

Ability grouping appears to have detrimental effects on those pupils from ethnic minorities, boys and summer born pupils who are over-represented in lower ability groups.

Claire Norris and Paulo Aleixo

Dr Claire Norris is a Senior Lecturer in the Division of Psychology at De Montfort University.

Dr Paulo Aleixo is a Senior Lecturer in the Division of Psychology at De Montfort University.

Address for correspondence:

Dr. C. E. Norris
Division of Psychology
De Montfort University
Hawthorn Building
Leicester
LE1 7BH
Tel: (0116) 257 7756
email: cenorris@dmu.ac.uk

Ability Grouping in Schools: Attainment and self-esteem

A review of the research reveals limited evidence to support ability grouping, which appears to have detrimental effects on some pupils, and possibly disadvantage those placed in lower sets in primary school.

In schools today it is highly likely that children are taught in groups differentiated by ability.

In secondary schools this is most likely to take the form of dividing the children up on the basis of ability and teaching them separately for subjects such as maths, English and science (these are known as sets). In primary schools this is likely to take the form of within class sets whereby children are divided into small groups within the class. In infant schools this tends to be on the basis of ability in maths and English and in junior schools on the basis of maths, English and science.

Streaming

Streaming is used in some schools, whereby pupils are divided into classes differentiated by ability and pupils remain in those segregated classes for all subjects across the curriculum.

This practice marks a return to ability groups, which was popular between 1930s to the 1960s, when streaming was practised. This practice was criticised by the Plowden Report (1967) because studies had shown that pupils in the lower streams exhibited low self-esteem, while levels of attainment were not greatly improved. The report suggested a return to mixed ability teaching.

Why then has a return to ability groupings occurred? Is the use of sets and within class sets more beneficial for attainment and self-esteem in comparison to streaming? Who is in favour of such a return to ability groupings?

Worried about falling standards in comparison to other countries, the New Labour government appears to be committed to the use of ability grouping. The government White Paper 'Excellence in Schools' (DfEE, 1997) states that

“ unless a school can demonstrate that it is getting better than expected results through a different approach, we do make the presumption that setting should be the norm in secondary schools and worth considering in primary schools ”(p.38).

The Green Paper 'Building on Success' (DfEE, 2001) further supports the use of sets.

Gewirtz, Ball and Bowe (1993) surveyed teachers about the 1988 Education Reform Act and reported that a number of teachers felt that the National Curriculum was in fact incompatible with mixed ability teaching. This is clearly the case for the differentiated mathematics GCSE (suggested by the Cockcroft Report, 1982) whereby there are three tiers of entry to the GCSE with different syllabi. The maximum grade that can be achieved within the bottom tier is a grade 'D' which does not allow a pupil to progress to 'A' level. In practice, schools enter pupils from the bottom sets into this exam.

In addition, Ireson and Hallam (2001) highlight the finding by the Chief Inspector for Schools in his 1999 Annual Report that the use of sets also helps for class management and teaching reasons.

Parents, particularly middle class parents, have also been found to be in favour of the use of ability groups (Boaler, 1997; Crozier, 1997;

The practice of streaming was criticised by the Plowden Report (1967) because studies had shown that pupils in the lower streams exhibited low self-esteem, while levels of attainment were not greatly improved.

Reay and Ball, 1997). Hannan (1997) writing in the TES comments:

"Let's be honest with ourselves. We are not talking education here, we are talking politics. After all, 80% of parents are in favour of setting because they believe they will have the 20% of children who will be in set 1." (p. 17)

Overall, the reasons given for the use of such sets are the concerns to raise standards of attainment, particularly for high attaining children who are believed to be disadvantaged by mixed ability teaching (see Ireson and Hallam, 2001 and Ollerton, 2001) and for teaching methods. Indeed Reay (1998) suggests that OFSTED believe that the majority of teachers are not skilled enough to engage in mixed ability teaching:

"The line pushed by OFSTED and its chief inspector is that the requirements of mixed ability teaching are 'beyond' the competence of many teachers." (p.546)

Concerns over attainment and raising standards appears to have superseded concerns over effects of dividing pupils in terms of ability on self-esteem.

Hallam and Toutounji (1996) state that hitherto the debate has been between those who believe that dividing pupils on the basis of ability leads to improved academic attainment and those who think that the lower attaining pupils will suffer in terms of self-esteem.

