The Debate over Ability Grouping

> When deciding on the way in which the mathematics teaching groups in a school should be organised, we believe that the overriding requirement is to achieve a form of organisation which enables pupils to work at a level and speed which is suitable for them. (DES: 1982: ¶150)

Very few teachers would find anything to argue with in this passage from the Cockcroft Report. The values it espouses are often used as the basis of a very persuasive argument in favour of the use of setting and other forms of ability grouping. This argument contends that the narrower spread of ability in such groups makes it "easier for the teacher to set work that meets the needs of the whole group" (Kyriacou 1998: 42). This rationale implicitly links the practice of ability grouping to improved attainment, since teaching matched to attainment in this way is also thought to allow pupils to make academic progress in line with their ability.

In this essay I shall be arguing that the issue is not nearly this clear cut, and that there are powerful considerations suggesting that ability grouping not only has adverse effects on attainment but is also unjust. My own view is that while mixed ability teaching may be preferable, the ill effects of setting may be limited if it is combined with appropriate teaching strategies and careful approaches to assessment and group allocation.

Issues of equity are addressed first, as I summarise evidence that suggests that setting significantly affects pupils' access to educational opportunities. After this, I review research findings relating to the effects of setting upon teaching practice and attainment. Before summarising and drawing out my conclusions, I also relate the debate over setting to Lev Vygotsky's sociocultural theory of learning.

Allocation to Groups and Access to the Curriculum

There are in fact several varieties of ability grouping that have been used. The most common are these *streaming*, *setting* and *within-class grouping*. For definitions of these and other forms of ability grouping see Sukhnandan (1998: 2).

Pupils are assigned to their ability groups based on prior attainment, commonly assessed through such methods as SAT scores, end-of-term tests, and teacher assessments. In theory, these groupings are subject to any amount of change, as pupils may be reassigned to different groups following later assessments.

As good as this sounds, in practice such groupings tend to be very static; the vast majority of students stay in their initial grouping for the remainder of their school career (Ollerton 2001: 264). Part of the difficulty in moving pupils between sets is that moving pupils into a higher group will normally require them to perform well relative to pupils in that group. But this is unlikely to occur for the simple reason that pupils in lower groups are usually taught less demanding material. The difficulty of 'moving up' is particularly worrying when seen in combination with the following observations:

- Our attempts to gauge pupil understanding are fallible and involve a large amount of subjectivity (Watson 2001).
- Setting frequently reinforces educational and social inequalities as pupils from working-class backgrounds and ethnic minorities are over represented in low attainment classes – even when prior attainment is taken into account. (Suhhnandan 1998: 42; Boaler and Wiliam 2001: 77)
- Pupils in lower attainment classes are frequently entered for lower-tier papers at GCSE, and therefore have access to only the lower grades.

This last fact is particularly significant in mathematics, where for students entered for the Foundation Tier, a grade D is the highest grade achievable. According to the Smith Report:

> Many students feel themselves to have been classed as "failures" by their teachers before they even start the course. … [It is] totally unacceptable to be entering some 30 per cent of the age cohort into a tier in which "externally perceived success" (ie grade C) is unattainable whatever the level of achievement. (DfES 2004: ¶4.9)

Not only are pupils in lower sets disaffected by the realisation that they do not have access to the higher grades, they are also frustrated by the low expectations that teachers have of them (Boaler and Wiliam 2001: 82-7). Issues of expectation are important:

> If ability in mathematics is not a fixed entity, as many researchers suggest, then grouping by attainment may mean that particular expectations are set up from which pupils will have great difficulty breaking free.
>
> (Askew and Wiliam 1995: 41)

Moreover, when it comes to assigning pupils to new groups, "it seems that the placing of students into 'ability' groups creates a set of expectations for teachers that overrides their awareness of individual capabilities" (Boaler and Wiliam 2001: 89). This last point is elaborated in the next section.

