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Differentiated learning according to ability has long been accepted practice in primary education. In secondary education groups are often streamed on ability in different subjects. But in Higher Education we have always assumed that by applying entrance grades we are effectively placing a lower limit on ability. So is streaming in HE actually achieved by default in relation to the institution studied at and the degree taken? My experience as a lecturer over the last 15 years suggests that the ability range within our degree cohorts has widened and continues to do so, whilst our entry requirements, at least in terms of A-levels and equivalents has steadily increased.

On a university course where the minimum entry level is 360 points it is likely that the ability range will be compressed toward the top end. The science degree I co-ordinate could be described as middle of the road in terms of entry requirements. For students following an A-level route we expect a minimum of 280 points and students enter with a range of grades from D through to A and a corresponding wide range in abilities. However, we know that some students do get into university with much lower grades, although this does not mean that universities offering lower entry grades are only attracting less able students. Indeed, students may now choose a certain university for financial reasons, or because they can study part time or so they can live at home. Add to this the increasing numbers of mature students returning to university from so called non-traditional pathways and issues surrounding an individual's motivation, and it is not difficult to explain why many of us are finding HE teaching a challenging experience. Three of these key challenges are: trying to motivate those who are not self-motivated; challenging the less able yet highly motivated students; and stretching those who are both very able and highly motivated.

Against this backcloth it becomes important to consider the degree to which we should, do, or can, differentiate — within university curricula. The traditional model of putting 300 students in a lecture theatre and talking at them is frowned upon by many educational theorists, but remains common practice across many universities and courses in the UK. Indeed, some would argue that the current funding model is further forcing the HE sector in this direction.

There are ways of tackling this issue, and indeed traditional small group tutorial and seminar sessions have often been used as a means of supporting the traditional lecture. Many universities now offer additional basic courses, such as 'introduction to chemistry' or 'introduction to biology' to underpin learning in the biosciences. This may well provide a mechanism for helping those at the lower end of the ability range, but what about the real high fliers, the high achievers — are we stretching them? Or are they becoming increasingly disillusioned as time goes on? There is surprising little literature available on this issue in relation to UK HE. In other parts of the world, notably America, this issue has been researched to a certain extent. Obviously many universities offer bursaries and funding to attract the very bright students but some also offer special curricula for high achievers. For instance, Buffalo University has a 'Distinguished Honours Programmes' which only those in the 98th percentile and above with respect to high school rank are admitted (Vidal, 1996) as one student describes "it is like a college within a college". Martinez and Snider (2000) reviewed "Successful educational strategies for high ability students" and note that many high achievers underachieve. Overall the literature suggests a range of strategies, a number of which are used or could be used in the UK system; these include:

- Grouping of high achievers across disciplines for PBL-type activities;
- Grade or year skipping when done sensibly;

- Special programmes linking with schools, perhaps allowing high achievers at school to start taking university modules;
- Increasing staff contact with the high achieving individuals via tutorials or research programmes;
- Offering extra-curricular activities such as summer schools (Hughes, 2005), specialist field trips or research opportunities during vacations;
- Ensuring that assessment techniques do differentiate across the ability range; and
- The use of additional formative assessments that stretch the high achievers, but which are available to all students.

The Centre for Bioscience would like to hear from anyone who has special programmes in place for high achievers, or is considering such actions. (pls contact j.r.park@reading.ac.uk)

REFERENCES

- Martinez, S and Snider, L (2000) Successful Educational Programs and Strategies for High Ability Students. Kansas State Department of Education. Available at <http://www.ksde.org/pre/edprogramsforhighachievers.htm> accessed 16/1/06
- Vidal, C (1996) Distinguished Honours Scholars: high achievers, highly motivated. University at Buffalo Reporter Vol 28, No 15. Available at <http://buffalo.edu/reporter/vol28/vol28n15/n1.html> accessed 6/1/06
- Hughes, I (2005) Student Needs, *Centre for Bioscience Bulletin* 16.

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