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Paper 111 – Poster

Tertiary and secondary level education partnership: taking programming out to schools

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Abstract

Widening access to Higher Education (HE) has become a prominent issue within the United Kingdom (UK) in recent years. The UK government and Higher Education Funding Council for England (HEFCE) are currently aiming to reform education amongst 14 to 19 year olds. Higher Education plays a vital role in the success of this reform. The details of the reforms are set out in the Department for Education and Skills (DfES) White Paper “14-19 Education and Skills” published in February 2005, followed by the “14-19 Implementation Plan” (<http://publications.dcsf.gov.uk/>). It has been determined that there is a low participation in education in post-16 year olds; therefore the reforms aim to create opportunities for all young people to continue learning until at least the age of 18 and to give them the qualifications and aspiration to progress to third level education.

Recent evidence, including the recommendations of the National Council for Education Excellence (NCEE) (<http://www.dcsf.gov.uk/ncee/>), indicates that links between schools and HE institutions are integral to widening participation. This paper introduces the project “Widening Access Through Introducing Programming in Schools” (WABIPS), which aims to strengthen existing links and establish new links between the School of Computing and Intelligent Systems at the University of Ulster and the secondary education sector by providing regular tuition in computer programming for Year 13 and 14 pupils in a range of schools.

The WABIPS project has developed a short ‘Introduction to Programming’ course which is delivered in a number of local secondary level schools. The course addresses fundamental programming concepts such as variable declarations, conditional statements and loops in a fun and engaging way. The aim is to provide Year 13 and 14 pupils with sufficient knowledge to assist them in making more informed decisions on the undertaking of further study and a career in computing and engineering disciplines; hence encouraging them to make the move into higher education.

In the first year of WABIPS we have targeted three local secondary schools with the intention of encouraging pupils to progress to computing and engineering related courses within the University of Ulster. We have assessed these pupils and also conducted a survey with them to acquire information on the course that was provided. This information captured the pupils’ views on computer science and engineering on completion of the first term of WABIPS. Initial results from the questionnaire analysis indicate that the project is having a

positive impact on both student perception of the subject area and is also acting as an insightful determiner on whether to apply for a computing course at university, but specifically at the University of Ulster.