Attainment

In a comprehensive review of the literature, Ireson and Hallam (2001) argue that while there are conflicting research results, on the whole, much research demonstrates that ability grouping does not raise levels of attainment for the majority of pupils. Slavin (1987), for example, in a meta-analysis of international studies focusing on streaming and sets in primary schools concluded that the effect of ability grouping was essentially zero although he reported that within-class ability grouping was effective in mathematics attainment. Similar findings were observed for secondary schools in several meta-analyses of the literature (Kulik and Kulik, 1992; Slavin, 1990; Veenman, 1995).

Others studies have shown different effects for different subjects. For example, Harlen and Malcom (1997) and Ireson and Hallam (1999) observed no real effect of ability grouping on attainment especially in English and science.

Still other studies have observed difference effects of ability grouping on low and high attaining pupils. Ireson, Mortimore and Hallam (1999) found that in maths, high attaining pupils showed greater gains in attainment in schools that set while lower attaining pupils did

better in mixed ability schools.

Within class sets

There is much less published research on within-class sets (see Ireson and Hallam, 2001 for a review) but several studies have shown that when implemented properly this method of ability grouping can have positive effects on attainment (Bossert, 1988; Lou et al, 1996; Johnson and Johnson, 1990; Slavin, 1990; Topping, 1992). However within class groupings function best when groups are comprised of mixed abilities - most and least able working together (Bennett and Cass, 1989; Swing and Peterson, 1982; Webb, 1991) and Slavin (1990) notes that groups should be representative in terms of ethnicity and gender. Bennett et al (1984) suggest that primary teachers using within class ability groupings tend to under-estimate the capabilities of the higher attaining pupils but over-estimate the capabilities of the lower attaining pupils.

Self-esteem

In terms of self-esteem the situation is less straightforward. It is difficult to come to an overall conclusion because different studies use different types of self-esteem measurements, different pupil age (either primary or secondary), and investigate different types of ability grouping (setting, streaming, within-class grouping and so on). Despite these problems there are some studies worth noting.

In a meta-analysis of 13 studies on elementary schools (primary) and junior high schools (middle and lower secondary) Kulik and Kulik (1992) concluded that the ability grouping raised the self-esteem of the lower attaining pupils while lowering the self-esteem of high attaining pupils. When looking at academic self-concepts (esteem related specifically to academia rather than general self-concepts) Bryne (1988) found that the low attaining pupils had lower English and maths self-concepts. Ireson, Hallam and Plewis (2001) observed that for maths but not English and science self-esteem was lower in high attaining pupils and higher in low attaining pupils. Overall they observed self-esteem was best at moderate levels of setting rather than in schools where there was mixed ability teaching or high levels of setting.

Because of the problem of some studies looking at general self-esteem while others look at academic self-concepts it may be helpful to highlight studies that investigated pupil attitudes to ability grouping. Boaler, Wiliam and Brown (2000) assessed pupil attitudes in both quantitative and qualitative longitudinal studies. Their results showed that the majority of

pupils were unhappy with their set placement and they concluded:

"Students in high sets came to be regarded as 'mini-mathematicians' who work through high-level work at a sustained pace, whereas students in low sets came to be regarded as failures who could cope only with low-level work - or worse - copying off the board. This suggests that students are constructed as successes or failures by the set in which they are placed as well as the extent to which they conform to the expectations the teachers have of their set." (p.643)

Group Composition

It is a general finding that summer born children are frequently placed in the lower ability groups (e.g. Giles, 1993; Jackson, 1964; Jinks, 1964; Thompson, 1971). Likewise this is the case for 'Working class' pupils, ethnic minority pupils and gender (Abraham, 1989; Ball, 1981; Gillborn and Gipps, 1996; Hargreaves, 1967; Lacey, 1970; Tomlinson, 1987). Hannon (1997) noted that boys are outnumbered in the lower sets and states that for boys:

"setting does little more for the unattaining boy than consolidate his view that maleness equates with academic under-performance and dissociates him from the high order learning and life skills of the most able, namely the girls." (p. 17)

Furthermore, these groups appear in the lower sets even after ability has been controlled for (Boaler, 1997).

In addition, studies have shown that teachers prefer to teach the higher sets (Ball, 1981; Finley, 1984; Lacey, 1970) and feel that the lower sets have a preponderance of pupils with negative attitudes to school and behavioural problems (Finley, 1984; Taylor, 1993). This is hardly surprising when some research has shown that placement in the bottom sets is influenced not by assessment of ability but rather by behavioural issues (Gillborn, 1997). Teachers in the UK are given little or no training on how to divide pupils into sets (Ollerton, 2001) and it is difficult to see the form this training would take in any case.