Effects of Setting on Teaching and Attainment

Research on the effects of setting on attainment has been inconclusive. Studies that have suggested differences between the attainment of pupils under different grouping arrangements have tended to suggest that setting gives a slight advantage to pupils in higher ability groups, but that these gains are at the expense of poorer performance by students of average and low ability (Andrews 2001: 303; Askew and Wiliam 1995: 40-41; Sukhnandan 1998: 19). Any difference between the effects on high and low sets may be partially explained by the fact that pupils in lower ability groups are generally provided with poorer instruction from teachers who are less experienced and less qualified (Sukhnandan 1998: 11).

Although the evidence base is limited, research does suggest that within-class grouping may have a positive effect on the attainment (and self-esteem) of pupils in all groupings (Sukhnandan 1998: 17-8, 37-9). The possible reasons for this will be explored later.

Jo Boaler has uncovered another reason why setting does not deliver the gains in achievement that we might expect. Her research (summarised in Boaler 2002; Boaler and Wiliam 2001) suggests that mathematics teachers use quite different approaches when teaching setted classes than when teaching all attainment groups.

> Teachers in the four schools in our study that used ability grouping responded to the move to setted teaching by adopting a more prescriptive pedagogy and the same teachers who offered worksheets, investigations and practical activities to students in mixed-ability groups concentrated upon blackboard teaching and textbook work when teaching groups with a narrower range of attainment.
>
> (Boaler and Wiliam 2001: 89)

The result of such an approach is that all pupils are required to work at the same pace. Those who complete work more quickly are often left with nothing further to do, while those who find that the class is going too fast will simply get left behind. The following student perspectives are fairly typical of those collected:

Aisha: Sometimes you can do it fast, and at the end, you don't really know it.
Lena: But if she knows some people have finished, then she tell the class, 'OK you've got even less time to do the work'. She's like, 'look at these 5 people, they have finished, hurry up!'
Craig: Last year it was OK but when we finished our work or anything miss would give us harder work to do. But in this year when you finish it you just got to sit there and do nothing.
Liam: Yeah because in sets you all have to stay at one stage.

(Boaler and Wiliam 2001)

The problem here is not that the teacher had chosen a pace that was inappropriate, it is that there is no one pace that can suit the entire class – even when the classes are setted.

In short, Boaler's research suggests that when teaching mixed ability classes, teachers typically use methods and materials that allow students to progress at their own pace through suitably differentiated material. By contrast "setted lessons are often conducted as though students are not only similar, but *identical* – in terms of ability, preferred learning style and pace of working." (Boaler and Wiliam 2001: 91). Another passage from the Cockcroft Report provides a welcome reminder of some obvious, and yet easily ignored, facts.

> It is very important to realise that within any mathematics set … there will still be marked differences in the mathematical attainment of pupils … It is therefore essential that the teaching takes account of these differences and is responsive to the needs of individual pupils. It should not be assumed that the same teaching approach will necessarily be suited to all in the group, that it will be appropriate for all to do exactly the same work or that pupils should always work as a single group. (DES 1982: ¶493)

Although it is not clear why teachers adopt such a narrow range of approaches with setted classes, one of the main reasons may be simply that they can. The 'chalk-and-talk' style of teaching requires less planning, gives the teacher more class control, and in this situation is not so badly tailored to individual needs as to be *obviously* inadequate. The same approaches would be clearly inadequate were they used in mixed ability groups.

Educational Theory

According to Lev Vygotsky pupils learn most effectively with the guidance and support of an expert. The expert should *scaffold* the pupil's efforts by adjusting the level of assistance given to fit the pupil's current performance, gradually leading the pupil towards independent mastery. Although the role of expert would normally be played by the teacher, "According to Vygotsky … more knowledgeable peers can

also lead children's learning forward" (Berk 1997: 253). One of the more important elements in these peer interactions is

> the extent to which peers achieve intersubjectivity – by resolving differences of opinion, sharing responsibility, and engaging in cooperative dialogues. … And in line with Vygotsky's theory, children's planning and problem solving improve most when their peer partner is an "expert" – especially capable at the task.
>
> (Berk 1997: 253)

It is also important that these peer interactions take place during a task that requires the group to work towards a common goal. Although Vygotsky highlighted the value of such interactions for the 'novice', they are also valuable for pupils that play the role of 'expert'. According to Make Askew and Dylan Wiliam: "There is substantial evidence that the extent to which a pupil gives detailed explanations is a good predictor of how much that pupil will benefit from small-group working" (1995: 38). These findings suggest that, at least in some situations, a fair spread of ability and attainment may help rather than hinder pupil learning. It may be that these findings explain the abovementioned success of within-class grouping relative to other methods of grouping, since this form of grouping is not necessarily tied to ability.

