It could be said that with regard to software development and education that we live in interesting times. The UK’s Learning and Skills Council in partnership with the Department for Education and Skills and the Sector Skills Development Agency produced, in 2004, a four-volume report on Skills in England that includes information on the demand for skills in computing. In volume one, figures are given which show that Computing has been one of the strongest employment sectors in 1993-2003 and that it is predicted to increase further in the period 2003 to 2012. Also, the British Computer Society has recently reported significant increases in its membership [2]. Yet within UK universities there is a general feeling of gloom about falling undergraduate numbers in computing [3].

In the UK we have, in the University sector, a group - The Council of Professors and Heads of Computing (CPHC) which exists to promote public education in computing and its applications and to provide a forum for those responsible for management and research in university computing departments. Each year CPHC holds a conference to address issues that are relevant to the discipline. It also hosts an email list to support on-line discussions. The remainder of this paper highlights some of the issues raised at this year’s CPHC conference which was devoted to the Future of Computing and one of the on-line discussions that followed it [7].

With regard to the software development workforce there are the challenges due to outsourcing, technological developments, and integration - all of which could lead to a decline in the UK computing workforce [4].

With regard to applications to university academic programmes in computing there is a decrease in home applications but an increase in overseas applications [5].

With regard to the image of computing - interviews with a wide range of secondary school children showed that there were clear problems - both with regard to educational programmes and eventual jobs [6].

With regard to home students going to university, traditional science and engineering is static overall, business, economics etc, and the creative arts are all increasing but computing is clearly declining [6, 3].

Much of the CPHC on-line discussion in late March and early April 2005 [7] centred on trying to identify the reasons for the decline in applications for computing. Commonly occurring themes for the causes were:

- Confusion over computing as a vocation vs theoretical computer science.
- Problems with the presentation of computing in schools.
- Problems with terminology e.g what do people understand by ICT (Information and Communications Technology)
- Problems with the naming of the discipline (or parts of it)
- That people do not appreciate the importance of large scale computing based projects or the challenges they present.

Addressing these problems is the real challenge for the 21st century

References


