

# MIXED AGE CLASSES IN URBAN PRIMARY SCHOOLS: PERCEPTIONS OF HEADTEACHERS

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## **Introduction**

Mixed age classes occur when a single teacher instructs more than one year-group of students in the same classroom. Mixed age grouping is most commonly found in 'small' primary schools because there are insufficient teachers to organise the range of year groups into single-grade classes. However, this form of classroom organisation may also occur in larger primary schools when there is fluctuating or uneven enrolment. Although mixed age classes are generally created out of administrative necessity, in some schools they may be formed for pedagogical reasons. In this country, such mixed age grouping by choice is often referred to as 'vertical grouping' (Draisey, 1985; Dixon, 1976).

There is a reasonably large body of research into mixed age classes in 'small' schools in the UK (Cornall, 1986; Galton and Patrick, 1990; Francis, 1992; Vulliamy and Webb, 1995; Hargreaves et al, 1996; Hayes, 1999; OFSTED, 2000). However, much less is known about the issues of mixed age classes in larger, urban and suburban primary schools. One important source of information on the latter (also based on survey data) is Bennett et al (1983), but this research was conducted prior to the introduction of the national curriculum. Additional challenges for teachers of mixed age classes may now arise from the greater emphasis placed on whole class teaching, from more tightly prescribed subject content, from the increasingly complex planning demands placed upon teachers, and from the importance attached to student attainment (evident in the publication of league tables). In the article that follows reference will particularly be made to the results of the 1983 Bennett research for comparative purposes.

In the research reported here, the views of headteachers on mixed age classes are explored using a postal questionnaire. The research focuses on the primary schools in one inner city London Local Education Authority. This sample was chosen because it is likely to contain schools which, while not 'small', will face challenges relating to their enrolment patterns that may force them to adopt mixed age organisation.

The attitudes of principals towards this form of organisation are important because they may shed some light on why schools make the organisational decisions that they do. It has been reported elsewhere, for example, that primary schools may actively avoid forming mixed year group classes, and that teachers will put up with larger class sizes instead (Smith and Warburton, 1997). This situation requires further understanding, particularly in the light of evidence of the potentially negative effects of increases in class size (Bennett, 1996).

## **Background**

An important milestone in the development of attitudes towards mixed age classroom organisation in this country was the publication of the 1978 HMI survey, Primary Schools in England. At this time, about a quarter of children were in mixed age classes where the possibility of single grade grouping existed. HMI reported that not only was achievement lower in mixed age than in single age classes, but also teachers were less able to appropriately match tasks to student abilities. This led to the conclusion that mixed age classes were something to be avoided if possible.

Other research that came out at about the same time (Galton and Simon, 1980) as part of the ORACLE observational study found that students in double grade classes tended to achieve less than their counterparts in single grade classes, but the differences found were not significant. Small differences in teacher-student interaction patterns and degree of pupil involvement were also found. Students in the mixed age classes tended to concentrate on their work less, and spend more time on 'routine' interactions and waiting for the teacher. These mixed age classes were all formed as a response to fluctuating enrolment in an otherwise single-grade organised school.

The publication of the 1978 HMI survey provoked a response from the academic community. Bennett et al (1983) argued that the HMI research was flawed because it conflated different mixed age contexts, particularly relating to urban and rural schools. They produced survey research that showed just how varied the patterns of mixed age organisation in primary schools were. They also found that while there was an increasing tendency for schools to adopt mixed age classroom organisation patterns, this was being done reluctantly and mainly in response to falling school rolls and staff cuts. Headteachers were generally found to prefer a 12 month age span in the class and were negative about the implementation of mixed age classes.

Since the Bennett survey, there has been very little other literature relating to the issue of mixed age classes in larger UK primary schools, although there have been several studies of national curriculum implementation in small schools (Vulliamy and Webb, 1995; Hargreaves et al, 1996; Hayes, 1999; OFSTED, 2000). These latter studies have generally found that there are no grounds for believing that curriculum provision in the small primary school is inferior to that found in larger schools. This may be put down to factors relating to the size of the school, such as greater flexibility in staffing, more intimate knowledge of students, and realistic planning demands from teaching heads. However, these factors are unlikely to apply in the larger primary school with mixed age classes.

