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THE ORGANISATION OF CLASSES IN THE PRIMARY SCHOOL

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Four of the many forms of organization of classes in the primary school are considered: non-promotion of slow-learning pupils, ability grouping (streaming), grouping within the classroom and organization for the purpose of individualizing instruction. Practices under each of these four headings are considered, and research into the effectiveness of each form of organization is examined. The available research does not indicate that any pattern of organization is consistently superior to others. Future research should be directed towards an examination of the relationship of organizational practices to specific kinds of learning.

INTRODUCTION

The problem of finding an appropriate method of grouping children is one which all schools, especially larger ones, must face. It seems reasonable to assume that a teacher's effectiveness will partly depend on how the school is organized, i.e. how children and teachers are allocated to classes. At any rate, educational practice has long been based on this belief. Precise patterns of organization, however, vary from school to school. One author has listed thirty-two ways of grouping children that he regards as 'historically interesting and educationally promising' (65).

School organization may be considered as vertical or as horizontal (30). Vertical organization is concerned with how the progression of children is organized from the time they start school to the point at which they leave. In many school systems children progressively pass through a number of 'grades' or 'standards'. Horizontal organization, on the other hand, is concerned with the division and grouping of pupils at any given point in the course of their vertical progression through the school. Horizontal class groups are often based on a consideration of the characteristics of children, as for example, when children of the same level of ability are grouped together. Other considerations which may be taken into account in horizontal organization are the curriculum and the qualifications of the teachers. The curriculum is the main consideration when, for example, children are assigned to classes on the basis of the subjects they take. This system is more likely to operate in post-primary than in primary education. The qualifications of the teacher are the main

consideration when a different teacher takes each subject ('departmentalization'). Some methods of organization combine considerations of children, curriculum and teacher qualifications (e.g., team-teaching) (30).

Only four methods of organization will be considered here. Two of these —those involving the non-promotion of pupils and the abolition of grades—concern the vertical organization of the school. The other two—ability grouping and grouping within the class—are aspects of horizontal school organization. These four represent common current organizational practices in primary schools, and three of them are the subject of considerable controversy at the moment.

NON-PROMOTION OF SLOW-LEARNING PUPILS

During the course of their progress through the school, pupils, regardless of their age, may be allocated to classes according to their level of achievement, or the 'standard' they have reached. Children failing to complete satisfactorily the work of their standard may be 'kept back' for one year or more. This is done in the belief that the slow-learner will benefit more from repeating a standard than from being automatically moved on with his peers. Non-promotion of slow-learning pupils is often accompanied by the accelerated promotion of the fast-learning pupil. The effect of these practices is, of course, to produce wide age-range classes, but, it is hoped, groups that will be more or less homogeneous in level of attainment.

Non-promotion occurs in the school systems of many countries and seems particularly common in Irish schools (38), where over a third of pupils in national schools are in a standard one year or more below the one in which they should be, were promotion automatic. A sizeable number (1.4 per cent) are three or more years retarded.

The research evidence available does not lend much support to the view that a child benefits more by being kept back for a year than by being promoted (16, 35, 71). Furthermore, it would seem that non-promotion may also have undesirable effects on the child's personality, producing feelings of failure, insecurity, inferiority and rejection (6, 35, 71, 75).

It is true that some research suggests that repeating a class may, in certain circumstances, help scholastic progress (66) and does not necessarily have an adverse effect on social-personal development (74). Besides, 'promotion for all' policies have been found to be not entirely satisfactory. New York city, having tried a 98 per cent promotion policy for twelve years, eventually abandoned it in favour of non-promotion (34).

Nevertheless, while non-promotion may be indicated in some cases, the weight of available evidence suggests that when it is carried out on a large

scale it has educationally undesirable effects. Frequently, the child who is slow at school subjects is normal in physical and emotional development. Such a child will probably do better by being left with his age peers than by being kept back for a year. A decision about non-promotion should never be taken until serious consideration has been given to all aspects of a child's development, especially the physical and social aspects. When each case is examined in detail, non-promotion will probably become the exception rather than the rule. However, a policy of automatic promotion is not likely to be effective unless the curriculum is highly flexible and unless the teacher is free from pressures to bring all pupils to an arbitrary standard of attainment.

All this should not be taken to imply that having children of different age levels in the same class is necessarily undesirable. The evidence we have looked at relates only to cases in which the wide age range in classes was the result of not promoting pupils who had failed to reach a certain level of attainment. When factors other than standard of attainment determine class-grouping, it is the opinion of some educationists that multi-age classes are in fact 'the desirable, preferable arrangement' (1, p. 261). The non-graded school (which will be considered later in this paper) is based on the view that a wide age range in a class may be the source of numerous advantages.

