dispersed Associate and Linked College Network. Arrangements with other institutions mean that some of the programmes of study are delivered overseas, such as in Asia, Europe and the Middle

East. Students are normally based at one of the university's centres for the duration of their programme, though they benefit from the facilities of the whole university. In total, there are approximately 30,000 students, most of whom are undergraduates.

The range of academic and vocational opportunities that the university offers within each of its faculties is extensive with subjects ranging from law and engineering to agriculture and the arts (see Appendix A). Study options include full-time, part-time and sandwich programmes. Increasingly, there are opportunities to study or undertake work placements abroad. Many subjects are also offered in joint and combined honours routes, enabling students to pursue more than one area of interest.

A number of national issues that impact upon all universities as well as local issues specific to the university have to be addressed in order to continue expansion and development. Some of these include: an over-supply of student places, which has made the sector intensely competitive; the expectations of fee-paying students, who are demanding facilities and resources of the highest quality; decreasing income from the Higher Education Funding Council for England (HEFCE); and a growth in the number of performance indicators evident in national league tables which have a significant impact upon every institution's reputation. Strategically, the university is now seeking to provide fewer things in fewer places to even higher quality and so acquire a growing reputation as a great place to study, work and live.

The case study relates to delivery of the Computing and Ethics module that is offered to undergraduate students within the Faculty of Computing Sciences and Engineering. The Faculty is responsible for more than 3,000 students based in several locations around the world. In 2000/2001, the Faculty generated £3.3 million through a mix of external income activities including research, consultancy, training, conferences and technology transfer. The responsibility for curriculum development and delivery of the degree programmes lies with specialist subject groups. Degrees comprise a number of mandatory and optional modules at each stage. Many modules are shared across programmes. Each degree programme has an academic manager and several year managers. Each module has an academic leader. It is the role of these managers and leaders to develop consistent curriculum strategy at both degree and module level.

## SETTING THE STAGE

As the use of technology escalates in society, this has subsequently led to an enormous expansion of student numbers in the field of computing. Such advances in technology have also served to heighten expectations of all students, regardless of discipline, to use ICT to support their learning activities. Thus, the requirement for having both the technology itself available as well as providing the opportunity to develop requisite IT skills has grown exponentially.

In the face of increasing competition, computing departments within UK universities have sought to increase the "value added" component that they perceive will enhance the attractiveness of their provision to potential applicants. As such, some have sought, and subsequently gained, accreditation by the British Computer Society for their programmes of study. A requirement of such accreditation is that programmes of study in computing include consideration of the ethical issues related to ICT. This is evidenced in a recent survey conducted amongst 14 UK universities who had Computing Science and Information Systems departments. "Nine of the fourteen universities said that their CE teaching was

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