Research has also shown that teachers alter their teaching methods in lower sets, using more repetition and having fewer resources (e.g. Ireson, Mortimore and Hallam, 1999). Ireson and Hallam (2001) summarise the research on teachers' attitudes to setting and suggest that teachers believe that setting benefits the more able children while damaging those in lower sets in terms of stigmatisation and self-esteem. In addition, there is some evidence that teachers tend to treat everyone in a group homogeneously (Ollerton, 2001; Bowler,

...teachers believe that setting benefits the more able children while damaging those in lower sets in terms of stigmatisation and self-esteem.

Wiliam and Brown, 2000).

Social issues

Beyond the usual concerns about attainment and self-esteem some research suggests that there may be concerns about social issues. Benn and Chitty (1996) observed that in comprehensive education attainment was not better whether pupils had learned within mixed ability or set ability groups. However, in mixed ability settings they found that pupils had a more favourable general ethos. This in turn may result in improved pupil attitudes towards school (a suggestion not refuted by Boaler, Wiliam and Brown, 2000). Given that motivation and positive attitudes are important to learning, such issues cannot be ignored.

A number of studies have also shown that pupils select friendship groupings from those who are similar in terms of class, ability and ethnic grouping (Barker Lunn, 1970; Gameron and Berends, 1987; Newbold, 1977) but this is less marked in mixed ability settings (Newbold, 1977, see Ireson and Hallam, 2001 for a review).

Furthermore, it is well established that social settings are important in the development of intellectual ability (Bruner, 1983, 1985; Vygotsky, 1962), especially through the input of 'more knowledgeable others' in the form of teachers or peers. Setting may limit the capacity for this to occur since ability grouping limits the academic level of those peers children will interact with mostly and hence those who can 'pass' on their greater 'knowledge'.

Academic Self-Knowledge

One of the implications of these findings that is arguably the most worrying concerns the development of children's self-perception in academic and intellectual terms. There is a general belief that setting or within-class groupings are better than streaming. However, these run the risk of having pupils construct an idea about their level of academic and intellectual ability from one or two subjects (usually maths and English) from the age of about 5 (Year 1). Children who excel in art, for example, will never find themselves in a high and thus affirming set for art. A child's whole view of who they are academically may be affected by placement in ability groups.

Conclusions and Implications

Clearly, research evidence is mixed on the impact of ability grouping, be this setting, streaming or within-class groupings and does not seem to justify the current Government emphasis upon it. In fact, several researchers have concluded that there is no evidence for

...while there are conflicting research results, on the whole, much research demonstrates that ability grouping does not raise levels of attainment for the majority of pupils.

ability grouping resulting in higher pupil attainment (e.g. Aylett, 2000; Harlen & Malcolm, 1997; Lyle, 1999).

Perhaps more importantly, given certain research findings, there are clearly implications regarding the use of ability grouping in primary schools. There is the real possibility that pupils in lower ability groups at key stage 1 will remain in lower ability groups throughout their school career. A child at the age of 5 may be selected for a lower set within a class that utilises within class ability grouping. When they enter the next year, they will only be able to demonstrate the knowledge from the curriculum that they have been offered and therefore be allocated to a similar ability group. If this carries on the child will then achieve the Key stage 1 and 2 results commensurate with the group they have been placed in. It is also therefore likely that this trend will be continued in secondary schools. This reasoning is backed up by Dixon's (1999) claim that

“ a child's chance of remaining in its initial grouping for the rest of its school career are 88-89%. ” (p.1)

In effect, the argument is that KS1 results will in turn affect children's placement in secondary school and therefore potentially affect the quality of teaching and resources they receive. The obvious culmination is that these pupils will only be offered the low track GCSE in maths and further preventing their attainment and future choices (for example, not being offered 'A' levels). The system is, in essence, not allowing for individual differences in children's development of maths and English abilities since it assumes

that the general level of these abilities develops at the same rate for all pupils.

This situation is further complicated by the evidence that suggests that summer born children, ethnic minorities and boys are over-represented in the lower ability groups. This suggests that these children may be receiving a substantially different type of education than their higher attaining peers. Sharp and Hutchison (1997), referring to summer born children, clearly agree:

“ Children who are younger in the year group are likely to do less well than their older classmates... If decisions are made on the basis of KS1 data (e, g, the allocation to sets and streams) these age related differences could have longer lasting consequences for the children concerned.” (p.9)

This could equally be applied to minority groups and boys and therefore, as Ollerton (2001) states, becomes an issue of equal opportunities.

Clearly, more research into the possible long-lasting effects of within class ability groupings is needed. A whole generation of boys, ethnic minorities and summer born children could be failed at the age of 5 by an educational system that encourages ability grouping.