ABILITY GROUPING

Ability grouping, or streaming, entails the allocation of pupils of a particular age or standard to classes on the basis of measurement of overall ability or attainment.* Children of like ability or attainment are grouped together on the assumption that the more limited the range of ability of pupils in a class, the easier it is to teach them. It is argued that in such a system the bright children are not held back by the less bright ones, while the less bright ones, in turn, can be provided with a curriculum suited to their needs. Obviously streaming is possible only in a school where numbers are large enough to require the formation of more than one class at any individual standard. In theory, ability grouping may seem appealing and in some countries, particularly Britain, it has become extremely common in practice, though there has been a reaction against it in recent

*Strictly speaking, *ability grouping* refers to the allocation of pupils to classes on the basis of estimates of *ability* or 'intelligence'. In practice, however, the term is also commonly used to refer to groupings based on measures of attainment, and since the distinction between ability and attainment is not a very clear one, the term will be used in this latter, and broader, sense here.

years. In the United States, after a period of unpopularity, ability grouping is again being advocated by educationists.

For the practitioner, streaming presents many difficulties. One such concerns the choice of criterion to be used in forming classes. A group may be fairly homogeneous with respect to one variable (e.g. age) but very heterogeneous in other respects. Many different bases have been used or suggested—intelligence test scores, teachers' opinions, teachers' marks, attainment test scores in various subjects (particularly reading), reading readiness tests, and estimates of social development. Any one of these may be employed on its own or in combination with others. The use of one basis may result in reducing the range of variability on one particular variable, but children may still remain very diverse on other variables. For example, children relatively homogeneous in intelligence may differ greatly in their reading attainment.

The idea of total homogeneity runs completely counter to what we know about human variability. The best one can hope to do by grouping is to reduce to some extent the amount of variability in a class. However, since streaming for many people seems to imply homogeneity, there is always a danger that teachers may not appreciate the range of variation in attainment that remains in the most perfectly graded system. This variation can be quite considerable. For example, in a study by Borg (12) in which children were assigned to three groups on the basis of a composite achievement test score, it was estimated that the average variability within streamed classes was only 26 per cent less than within unstreamed classes. The smallest difference in variability between the two types of class was found in the arithmetic scores of fourth grade pupils, while the largest difference was found in the reading scores of sixth grade pupils.

Discussions of streaming, like discussions of comprehensive schools, are likely to rouse people's emotions and the arguments for and against streaming are often more emotional, political and philosophical than strictly educational in nature. At times, one is inclined to feel that such arguments could be improved by reference to empirical educational data. However, when one looks for guidance from empirical investigations on the question of streaming, one soon discovers that the research evidence is far from clear; so the proponents of streaming or non-streaming may be pardoned if at times their arguments contain little empirical content.

Many of the studies carried out on streaming have run aground on the rocks of inadequate experimental design, and what can be salvaged from them is often, not surprisingly, difficult to interpret. Studies differ very much in detail and quality, and so it is difficult to draw comparisons between individual investigations. They vary in the age of the pupils examined, in their duration, in methods of selecting the groups to be

compared and in the deployment of teachers (60)—all of which could conceivably affect findings.

In some studies the numbers involved are very small and this is likely to affect the confidence one places in the findings. If one limits one's comparisons to as few as two streamed and two unstreamed schools (18), then it is difficult not to suspect that factors other than school organisation may be operating to produce differences. Two recent studies reported in the Plowden Report (19) can certainly not be faulted on the grounds that the number of schools and children studied was small. Their findings support the view that children in streamed classes do better on tests of scholastic attainment than do children in unstreamed classes. In one of these studies carried out by the National Foundation for Educational Research in England and Wales, on practically all tests of reading, English and arithmetic, pupils in streamed schools, at ages 7 and 10 years, performed slightly better than their counterparts in non-streamed schools (19, 50). In the other study (The Manchester Survey), streamed schools also had better records of attainment (19).

It can be argued that to examine the effects of streaming only on narrow scholastic attainments is to ignore other areas of behaviour which may be affected by streaming. Indeed it has been claimed that standardized attainment tests are likely to favour the child in the streamed school since these tests demand skills which are more likely to be emphasised in that kind of school. This claim has not been well substantiated, but it is worth bearing in mind in studies of the effects of streaming. There has been one recent example of a study in the United States (12) which, apart from examining the attainments of children in areas like arithmetic and reading, has looked at such things as the study methods, attitudes, self-concepts and general personality characteristics of pupils in streamed and unstreamed schools. Such an approach is likely to give a much more rounded picture of the effects of differing types of school organization.

