

Raising standards in education education essay



Introduction

The question of how to group children in order to teach them has been a major issue in the debate about how to raise standards in education (Budge, 1998a, 1998b; Evans, 1998). In recent years, the mixing of children of different abilities in a single class has become standard practice in British primary schools (Office for Standards in Education [OfSTED], 1994.)

Within-class ability grouping is often used in such classes to facilitate teaching by reducing the heterogeneity of ability of children being taught at any one time (Gregory, 1984). This is a particular issue for the primary English and mathematics curricula since similar ability grouping has been shown to be more common for these than for other primary curriculum subjects (Blatchford et al., 1999).

Ability grouping is the placement of children in one classroom into groups based on their ability. The classroom may contain children with a wide range of ability. Children can move in and out of groups as needed. For example, a child may be in the high ability group in reading, but a middle level in math. If the child improves in math, he could be moved up to the high ability in math. In the same way, if the child begins to have problems in reading, he could be moved to a lower group. This flexibility of grouping allows the needs of children to be better met. Ability grouping is not the same as tracking, heterogeneous grouping, or cluster grouping.

Indeed, this type of grouping was becoming a required organisational feature of English and mathematics teaching at the time this study was undertaken (Department For Education and Employment [DfEE], 1998, 1999). Within-

class ability grouping is also seen as a means of avoiding the social and emotional disadvantages which have been associated with the practice of streaming (Barker Lunn, 1970; Rutter et al., 1979; Oakes, 1985; Slavin, 1987; Harlen, 1997) and which led to its demise in primary schools in the 1970s. Indeed, within-class ability grouping has been identified as an important factor in raising the performance of children in mixed-ability classes (Slavin, 1987; OFSTED, 1994; Lou et al., 1996).

Students are usually assigned to groups based on a review of a variety of performance data such as their grades in a subject, results on standardized testing, and performance in class. Once placed, students can move into higher level groups if their skill levels increase. Students may also move into lower skill level groups should the need for more intensive remedial instruction arise.

Summary and Review of Current Research

Within-class Ability Grouping: placement of pupils in groups and self-concept, MacIntyre & Ireson (2002)

MacIntyre and Ireson's (2002) research aimed to investigate the relationship between the self concept and the ability setting of pupils within Key Stage 2 classrooms. In this context, the idea of self-concept is how children see themselves in terms of their own ability when considering the ability set in which they are placed for mathematics. The research was carried out in a mainstream primary school in London, and the researchers were able to use the schools use of standardised testing as a tool for comparing achievement of 145 pupils from year 3 through to year 5, allowing the research to remain

valid. Without the use of standardised testing to compare achievement i. e. using the class teachers own assessments based on class work, results would not give a fair reflection of difference in ability. (GET NAMES)

Furthermore, the researchers wanted to determine the impact that any misplacement in the ability sets had on the pupils and their self-concepts.

In order to determine the self-concept of the pupils the research team adapted a version of the ' Self-Description Questionnaire' used by Marsh (1990), within the questionnaire were five scales measuring the pupils' level of self-concept towards reading, mathematics, general school life, peer relations and general self. Questionnaires with more than four answers missing were not included in the research. Although the questionnaire was used in previous research papers, it was adapted in order to focus solely on mathematics self concepts. The validity of the research was not under threat due to the previous use and therefore allows us to read any results gained as valid. The overall trend in the year 4 and year 5 classes showed that children in high-ability groups had higher self-concepts than those in middle-ability groups and likewise between middle-ability and low-ability groups. Within the year 3 classes, however, it was the complete opposite results i. e. the self-concept of the high ability set was actually lower than that of the middle set, and likewise, the middle ability set was lower than that of the low-ability mathematics group.

To collect information about the children's mathematics ability, results from the end of year standardised tests within the school was used. This particular method was used in order to avoid any class-based test, allowing a fair comparison of the results gained between classes and year groups. (GET

NAME) The results from this part of the study showed that although each ability group scored higher mean marks, than the set below, it also showed that there are overlaps in the relationship between achievement and ability set based on maximum and minimum scores within the set. Of the 145 children used in the study, 122 were in the overlap of high and middle ability, 64 children fell within the overlap of middle and low ability sets whilst 56 between the high and low ability sets.

