Computer Scientists meet Professional Issues Blended Learning for a Persistent Challenge

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Abstract

Teaching professional issues to computer scientists presents academics with the two challenges. Firstly there is the issue of motivating students whose primary driver is their technical specialism. Secondly; how to persuade learners who may have chosen their field of studies with the explicit preference to avoid anything which is textual or discursive.

Biglan's extensive study of disciplinary differences, work has been sustained and developed by a number of authors from a disciplinary and technology in learning perspective. He would have classified the approaches, content and epistemology of computer science as belonging predominantly to the 'hard applied' field of study, with a component of 'hard pure' which varies according to the particular specialism. By contrast, the curriculum of professional issues modules sit squarely in the 'soft applied' area. Understanding these differences, is, we believe, a powerful aid to integrating professional issues into the wider computing and technology curriculum. This challenge is not confined to computer science and is one which might find resonance with many involved in education in the STEM disciplines.

This oral presentation will recount experiences from the first iteration of a newly redesigned first year professional issues module which has been radically redesigned to incorporate a mixture of face to face and online educational activities. The design seeks to preserve the active participative student-centred nature of the existing module which it replaces, and at the same time provide a sustainable and compelling resource-set to which students will be able and willing to use throughout their degree studies.

The presentation will provide a detailed explanation of the rationale for these changes, alongside a discussion of the impact and implications of this type of change. It will also include analysis and interim evaluation of the impact and reception of the module by students.

Keywords
STEM; Higher Education; Disciplinary Differences; Technology Enhanced Learning; Computer Science Education; Professional Issues; Blended Learning.