A defect of some studies on streaming is that they neglect to consider the possibility that streaming, like other forms of classroom organization, may affect different pupils in different ways. For example, it may be that the bright child benefits from being in a streamed class, while the dull child does not. The findings relevant to this issue are not clear. Ekstrom (22) reviewed a number of studies but found no consistent pattern. In Borg's (12) study which compared children grouped into three levels of ability with children randomly assigned to classes, the relationships between level of ability and possible effects of streaming were found to be quite complex. Comparing superior pupils in streamed and randomly-grouped classes, it was found that on tests of scholastic attainment, the streamed pupils generally showed greater gains over a period of four years.

The study methods of the randomly-grouped pupils were, however, better. And, contrary to the expectation that pupils in top streams might have a somewhat inflated opinion of their own capabilities, it was found that the bright pupil in the unstreamed class was more likely to place a high value on his own abilities. Comparing average pupils in streamed and unstreamed classes, there was no difference between the groups in terms of scholastic attainment. The unstreamed pupils showed up better in some ways, however. They had better study methods and showed more favourable personality characteristics and there were fewer pupil problems. Slow pupils in the unstreamed classes tended to do better on attainment tests than their counterparts in streamed classes. Their study habits were also better. In the Manchester Study (19), on the other hand, there was no evidence that streaming has an adverse effect on dull children; in fact, streamed schools had fewer backward children, at all ages and on all tests, than had unstreamed schools. In terms of sociometric status, the streamed dull pupils in the Borg study fared much better than the unstreamed ones; attitudes towards the school and teacher were also more favourable in streamed classes. This runs counter to the findings of other studies in which it was found that pupils in duller classes tended to feel inferior and ostracized, while the brighter children were snobbish in their attitudes towards pupils in lower streams (43, 47). In some schools there would seem to be a stigma attached to being in a lower stream. How far this is related to streaming as such, however, is not clear. It may be a reflection of a basic competitive philosophy in the school or of the attitudes of parents and teachers. One might indeed expect streaming often, but not inevitably, to be accompanied by such attitudes.

While it is therefore hazardous to attempt any generalization on the effects of streaming in the primary school, the available information, on balance, indicates that there may be scholastic advantages attached to it (17, 26). It would be mistaken, however, to think that streaming in itself will produce any benefits. Findings from a number of studies (25, 56) indicate that streaming *per se* may have little effect on pupils' attainments and indeed may interfere with them. Unless adaptations are made in the curriculum to suit the different levels of ability represented in classes, streaming may produce no benefits. There is then an inter-action between streaming on the one hand and content and teaching techniques on the other. Likewise, the bad effects which have been attributed to streaming, such as snobbishness, neglect of weaker pupils, and discrimination against working-class children (20, 39) may not be inevitable either. They certainly do not show up in all studies.

One feels that factors essential to streaming are very often confounded with non-essential ones. For example, Jackson (39) has remarked on the

differences in values, teaching techniques and expectations between streamed and unstreamed schools in Britain. He sees competitive behaviour as being emphasised in the streamed school and co-operative behaviour in the unstreamed school. In general, the streamed school tends to be seen as traditional and formal and the unstreamed school as informal, progressive and encouraging 'activity methods' (19, 39, 50). Must a streamed school, however, be traditional, formal and rigid? Must it discourage individual attention? If these things are not intrinsic to a form of organization involving streaming, then really they are irrelevant to a consideration of the effects of streaming as such. In many studies of streaming it seems likely that the effects of particular school 'philosophies' and teachers' attitudes, were more important than methods of school organization in producing the effects noted (50).

Streaming should always involve the adaptation of curricula and methods to suit the level of ability of the pupils. This, and only this, it would seem, is essential to intelligent ability grouping. But there seems no apparent reason why this could not be done in a non-traditional, informal, progressive atmosphere, if such an atmosphere is thought to be desirable.

In conclusion, the available evidence suggests that streaming, like other forms of organization, presents a rather complex pattern of advantages and disadvantages. Of itself, it cannot meet the problems posed by the wide range of differences which children exhibit. Indeed it can be no more than a step towards providing a situation in which the teacher may be better able to adapt his procedures to cope with these differences. If a school decides to adopt some form of streaming, teachers should be aware of its possible undesirable effects and should take the necessary precautions to cope with these.