The results gained are not in line with previous research in which evidence from Marsh (1984), Shavelson & Bolus (1982) and Reuman (1989) shows that self concept and ability have a positive relationship. Due to these contradictions in research, a number of children were asked to take part in interviews, they were selected on their mathematics ability either matching their self-concept scores, or being the exact opposite to what is expected for such results. This technique was used in the hope that it would give an impression of any particular classroom factors potentially influencing the variations in mathematical ability and self-concept. Children at the upper end of scores within their ability group agreed that they were set correctly, whilst those with conflicting scores in each happened to disagree with their setting. One child in the high ability group scored 92 and in the interview stated that they found the work hard and would like to be in group two, whilst another in the low ability group achieved a mark of 95 and stated that they wanted to move groups because they wanted to learn more. It is important, however, not to take these results at face value as the self-concept of the children may be influenced by their peers' achievements within the same group. For example, the mark of 95 is high for the low ability

group therefore the child with such a grade in the tests may have a distorted impression of their own ability, giving a self-concept higher than perhaps they should have.

Finally, within the study, researchers interviewed teachers to find their opinions on ability setting etc. These teachers pointed to differences in the work for each ability group, with the major difference being the skills needed for completing the work set. The higher groups were allowed the opportunity of practicing simple tasks, but were also afforded the opportunity to approach more open ended questions and investigations, whereas the lower ability sets were merely working on closed investigations and problems. Therefore it can be said that the higher ability sets were allowed greater opportunities to progress in the subject, whereas the lower ability sets were not afforded such opportunities. As these differences were identified in the research, the results may not be as reliable as research in which each group are afforded the same opportunities within the lessons.

Effective Classroom Organisation in Primary Schools, Whitburn (2001)

Whitburn (2001) reports on the government initiative of increasing focus towards a whole class system of teaching maths is, how this has led to pupils being 'set' by ability in primary classrooms in numerous schools around the country and what effect this is having on children's attainment. She believes that it is vital to study the effects of this practice as their paper cites one of OFSTED's reports (1998, p. 3) conclusion that about 'six out of ten junior schools set for at least one subject in some year groups while over one-third of infant schools and about one half of combined infant and junior schools do

the same...of those schools that use setting, 96% set for Mathematics.’ The need, therefore, to conduct further research into this area is supported by OFSTED (2000) suggesting that this practice might be becoming increasingly more common in ‘ order to meet the needs of the National Numeracy Strategy.’

The paper itself is from the Oxford Review of Education, and is a longitudinal study looking at the difference between the attainment of pupils that are set according to ability and those that are taught in mixed group within schools in the London Borough of Barking and Dagenham. The performance of all pupils in the project was assessed in the September as they enter Key Stage 2 at the beginning of Year 3 of schooling between 1996 and 1999 and three times a year there after. Each pupil involved in the study was asked to complete short tests of about 15 minutes throughout the year relating to the content of the previous term’s lessons, with the results allowing a comparison of the success and the effectiveness of the teaching approach i. e. ability setting, or mixed grouping. In order to be able to compare the results in a fair way, the researchers ensured that the all pupils had learnt from the same teaching materials and lesson plans, although the teachers did differ. Because the methods of teaching and the materials used were universal within the schools involved in the project, the differences that would normally be encountered could largely be eliminated because of the unique circumstances of the project. The National Numeracy Task Force recognised the importance of both direct instruction and teacher-pupil interaction which now forms a large part of the daily mathematics lesson. The National Numeracy Framework stated that the aims should be “ to allow

all the children in the class to progress steadily, so that all of them reach a satisfactory standard and the range of attainment is much narrower.” (DfEE, 1999).

The results from the research suggest that there is little evidence to show that the expectation of greater gain by schools choosing to set by ability was not supported by the figures; in fact the results supported a tentative conclusion by the author that children of all levels of attainment do better when taught in mixed ability groups and that the diversity of attainment was unlikely to be widened as a result of this. The pupils who were taught in mixed ability classes showed an average gain in test scores (of up to 7%) over those taught in ‘set’ classes. They continued to show an improvement in their average attainment score relative to set classes by about 3% over two years. The variation in attainment (as measured by the standardised test scores) among all pupils as they entered Key Stage 2 was only slightly reduced among mixed ability groups compared to those set by ability. The author interpreted this as evidence that the policy of setting was not a response to a pre-existing diversity of attainment.