## **Research aims and questions**

The present study was initiated by an international multigrade research project that is currently running at the Institute of Education, University of London. This project, funded by the Department for International Development, is attempting to explore multigrade issues in Peru, Vietnam and Sri Lanka. However, comparative data is also being sought

from the UK. This is the first phase of research into mixed age classes in one inner city Local Education Authority. The research has the following two aims:

1. To gauge the extent of mixed age teaching in urban primary schools and the reasons for its implementation.
2. To ascertain teachers' views on mixed age classes and their strategies for dealing with them.

The results reported here are based on a survey of headteachers in the population of schools in the target LEA. This phase of the research focuses on issues around the first aim. In a follow up study planned for the 2001/2002 academic year, it is intended to interview a sample of teachers in order to address issues arising from the second aim.

This phase of the research sought to address the following four research questions:

1. What is the extent of mixed age class grouping in schools?
2. How are students assigned to mixed age classes?
3. Why are mixed age classes formed?
4. What challenges and opportunities do mixed age classes present?

Based on the previous literature and discussions with practitioners, the researchers made two major predictions. First, mixed age classes would only be found in schools where it was forced by their enrolment patterns. There would be few, if any, examples of mixed age classes formed voluntarily for pedagogical reasons. Second, mixed age classes would tend to be viewed as a challenge to teaching and learning, rather than as an opportunity to be exploited.

## **Research methods**

### *Sample*

The sample of primary schools used in the study was drawn from one inner-London local education authority. The authority was selected on the basis of its 'typicality' i.e. the authority faces challenges typical of others in London to the provision of high quality primary education. These challenges include high teacher turnover and pupil mobility, a relatively large proportion of EAL students, and several areas of significant disadvantage on measures such as eligibility for free school meals. The LEA in question has a population of fifty-five primary schools, the majority of which are combined junior and infant schools. Of the fifty-five schools, thirteen are church voluntary aided and the rest are county primary schools.

A total of twenty-nine schools responded to the questionnaire, which represents 53% of the total number. Twenty-seven of these schools are combined junior and infant schools, and the other two are infant schools only (comprising of reception and key stage 1 classes). Nine schools in the sample were voluntary aided. The response rate was acceptable for our purposes, but we must exercise caution when generalising the results beyond the sample of responses that were received.

### *Instrument and procedure*

A questionnaire was developed based on a reading of the previous literature and discussion with practitioners. Questions were grouped into the following three areas:

- General school statistics (number on roll, reception intake, number of classes)
- Mixed age statistics (extent of mixed age classes, combinations used, methods of assignment)
- Other information (reasons for creation/non-creation, problems and opportunities)

The length of the questionnaire was kept to a minimum in order to encourage a higher response rate. Questionnaires were initially mailed to all headteachers in May of 2001. A covering letter was included that explained the research aims, and also a leaflet explaining the work of the multigrade project. A stamped addressed envelope was enclosed. This initial mail shot produced a response from eleven schools. A second letter was sent in July of 2001 as a follow up to the first. The remaining eighteen schools in the final sample responded to this letter.

### *Analysis*

The numerical responses from the questionnaires were inputted immediately into a data base. The qualitative responses were coded according to the type of response received. In the question about problems associated with mixed age classes, for example, responses that commented on 'planning from literacy/numeracy strategies' and 'planning for two year groups' were both coded as issues relating to planning.

## **Results**

Reflecting the research questions, the results of the study are presented in four sections: (a) extent, (b) class formation, (c) rationale, (d) problems and opportunities.