While there is a general belief that ability grouping may benefit the more able students (although this remains unsubstantiated); the question remains as to whether the less able should be

Given that the more able students may suffer more self-esteem issues this hardly seems a good argument to teach pupils in ability groupings.

sacrificed for them. Given that the more able students may suffer more self-esteem issues this hardly seems a good argument to teach pupils in ability groupings.

While academics, the government and teaching practitioners argue over the relative validity of academic research, pupil attitudes to setting appear to be clear and should be listened to. Lyle (1999) cites the 1989 UN

Convention on the rights of the child that was ratified by the UK government in 1991. Article 12 states that every child should have the right (if capable) to express their views and that such views should be given weight in accordance to the age and maturity of the child. This alone suggests that while this debate has raged on for most of this century, every child has a human right to be consulted.

Perhaps the only solution to this problem is to return to the recommendations of the Plowden report (1967) to use mixed ability teaching (see also a review of alternative methods by Ireson and Hallam, 2001). As Ollerton (2001) states:

“ At the centre of learning processes are children who have entitlements, rights, hopes and aspirations. As such education must be implicitly, explicitly and intrinsically free from centralised Government intentions to categorise and divide children in ways which, if applied to race or gender would be immoral, and if applied to our own children, totally unacceptable. Inclusion is an equality of opportunity issue; this, in turn, relates to quality of access for all children to the statutory curriculum. Teaching children who have wide ranges of conceptual understandings, work-rates, motivations, potentials, behaviours and aspirations, in inclusive, mixed ability classrooms is not just feasible, it is ethically desirable.” (p.40)

References

- Abraham, J. (1989). Testing Hargreaves' and Lacey's differentiation-polarisation theory in a setted comprehensive. *British Journal of Educational Sociology*, 40(1), 46-81.
- Aylett, A. (2000). Setting: does it have to be a negative experience? *Support for Learning*, 15, 41-45.
- Ball, S. J. (1981). *Beachside comprehensive: a case-study of secondary schooling*. Cambridge: Cambridge University Press.
- Barker Lunn, J.C. (1970). *Streaming in the Primary School*. Slough: NFER.
- Benn, C. and Chitty, C. (1996). *Thirty years on: Is comprehensive education alive and well or*

struggling to survive? London: Fulton.

- Boaler, J. (1997). 'Setting, social class and survival of the quickest', *British Educational Research Journal*, 23, 5, 575-95.
- Bennett, N. and Cass, A. (1989). The effects of group composition on group interactive processes and pupil understanding. *British Educational Research Journal*, 15(1), 19-32.
- Bennett, N., Desforges, C., Cockburn, A. and Wilkinson, B. (1984). *The Quality of Pupil Learning Experiences*. London: Lawrence Erlbaum Associates.
- Boaler, J., William, D. and Brown. (2000). Students' experiences of ability grouping - disaffection,

polarisation and the construction of failure. *British Educational Research Journal*, 26(5), 631-648.

- Bruner, J. (1983). *Child's Talk: Learning to use Language*. New York: Norton.
- Bossert, S. T. (1988). Cooperative activities in the classroom. *Review of Research in Education*, 15, 225-250.
- Bruner, J. (1985). Vygotsky, A historical and conceptual perspective. In J. V. Weersch (Ed.) *Culture, communication and Cognition: Vygotskian perspectives*. Cambridge: Cambridge University Press.
- Bryne, B. M. (1988). Adolescent self-concept, ability grouping and social comparison: re-examining academic track differences in high school. *Youth and Society*, 20, 46-67.

Department for Education and Science, CACE (1967). *Children and their Primary Schools* (The Plowden Report). London: HMSO.

Dixon, D. (1999). A canker by any other name. *FORUM for Promoting 3-19 comprehensive education*, 41 (1), 1.

Department for Education and Employment (1997). *Excellence in Schools*. London: HMSO.

Department for Education and Employment (2001). *Schools: Building on Success*. London: HMSO.

Finley, M. K. (1984). Teachers and tracking in a comprehensive high school. *Sociology of Education*, 57, 233-243.

Gameron, A. and Berends, M. (1987). The Effects of stratification in secondary schools: synthesis of survey and ethnographic research. *Review of Educational Research*, 57, 415-435.

Gewirtz, S., Ball, S. J. and Bowe, R. (1993). Values and ethics in the education market place: the case of Northwark park. *International Studies in Sociology of Education*, 3, 233-254.

Giles, R. (1993). The effect of date of birth on performance within the secondary school. *School Science Review*, 75, 270, 133-135.

Gillborn, D. (1997). Racism and reform: new ethnicities/old inequalities. *British Education Research Journal*, 23(2), 345-360.