The author goes on to suggest that the policy of setting is adopted primarily to make a teacher’s task more manageable, which is particularly important when there is official encouragement to teach through a whole class approach. For example, larger schools with parallel classes sometimes deal with a range of attainment by organising ‘ability sets’ for mathematics lessons. The advantage is that planning can be easier if the attainment gap in a class is not too wide. The author warns that teachers may need considerable support to teach whole class mixed ability groups, as they may

not have been trained to teach in this way, and may not have been taught that way themselves.

The author concludes from her research that there is no support for the view that lower Key Stage 2 children learn more effectively in 'sets' for mathematics at any attainment level. She demonstrates that the tail of underachievement is reduced and the range of ability within the class decreases when these children are taught in mixed ability groups. She goes on to recommend mixed ability teaching, as it has social and equitable benefits for children. It is in the crucial years of primary schooling that the foundations for later learning in mathematics need to be laid, since success in later years of schooling depends upon a secure understanding of number structure. The initial findings of this study suggest that in the circumstances of this experiment, children, as a whole, generally do better when taught in mixed ability groups, and the diversity of attainment is unlikely to be varied because of this.

The findings from this study confirmed these earlier findings and the author found that slower learning children seem to benefit from learning in mixed ability classes, whereas children of average or high ability do not appear to suffer. The author concludes that pupils should continue to have access to the equality of opportunity and other social benefits that derive from mixed ability teaching.

DISCUSSION:

Contrast the 2 studies (200 words)

Detail several questions that further research could address on the chosen issue and state why that research would be useful (200 words)

Explain how the research studies you have considered will influence the way you teach mathematics and what their implication is for mathematics teaching in general. (400 words)

Where it was done?

1 school Vs Area

What were they asking?

Broad research Vs Narrow direct research

This builds upon previous research findings which suggested that lower ability groups achieve more when taught in mixed ability groups, as they observe how others approach problem solving and calculating in mathematics. Low-attaining pupils are known to respond to higher levels of interaction, and their need for interaction is greater than high-attaining pupils who may be more capable of independent work. To find out more about ability grouping, [click here](#).

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the equality of opportunity and other social benefits that derive from mixed ability teaching.

The evidence presented in this study suggests that if a policy of grouping by ability is adopted for the teaching of mathematics a widening in the range of attainment will result, so adding to the difficulty of any subsequent attempt to introduce a whole class, mixed ability teaching approach.

The success of setting depends on very careful monitoring, close team work and co-operative planning among staff to make sure that expectations for all pupils are suitably high and that lower expectations are not justified simply because pupils are in a 'lower set'.

As standards improve over time, the range of attainment in each year group ought to reduce so that it becomes possible to cater for the diversity of needs by grouping pupils within the same class.

When schools-and teachers-are asked why they choose to group pupils by ability for the teaching of mathematics, the answer is invariably along the lines of 'Because it is better for our children', 'Because we can teach more effectively', 'Because the range of attainment/ability is so wide that we cannot teach them altogether', 'Because we can give more attention to the weaker/stronger children if they are together in a group'.

There is no doubt that teachers have the best interests of the children at heart, and that they are highly committed towards achieving the best results from their pupils. Yet more than 20 years ago one research study examining the advantages of grouping (at that time streaming) concluded that, 'The

greatest advantage of streaming was that it was less strenuous for the teachers' (Frost, 1978) and the recent report of the first full year of the National Numeracy Strategy says:

In those schools which were enthusiastically setting pupils for mathematics, teachers often reported that they found it easier to teach the narrower range of attainment within the set. (OFSTED, 2000, para. 88) And in respect of a study in Scotland specifically concerned with the question of selection within primary schools which recommended setting by ability (SOEID, 1996), research reviewers Harlen & Malcolm commented: the rationale for setting is that it reduces time spent on organising and managing learning to allow more time for 'direct teaching'. (Harlen & Malcolm, 1999, p. 17)

The author further suggests that if a policy of grouping by ability is introduced for the teaching of mathematics, a widening in the range of attainment may result, so adding to the difficulty of any subsequent attempt to introduce a whole class, mixed ability teaching approach.