### **Extent**

Of the 29 headteachers who responded to the questionnaire, 11 reported that that their school operated some mixed age classes. This represents approximately 38% of the sample. The actual number of classes involved in Key Stages 1 and 2 is shown in table 1 below. The table includes cell counts, marginal percentages and conditional

probabilities (in square brackets). The table shows that overall less than 20% of classes were organised as mixed age. Based on an average class size of 30 pupils, this means that approximately 1200 pupils are in mixed age classes. The proportion of mixed age classes at Key Stage 2 was slightly higher than that at Key Stage 1.

**Table 1: Mixed age classes by key stage**

Class type	Key Stage 1	Key Stage 2	Totals
Mixed age	9 [0.11]	30 [0.20]	39 (17%)
Non-mixed age	74 [0.89]	117 [0.80]	191 (83%)
Totals	83 (36%)	147 (64%)	230 (100%)

In their survey, Bennett et al (1983) found that 32% of their sample of urban primary schools operated with some form of mixed age class. This is slightly less than our figure of 38%. Their prediction that the proportion of mixed age classes would increase is, therefore, to some extent borne out by our data.

#### *Class formation*

The range of variation in the patterns of organisation in the eleven schools was quite wide as table 2 shows. Most commonly (in five of the eleven schools), three classes were mixed in terms of age, one combining years 1 and 2, another combining years 3 and 4, and the final one combining years 5 and 6. However, in three schools, the proportion of mixed age classes was much higher, with almost all classes operating as mixed age. In two of the schools, only one class - year 5 and 6 - was mixed age organised.

**Table 2: Mixed age combinations in key stages 1 and 2 by individual school**

<i>School</i>	<i>Intake</i>	<i>Total classes</i>	<i>#Mixed age classes</i>	<i>Year group combinations</i>
1	45	3	3	Yr 1&2; yr 3&4; yr 5&6.
2	45	3	3	Yr 1&2; yr 3&4; Yr 4&5
3	45	3	3	Yr 1&2; yr 3&4; yr 5&6
4	50	1	1	Yr 5&6
5	45	7	7	Yr 1&2; yr 2& 3; yr 3&4; yr 4&5; Yr 5&6
6	31	9	9	Yr 1&2; yr 3&4; yr 5&6
7	20	3	3	Yr 1&2; yr 3&4; yr 5&6
8	37	3	3	Yr 1&2; Yr 3&4; Yr 5&6
9	75	3	3	Yr 1&2; yr 3&4; yr 5&6
10	60	3	3	Yr 5&6
11	30	1	1	Yr 5&6

The range of mixed age class provision echoes the variation found by Bennett et al (1983) in their study. They found over 179 variations in their sample of combined junior/middle/infant schools and 18 variations in their sample of junior schools only. A direct comparison with their findings is difficult because of the introduction of key stage organisation since the 1983 study.

Table 3 shows the responses in relation to the basis on which pupils are assigned to mixed age classes. The percentage column represents the number of responses as a proportion of the total number of respondents who reported that they had mixed age classes (11).

**Table 3: Means of assigning students to mixed age classes**

<i>Method of assignment</i>	<i>Number of responses</i>	<i>%</i>
Age	7	64
Ability	7	64
Behaviour	6	55
socialisation	3	27
SEN Spread	3	27
Parental request	1	9
Gender	1	9

The predominant means of allocating pupils to mixed age classes was reported to be by age. Heads who mentioned several criteria normally put this one first. This is likely to mean that the oldest pupils in year 1 are put in the same class as the youngest in year 2, thereby reducing age heterogeneity. However, another common means of allocating students to the classes was by ability. This may indicate that there is a deliberate attempt to reduce the range of ability levels in the mixed age class to facilitate instruction. Behaviour was also commonly reported as a criterion, suggesting that students who exhibit more co-operative behavioural patterns are placed into these classes. Other less common means of assigning students to these classes were by socialisation, SEN spread, at the request of parents, and ensuring a gender balance.