Observations on Placement Schools

The present author has recent experience of three schools in which arrangements for grouping are importantly different. Schools A and B use setting of different kinds, while pupils at School C are taught in all attainment groups.

In School A, pupils are setted by ability across half-year groups in Y7 and Y8, and across the entire cohort in Y9, Y10 and Y11. Because staff recognize the difficulty in moving pupils upwards, initial allocations make higher ability groups significantly larger. This also allows pupils in lower groups to receive more support. School B has a very high proportion of students with EAL and a relatively high proportion of students with SEN. All year groups are divided into two bands (or streams) on general academic ability, and each band is then further setted by attainment in each subject. Classes in the lower band are typically 15-30% smaller and often have the support of a Special Needs or Language Assistant.

Within both schools, movement between sets is based almost entirely on the results of end-of-term tests. Pupils in each set take papers that overlap with those taken by neighbouring sets, to allow comparison of scores. Nevertheless, comparisons between scores of pupils in different groups will tend to favour the pupil

in the higher group simply because they are given the chance of scoring marks on more demanding tests which are not given to lower ability groups. It is also possible that basing movement between groups on this single form of assessment disadvantages comparatively able pupils who – for whatever reasons – perform less well in formal test situations.

My limited observations in School C, where students are taught in all attainment classes, suggested that staff were not using the teaching approaches best suited to this arrangement, often teaching from the board and using textbook based work. There was some within-class grouping, however, but this amounted only to the use of different textbooks for students deemed to be of different ability. Despite this, teachers in School C were very supportive of the school policy on mixed ability teaching, and often referred to recent research when asked about its effects on attainment.

In fact, teaching in all three schools showed a marked over-reliance on the narrow range of teaching approaches that Boaler argues characterise the setted school. While these methods are less than ideal when used in setted classes, over reliance of such techniques in mixed ability classes seems especially unhelpful.

Conclusion

Given the intuitive power of the simple argument for setting presented at the outset of this essay, it comes as something of a surprise that research does not reveal any significant gains in achievement in schools where ability grouping is used. This, however, may be less a function of setting itself and more a result of the teacher expectations and practices that typically accompany it. If undifferentiated teaching were a necessary result of setting, then the argument for mixed ability teaching would be complete. But even in the context of well differentiated teaching, setting raises important issues about access to educational opportunities, and these allocations are based on teacher assessments that are fallible at best.

For these reasons, it seems to me that while setting does not lead *necessarily* to poorly differentiated teaching, underachievement, unfair allocation to groups, or unjust limits on access to educational opportunities, concerns in these areas make ability grouping educationally and morally questionable.

Many teachers, including the present author, will be tempted to ignore the arguments presented here not because they "know setting 'works', but [because they] can actually not conceive of doing it another way" (Gates 2001a: 13). Successful teaching in mixed ability classes clearly requires the use of more open and discursive teaching approaches, to which many teachers will have a natural resistance; such methods take more time and reduce the apparent control of the teacher (Swan 2001: 150).

In the meantime, and regardless of our own views on the issue, many of us continue to teach in schools or departments that use ability grouping of some kind. In this context it is vital that our teaching is appropriately differentiated and that a wide range of teaching strategies are employed. If the practice of setting is not to lead to social inequity, we must also be extremely careful to ensure that our methods of assessment and group allocation are fair and evidence-based. Moreover, to prevent our assumptions about pupils from becoming dangerously entrenched, it is also important that teachers become self-critically aware of the limitations of their own assessment methods, and that these assessments are open to revision following later assessments and the moderation of our peers (Watson 2001: 226-9).

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