
Undergrad Ambassadors Go Back To School

Reported by: Ravi Kapur Email: ravi@ravikapur.freeseerve.co.uk

A new maths course aimed at giving undergraduates first hand experience of working with teachers in schools has been introduced in a number of departments this year and is under consideration in many more universities for introduction in the 2003/4 session. The course is run as a final or second year module by each individual department, but is part of a wider endeavour called the Undergraduate Ambassadors Scheme (UAS), which has been initiated by author and broadcaster Simon Singh.

UAS places maths, science and engineering undergraduates as teaching assistants in local schools for half a day a week for one semester. The aim is to enable undergraduates to acquire valuable transferable skills while learning about the challenges of teaching and communicating their subject, and to provide teachers with a genuinely useful assistant in the classroom who has up-to-date knowledge and expertise. Pupils also benefit from having an enthusiastic role-model who can give them more individual attention and help them see the applications of their studies beyond school. It is hoped that this may help to boost numbers of pupils considering a degree in mathematics, and also give undergraduates an opportunity to consider teaching as a career.

A pilot scheme, launched last October, was instigated after Singh – best known for his books and television documentaries on Fermat's Last Theorem and Codes – became concerned that not enough was being done to combat falling university admissions figures and chronic teacher shortages in maths and science subjects. UAS has so far run in maths and physics departments at King's College London, Southampton University and the University of Surrey, with 28 undergraduates having worked with teachers in 10 different schools.

The scheme has been working with other programmes around the country that put students into schools, such as the Pimlico Connection at Imperial College and the Pupil Researcher Initiative at Sheffield Hallam University, in order to build on good practice that established elsewhere. But the crucial difference of UAS is that it offers undergraduates academic credit towards their degree for participating in the scheme. The scheme's project director, Ravi Kapur, says that UAS has worked hard to develop a detailed assessment methodology that will allow departments to take up the scheme with the confidence that it matches the academic rigour of equivalent course modules. "We've tried to do as much of the work for departments as possible in order to make the scheme easily implementable. We've developed materials and a 'template' for running the scheme that minimizes the burden on course tutors and school teachers."

Prof Ray D'Inverno from Southampton University, who has been coordinating the course for the Maths department there this year, has found no shortage of

enthusiasm for the scheme from all quarters. "The feedback from teachers has all been very positive, and all of the undergraduates have been conducting projects that have been of real use in the classroom," he said. These 'special projects' have included creating IT-based resources, developing effective work sheets for engaging disaffected pupils, and conducting problem-solving sessions with higher ability pupils.

"We are very excited about the large number of high calibre undergraduates that applied for this course, and the enthusiasm of local teachers," adds D'Inverno. "The competitive element of the scheme really 'upped the ante' and raised the number of undergraduates applying. The difficulty we had was in having to turn some undergraduates down."

Heidi Cross, one of the maths undergraduates taking the course at Southampton, says that she would recommend the scheme to all undergraduates, whether they are interested in teaching or not. "Even though I have not yet decided if I do want to become a teacher it has given me some good experiences that I know will be useful to me in the future," she said. "I am enjoying the course immensely and gaining more and more confidence every week."

UAS has won widespread support throughout the higher education world, amongst schools, amongst professional and learned bodies, amongst undergraduates and in government from both DfES and the DTI. The scheme is expanding rapidly, and is currently in the process of signing up new departments for the 2003/2004 academic year. Kapur says the long-term aim of UAS is to expand the scheme to all UK universities and offer it to all undergraduates. It may ultimately even be expanded to disciplines outside of maths and science.

"This scheme offers benefits for all the parties involved," says Kapur. "For universities it offers an outreach programme with local schools to try to help address admissions and Widening Participation issues; for schools it brings a fresh approach and enthusiasm into the classroom; for undergraduates it offers experience and skills that will be of value in employment and in life; and we hope it's also going to make some impact on recruitment to the teaching profession."

For more info, contact Ravi Kapur at ravi@ravikapur.freeseerve.co.uk