### *Rationale*

Of the 11 heads who operated with mixed age classes, all gave as one of their reasons the number of students in the school. In seven of the schools, this was directly related to having a one or two and a half form intake (i.e. either 45 or 75 pupils entering the school). Heads with this type of intake almost inevitably have to form mixed age classes. Of the other four schools, one had been threatened with closure and had lost staff or students, the second was very small with an intake of only 20 students, the third used to have a one and a half form entry, and the final one failed to answer the question. In addition, 2 of the heads gave responses not related to numbers. One said that 'mixed

age grouping was beneficial for under and high achievers in both year groups'. The other said that it allowed his staff to plan in teams and 'give equal access to all children in year bands'.

The headteachers who reported not using mixed age classes were also asked to explain why they did not use this form of organisational structure. Of the 18 heads who did not need to use mixed age classroom organisation, 12 actually responded to this question. Their answers are summarised in table 4. The percentage column indicates the proportion of the 12 respondents who identified any particular reason.

**Table 4: Reasons for not using mixed age classes**

<i>Reasons</i>	<i>Number of responses</i>	<i>%</i>
No need to	7	58
Simpler to plan for straight year groups	4	33
Better learning opportunities in straight classes	2	17
Self-esteem is higher in straight classes	1	8
Funding	1	8

As table 4 shows, the most common reason cited for not organising pupils into mixed age classes was that the school did not need to do so. In other words, the intake allowed for the formation of single age classes. Thus, as the responses from the heads who do operate with mixed age classes suggest, there is generally no pedagogical imperative for forming these classes. There is also quite a widespread view that mixed age classes are more difficult to plan for from the national curriculum frameworks. Two of the heads were adamant that mixed age classes were a less effective organisational structure from a teaching and learning point of view. One of the heads used to operate with mixed age classes to keep his class sizes below 30 pupils. However, funding dried up and the school had to revert to straight year groups.

Once again, these results echo those of Bennett et al (1983) who found that the majority of schools in their sample (70%) were operating mixed age classes out of necessity. In their study, this was directly linked to falling rolls and variations in student intake.

#### *Problems and opportunities*

The question on problems in mixed age classes was answered by a total of 20 respondents. The main problems identified are summarised in table 5. The percentage column shows the proportion of the 20 respondents who mentioned any particular problem.

**Table 5: Problems of mixed age classes**

<i>Problem</i>	<i>Number of responses</i>	<i>%</i>
Curriculum delivery/coverage	12	60
Planning	9	45
Differentiation	6	30
Perceptions	6	30
Transfer/exams	2	10
Achievement	1	5
Maturity of younger pupils	1	5

By far the greatest concerns related to planning and delivering the national curriculum in mixed age classes. In particular, how to ensure that both year groups received their full curriculum entitlement without repeating material. One strategy reportedly used to solve this problem was 'to plan up one year group and down the next'.

Another fairly frequently mentioned difficulty related to differentiation. Some heads felt that the range of abilities in a mixed age class was likely to be greater than in a straight year group class and this would create difficulties for the teacher. However, at least one head commented that the ability mix can be at least as wide in a single grade class. This is clearly dependent on how the mixed age class is formed and will be returned to in the results related to opportunities.

The perceptions of pupils, teacher and parents were also mentioned fairly often as a problem. Several heads felt that mixed age classes tended to be viewed negatively; for example, that parents might believe that the older children in the class were SEN students, or that older children might intimidate younger children in the same class.

A less frequently mentioned problem related to examination preparation. One can imagine that this could be particularly difficult at the end of each Key Stage. For example, in a mixed year 5 and 6 class where the year 6 students are being prepared for their SATs examinations, it might be difficult to offer the year 5 children an appropriate curriculum. A different perspective on this problem, however, is given in the opportunities section below.

Finally, two other problems that were mentioned related to academic achievement and student maturity. One of the heads responded that she felt the year 5 and 6 students 'did not achieve as well as the school would like'. This is possibly connected to the point about SATs preparation just mentioned. Another head believed that younger children might not be mature enough to perform well in a mixed age class.