Gillborn, D. and Gipps, C. (1996). *Recent Research on the Achievements of Ethnic Minority Pupils*. London: HMSO.

Hallam, S. and Toutounji, I. (1996). 'What do we know about grouping pupils by ability?' *Education Review*, 10, 2, 63-70.

Hannan, G. (1997). *Setting puts boys at bottom of the heap*. TES, 4229, p17.

Hargreaves, D. H. (1967). *Social Relations in a Secondary School*. London: Tintling.

Harlen, W. and Malcolm, H. (1997). *Setting and Streaming: a Research Review* (Using Research Series 18). Edinburgh: SCORE.

Ireson, J. and Hallam, S. (1999). Raising standards : is ability grouping the answer? *Oxford Review of Education*, 25 (3), 343-358.

Ireson, J. and Hallam, S. (2001). *Ability Grouping in Education*. London: Paul Chapman Publishing.

Ireson, J., Hallam, S. and Plewis, I. (2001). Ability Grouping in secondary schools: Effects on pupils self-concepts. *British Journal of Educational Psychology*, 71, 315-326.

Ireson, J., Mortimore, P., and Hallam, S. (1999). The common strands of pedagogy and their implications. In P. Mortimore (ed.) *Understanding Pedagogy and its Impact on Learning*. London: Paul Chapman Publishing.

Jackson, B. (1964). *Streaming: an Education System in Miniature*. London: Routledge and Kegan Paul.

Jinks, P. C. (1964). An investigation into the effect of date of birth on subsequent school performance. *Educational Research*, 6, 220-225.

Johnson, D. W. and Johnson, R. T. (1990). Cooperative learning and achievement. In S. Sharan (Ed.) *Cooperative Learning: Theory and Research*. New York: Praeger.

Kulik, J.A. and Kulik, C. - L.C. (1992). Meta-analytic findings on grouping programs. *Gifted Child Quarterly*, 36 (2), 73-77.

Lacey, C. (1970). *Hightown Grammar*. Manchester: Manchester University Press.

Lou, Y., Abrami, P. C., Spence, J. C., Poulsen, C., Chambers, B. and d'Apollonia, S. (1996). Within-class grouping: a meta-analysis. *Review of Educational Research*, 66(4), 423-458.

Lyle, S. (1999). An investigation of pupil perceptions of mixed-ability grouping to enhance literacy in children aged 9-10. *Educational Studies*, 25(3), 283 - 296.

Newbold, D. (1977). *Ability Grouping: the Banbury Enquiry*. Slough: NFER.

Ollerton, M. (2001). Inclusion and entitlement, equality of opportunity and quality of curriculum provision. *Support for Learning*, 16(1), 35 - 40.

Reay, D. (1998). Setting the agenda: the growing impact of market forces on pupil grouping in British secondary schooling. *Journal of Curriculum Studies*, 30 (5), 545 - 558.

Reay, D. and Ball, S. J. (1997). Spoilt for choice: the working classes and education markets. *Journal of Education Policy*, 13(2), 179-196.

Sharp, C. and Hutchison, D. (1997). *How do season of birth and length of schooling affect children's attainment at key stage 1? A question revisited*. Slough: NFER.

Slavin, R. E. (1987). Ability Grouping in elementary schools. *Review of Educational Research*, 57 (3), 293-336.

Slavin, R. E. (1990). Achievement effects of ability grouping in secondary schools: a best evidence synthesis. *Review of Educational Research*, 60, 471-90.

Swing, S. and Peterson, P. (1982). The relationships of student ability and small- group interaction to student achievement. *American Educational Research Journal*, 19, 259-274.

Tomlinson, S. (1987). Curriculum option choices in multi-ethnic schools. In B. Troyna (Ed.) *Racial Inequality in Education*. London: Tavistock.

Topping, K. (1992). Cooperative learning and peer tutoring. *The Psychologist*, 5, 151-157.

Taylor, N. (1993). 'Ability grouping and its effect on pupil behaviour: a case study of a Midlands comprehensive school', *Education Today*, 43, 2, 14-17.

Thompson, D. (1971). Season of birth and success in the secondary school. *Educational Research*, 14, 56-60.

Veenman, S. (1995). Cognitive and noncognitive effects of multigrade and multi-age classes: a best evidence synthesis. *Review of Educational Research*, 65(4), 319-381.

Vygotsky, L. S. (1962). *Thought and Language*. London: Hodder and Stoughton.

Webb, N. (1991). Task-related verbal interaction and mathematics learning in small groups. *Journal of Research in Mathematics Education*, 22, 366-389.