Informatics: the core and the presentation

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Abstract
This paper puts forward a core curriculum and suggests ways to present it in support of the authors’ basic premise: that informatics should be part of every curriculum. So many daily routines in the world have become dependent on computer functions that people have a responsibility to understand how they work and take an informed interest in what they do. They also must be able to visualize computer work for the future so that they can help prepare their professions and occupations such that people will still have meaningful work in coming generations.

Keywords
Informatics, context of informatics, curriculum (core), role of CIT
1 INTRODUCTION

Informatics has to do with the ways in which computers operate and with the data these provide, as well as with the transformation of that data into information by interpreters, whether human or other computer applications. People need to understand this connection between computers and humans because the presence of computerized functions is becoming so pervasive in the world in both developed and less-developed countries, even though people living in remote villages may not perceive it. Humankind has the potential to manage its collective life better, if this connection is understood and used beneficially. There are many issues involved, such as impacts on social life and the need for people to develop critical faculties in relation to technical information, as well as ethics and privacy concerns, the social use of computer tools and the quality of decision-making based on computer-provided information. These issues will not go away. People want computers to further their aims, whether professional, in the business or the public sector, but they do not want their thinking and decision-making to be subordinated by computerized procedures.

2 INFORMATICS IN THE CURRICULUM

A quick survey of employment advertisements for lecturers in informatics for tertiary institutions shows that the topics such people must be able to teach are technical in nature, such as systems analysis and computer networking. They do not appear to require the teaching of a wider sense of the discipline, e.g. the quality and effectiveness of networked communications or the necessity for the inclusion of a wide spectrum of users when a system is to be designed.

There are of course exceptions to this general situation. For example, one alternative is provided by an Australian university for computing science students. The students in that program are required to complete satisfactorily 21 computing and project units and 5 non-computing units. (Nunn et al., 1995). One of the noncomputing electives is a first-year subject titled ‘Technical Communication’ in which the curriculum is based on cognitive learning theories and helps students engage in meta-cognition through facilitated experiential learning. The faculty has deliberately chosen to align the competencies for employment identified by a governmental committee with the principles of lifelong learning outlined in another government report. These are used in the curriculum development so that students are made aware of the parameters provided by these two studies and are asked to engage in learning activities which will help them realize the extent and meaning of those ideas. The meta-cognitive activities make it likely that learners will think more deeply about the subject material they will study in other parts of the program. Unfortunately it is an elective rather than a core subject and possibly may attract fewer students once its novelty has worn off. On the other hand one of its