A summary of the range of opportunities presented by mixed age class is shown in table 6. Only 15 heads responded to the question about opportunities and this is perhaps



indicative of a generally negative attitude towards mixed age classes. The percentage column shows the proportion of the 15 respondents who mentioned any particular opportunity.

**Table 6: Opportunities in mixed age classes**

<b><i>Opportunity</i></b>	<b><i>Number of responses</i></b>	<b><i>%</i></b>
<b>Setting/ability grouping</b>	<b>5</b>	<b>33</b>
<b>Younger students benefit from older students and from more difficult work</b>	<b>5</b>	<b>33</b>
<b>Children act as role models/mentors</b>	<b>4</b>	<b>27</b>
<b>Longer in each class (nurturing)</b>	<b>4</b>	<b>27</b>
<b>Taught by ability not year level</b>	<b>3</b>	<b>20</b>
<b>More flexibility</b>	<b>1</b>	<b>7</b>
<b>Narrower age range</b>	<b>1</b>	<b>7</b>
<b>Some children can be oldest in class rather than always youngest</b>	<b>1</b>	<b>7</b>
<b>Younger year 5s have opportunity of seeing SATs</b>	<b>1</b>	<b>7</b>

Interestingly, one of the most commonly cited opportunities is in the area of ability grouping. Several heads saw mixed age groupings as a chance to reduce achievement heterogeneity by setting across two year groups i.e. taking the most academically able from year 5 and placing them with the academically able in year 6. Presumably, this would also involve creating a class consisting of the least able students from the two year groups who would then be taught together as a remedial class. One of the heads indicated that her school was moving in this direction but that "more schools need to take this on board, without the inevitable equal opportunities' questions/issues/arguments."

An equally commonly cited opportunity was that the younger students can benefit from mixed age classes. Benefits were seen in two areas. First, they are able to mix with more mature students who can act as role models and facilitators. Second, they are exposed to curriculum content above their year level and this allows them to be stretched further than they would otherwise be. Related to this is that pupils can act as role models or mentors for each other, most commonly this would mean that older children could model for younger children.

A fourth opportunity identified by heads concerns the nurturing side of mixed age classes. Children tend to spend longer with the same teacher and get to know him/her better. They may also be encouraged to collaborate together in 'family' groupings and this can have spin offs in positive social effects. These are the kinds of arguments frequently presented by apologists for vertically grouped classes (Draisey, 1985; Dixon, 1976).

Although several heads perceived differentiation as a problem in mixed age classes, it appears that it may also be seen as an opportunity. Several heads felt that teachers in a mixed age class were forced to teach to the ability level of students rather than at their year level. As a consequence, they reported that students were more likely to make progress in these classes. Bennett et al (1983) also reported on a similar mix of perspectives in relation to differentiation. These differences in opinion seemed to have been at least partly associated with whether or not mixed age classes were created by choice or out of necessity.

Flexibility, while only mentioned by one head, is a potentially important advantage of mixed age grouping in a one and a half form entry school. The point being made is that there are more options available if, for example, a pupil is exhibiting behavioural or personality problems. They can be moved into another class with a different set of peer group influences. The head describes this as 'personalising' classes.

The comment on 'narrower age range' from one of the heads is also interesting. This school was not actually operating with mixed age classes, but had done so in the past. It would seem that the policy of selecting the oldest from one year groups and the youngest from the other year group actually reduced the span of age below 12 months. The same head also commented on the advantage for summer born children who do not always have to be the youngest in the class if they are placed in mixed age classes. This is a potentially very important point given the emerging evidence that summer born children achieve less well than their older counterparts (Zimmer, 1997; Memet et al, 2000).

Finally, there is the comment on SATS. The argument here appears to be that if year 5 children are exposed to SATs a year earlier (as they would be in a combined year 5/6 class), then they will be less anxious about them when their turn comes the following year. This comment is perhaps indicative of the increasing emphasis being placed on SATs examinations in primary schools. It contrasts sharply with the problematic view of teaching to exams in a mixed age class presented in the previous section.

