Widening Participation Case Studies

From the HEFCE document ***Successful student diversity*** at http://www.hefce.ac.uk/pubs/hefce/2002/02_48.htm. This document provides examples of practice to improve planning at a school or departmental level in widening participation (including disability) and learning and teaching. It is not prescriptive, but identifies common principles that institutions can adapt to their own circumstances, to help them recruit and support a diverse range of students. HEFCE are interested in finding more subject-based case studies. **Are you using student mentoring? How do you introduce new students to your course?** If you have any ideas to share, please get in touch.

1. Access to maths and science courses

Institution: Queen Mary, University of London
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Queen Mary, University of London is in the East End of London, one of the most disadvantaged parts of the city. Many of the local schools have low participation and attainment rates; and Queen Mary is working in partnership with London Guildhall University (LGU) and the London School of Economics (LSE) to seek to raise both aspirations and attainment levels. It recognised that the level of achievement in maths and science was such that local students might not have the same chance as others to enter certain courses. Consequently in 1995 it started to work with schools to address the issue, and has developed the activities since, based on the views of students and staff.

The project

Originally Queen Mary offered a summer programme to help adults raise their attainment in maths and science to a standard equivalent to A-level. This programme became popular not just with adult learners but also with A-level students who felt that they needed additional support to help them achieve the grades they required. To meet this demand Queen Mary introduced an evening course of support for A-level students in the eight weeks before examinations. It also developed a physics practical school to give students experience in the laboratories, and introduced Saturday schools in partnership with LGU and the LSE to provide support in chemistry, maths and physics. Students are paid to attend at weekends, in recognition that they are giving up an opportunity to earn money.

This pre-entry scheme has implications for both institutional and departmental learning and teaching strategies, as the students are prepared in a different way and may need additional support on entry. The numbers participating are significant, with 140 students on the summer programme and 120 taking the evening provision.

Staff perspectives: Staff in departments which work with the Learning Development Unit on the scheme have an interest in broadening participation, and in ensuring that student number targets can be met from a well qualified student base. The scheme has provided staff development opportunities to enable staff to understand the needs of different students, and how they can develop outside normal structures to succeed at the highest level. Several departments that require students to have a more general level of maths have contacted the unit to develop post-entry maths support models for the particular degree course.

Implications: The provision developed by Queen Mary has been successful through comprehensive pre-entry support and strong partnerships, with a coherent approach by the providers of the support programme and the university faculty. The schemes have raised pre-entry attainment, increased diversity and demonstrated the effectiveness of experiential learning. However, such models raise challenges for a maths or science department seeking to develop its learning and teaching strategy.

In order to be successful in maths and science, students need to have achieved a set of core skills. This is also true of allied subjects such as economics or computer science. Queen Mary has attracted funds to establish a drop-in centre targeted at students who were under-achieving due to a lack of maths skills. It uses diagnostic testing to determine the level and type of maths support required. Not all institutions will be in the position to do this. There also remains a tension between developing the independent learner who has the ability to reflect and self-refer, and the more interventionist approach of targeting students who are identified by tutors or other practitioners as requiring additional support.

Reflections

Widening participation strategies must include on-going support for new student groups so that they can complete their courses successfully. This may mean offering more flexibility in the timing and pace of delivery as well making the most appropriate use of technology to facilitate learning.

A further element of the programme has been experiential learning. This has given the students valuable experience of experimentation and has increased their motivation and confidence. The challenge is how to maintain that motivation and experience, to maximise the benefits of innovation and good practice at the pre-entry stage.

2.'Women into Technology and Science' access course

Institution: University of Huddersfield, Department of Computing and Mathematical Sciences
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The University of Huddersfield faced a similar issue to Queen Mary (Case study 1), but responded in a different way. The Department of Computing and Mathematical Sciences teaches specialist mathematics. Most of its students are 18 year-old school and college leavers applying for degree and diploma courses. The university has a commitment 'to increase opportunities by providing an expanded portfolio of courses, more flexibly available, to a greater number of students'. The department therefore introduced a Women into Technology and Science (WITS) access course.

The project

This one-year access course is geared to the needs of mature women returners. It provides them with the knowledge and skills required for entry into HE, or to careers in technology and science.

The success of the course, over its 16-year history, is evidenced by a progression rate of 72 per cent to HE courses within the University of Huddersfield for the academic year 2000-01, compared with an overall figure of 50 per cent for the previous four-year period. The course is popular with students and is acknowledged as a success both within the institution and more widely in the local community.

A core element of the course is maths. The curriculum has been designed so that all students can achieve a standard equivalent to GCSE Grade C or above, the minimum entry requirement for the department's HE provision, and there are opportunities for further study equivalent to A-level standard in many core topics.

Recognising that many students have had a negative experience of learning maths at school, the lecturer governs the pace of delivery to suit students who have been out of education for a long time and who need to develop confidence. Students are taught together in lectures and tutorials/practicals, giving a sense of peer support. In the following semester, students are taught the basic syllabus content formally by the lecturer, but then work on additional materials at their own pace to achieve their chosen exit level. During this period flexible tutorial help is available, and each student chooses a project where maths is used to study a real-life problem. Assessment includes both tutor-marked assignments and time-constrained examinations for students seeking specific qualifications.

Consideration has also been given to the practical issues affecting many women returners, namely childcare and financial support. The course has been funded by the university and the European Social Fund, which provides non means-tested bursaries for 28 students and some childcare allowances. To assist women with school-age children, the course has adopted a study day from 10.15 to 15.15, and reading weeks are scheduled to coincide with school half-term breaks. Each student is given a copy of the foundation level textbook and a calculator for the duration of the course, an initiative specific to this course. For entry to year 2001-02, 42 applications were received after 65 enquiries, and from the applications 28 students were selected after interview.

Implications: Encouraging new learners into HE has implications for the learning and teaching strategy at subject level. The annual intake of the WITS course is 28, with an average age in 2001-02 of 35 and a broad ethnic mix, where 25 per cent are non-white European. This makes the cohort significantly different to the student population across the department. In addition, science and technology are fields in which women continue to be under-represented, and where they must be prepared to challenge traditional stereotypes. These factors raise a number of issues in relation to the development of a learning and teaching strategy. For example, when considering group work, should the mature women students be kept together to foster peer support, or should the groups be mixed in age, gender and ethnicity so that students can share their different experiences and views?

Employability, and acquiring professional practice skills, will be high priorities for many students. This may need careful consideration in relation to developing the curriculum and work-based learning, particularly in the light of the need to ensure equal opportunities.

Reflections

In this case study the aim of increasing diversity has been tackled at pre-entry stage by offering flexible provision, with the ability to choose an agreed progression route. Not all students will want or be able to study full-time, and it is important that they can see clear pathways ahead of them within a culture of lifelong learning. This may require alternative forms of provision including distance and on-line learning.

Two further issues which need addressing are how HEIs provide on-going support for students, and ensure that staff have a good awareness of the issues which arise as a result of increasing diversity.