One final point to make in relation to problems and opportunities is that there were differences between the responses of those headteachers who operated with mixed age classes and those who did not. One aspect of these differences is summarised in table 7 below.

**Table 7: Problems and opportunities by school organisation**

<i>Problem/</i>	<i>Mixed age classes</i>	<i>No mixed age classes</i>	<i>Total</i>
<i>Opportunity</i>	<i>n=11</i>	<i>n=18</i>	
Problems	21 [0.62]	15 [0.6]	36 (61%)
Opportunities	13 [0.38]	10 [0.4]	23 (39%)
Total	34 (58%)	25 (42%)	59 (100%)

The table shows that a higher proportion of problems and opportunities were generated by those heads who operated mixed age classes (58%) and this is largely because of the high non-response rate amongst those heads who did not use this form of organisation. The proportion of problems and opportunities is, however, relatively stable. More problems than opportunities were identified in both sub-groups (at a ratio of approximately 3:2).

Bennett et al (1983) also included a survey of attitudes to mixed age organisation in their research. There are definite parallels between their findings and the results of the present study in relation to the perceived advantages and disadvantages of mixed age grouping. They comment that:

"They (the headteachers) were agreed that mixed age grouping places more stress on the teacher, requires more preparation for teaching, necessitates increased organisational ability, including more record keeping and creates difficulties in matching tasks to children...Both see advantages of the organisation in management terms, including flexibility of staff, children and space, and that it is likely to increase individualisation of teaching. Finally, they agreed that it was a better alternative to streaming."

The comment on streaming is not further elaborated by Bennett. It is interesting to reflect that several teachers in our sample appear to see mixed age grouping as an opportunity to set pupils by ability. Presumably this is regarded as an effective means of raising attainment by some heads.

## **Conclusions**

Several tentative conclusions can be drawn from this small-scale study of mixed age classes in one inner-city Local Education authority. These can be related back to the original research questions posed for this study.

First, mixed age grouping is fairly common. Almost 40% of the schools in the sample operated at least some mixed age grouping, and it is likely that in the region of 1200 pupils are in this type of class. These figures are slightly in excess of those recorded by Bennett et al in 1983. This may indicate that their identification of an upward trend in the proportion of schools with mixed age classes may still be continuing, albeit at a slower pace.

Second, pupils are predominantly assigned to mixed age classes on the basis of their age. This is likely to mean that the oldest from one year group is placed in the same class as the youngest from an adjacent year group. Other criteria that are used to place pupils into mixed age classes are, in descending order, level of achievement, behaviour, socialisation, and SEN spread. The most common organisational pattern found in the 11 schools was nine classes in Key stages 1 and 2 organised as follows: year 1; year 2; year 1 and 2; year 3; year 4; year 3 and 4; year 5; year 6; year 5 and 6. However, in at

least three of the schools almost all of the classes were organised for mixed age teaching.

Third, the main reason for forming mixed age classes is uneven intake, closely followed by declining enrolment. In schools with no mixed age classes, heads generally reported that their numbers did not force them to create this organisational structure. In general, then, there are no perceived pedagogical reasons for forming these classes. These findings are in line with those of Bennett et al (1983) and they support our first initial prediction.

Finally, on the whole mixed age classes are perceived negatively. In particular, heads point to the increased workload in planning for, and delivering the curriculum in these classes. This lends support to one of our other initial prediction. Notwithstanding, some interesting advantages were suggested. These include:

- Avoidance of summer born children always being youngest in the class;
- Flexibility in placing students into classes;
- Potential for setting across year groups;
- Greater differentiation (perhaps because of a focus on individualisation).

Follow up interview research to be subsequently carried out by the project will pursue some of these findings in more detail. In particular, we will be looking for innovative strategies employed by teachers of mixed age classes.

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