In so far as is compatible with the overall organization of the school, teachers should also be free to decide on the type of organization that suits them best. For, ultimately, it is how the teacher teaches rather than how his class was selected in the first place that is more important.

GROUPING WITHIN THE CLASSROOM

The grouping of children *within* a class is another attempt to cater for the wide range of individual differences that exists in any classroom. Instead of the class being taught as a single unit, it is divided into subgroups and each group is taught separately. Obviously, the group or groups not actually being taught by the teacher at any particular time must have work to keep them going. This implies a good deal of preparation and planning on the teacher's part, and it also implies that he is free

to adjust the curriculum to meet the needs of individual children. An adequate supply of materials, particularly books, to keep the children occupied is also essential.

In many school systems, the formation of groups within the class is a common procedure, particularly with younger children. In the United States, for example, it would appear that some kind of grouping for reading instruction takes place in most schools (9). Such grouping is also fairly common in English schools (49). Indeed most teachers, on some occasions, however informally, probably engage in 'group teaching'. This is particularly true of small schools, where a teacher has charge of children representing several standards.

While the term 'group' is commonly and indiscriminately used in the context of classroom organization, it can mean many different things in practice. It may be used to refer to a collection of individuals who sit in the same part of the room, but who work as individuals each at his own task. Or, it may be used to describe a collection of individuals whom the teacher teaches as a single unit. Such an arrangement does not allow for discussion among members of the group, but there could be group 'responses' as indicated, for example, by a show of hands. Such a group may include a whole class or a section of it. Again, 'group' may be used to describe a collection of individuals who interact among themselves and function as a team in the pursuit of a common goal. In such a group, discussions would take place among members and in carrying out a task each member would play his own role complementing the roles of others.

While the amount of interaction permitted between pupils may vary markedly from class to class, every class is a social situation involving a complex pattern of inter-relationships between teacher and pupils and among the pupils themselves. To lose sight of this is to ignore conditions that might be exploited in the interests of promoting the pupils' learning activity. Certain forms of group activity, one might expect, could be used to stimulate learning, but this is an area that has received very little attention under classroom conditions, or indeed with children at all.

As in the case of streaming, there are many bases on which children may be assigned to groups within a class, and there is no simple formula for the formation of groups which can be applied to all classes for all occasions. Indeed, as Wringstone (75, p. 14) points out, 'in all probability there is no one best approach. Different conditions require different solutions', and what might suit one class might not suit another. 'The range of ability within the class, the age of the pupils, the previous experience of the pupils in working in groups, the materials available and the teacher's competence, all have to be considered' (34). Besides, the basis used to form groups should depend very much on the purpose for which the

groups are formed. Any of the bases used for streaming (either singly or in combination) might be used for grouping.

A basis very frequently used is the ability or attainment of the pupils, particularly their attainment in reading. This kind of grouping may, in fact, be regarded as an adaptation of streaming. Instead of separating children into different rooms on the basis of ability or attainment, they are separated into different groups within the same classroom. Each group follows its own textbook, chosen to suit the level of the group's ability. This kind of grouping is most likely to occur in heterogeneous classes, but streamed classes are also sometimes grouped in this way.

The value of grouping on the basis of attainment has been questioned, and other bases have been suggested. Martin (53) has suggested that though interest is important in reading, graded materials often make little allowance for the diversity of interests of boys and girls of different ages. The answer, he suggests, is to group on the basis of common interest. Children with an interest in animals or local history or stamp-collecting might form a group to carry out a particular assignment or project. This approach to grouping has the advantage that it eliminates the 'lower' ability group, and groups change as new interests and needs arise.

Children may also be grouped according to their specific needs (13). For example, some children might need help in using source materials for locating information and these might be formed into one group; another group might be formed for instruction in the use of a dictionary; yet another group might need help in improving reading speed. A group is disbanded when the children have reached a certain level of proficiency. The teacher can then form other groups with different specific needs. Grouping by invitation as described by Hester (36) seems to be an adaptation of the grouping by need approach. A number of pupils who need help in the acquisition of a particular skill are grouped together and other pupils who feel they would benefit by coming into the group are invited to join. In time, pupils become aware of their own needs and spontaneously join the group that best suits them. Indeed, pupils may form new groups as needs indicate. Rittenhouse (61) has described a modification of grouping by invitation, in which only three groups, comprising fast, average and immature readers, are formed.

Yet another system of grouping is based on the friendship patterns of the children. Children who are friends might be encouraged to work together on projects. Or a group of friends might form a 'home base' (55) which the children would leave from time to time to engage in activities demanding other grouping arrangements. At times it may be advisable for teachers to take into account the personalities and social backgrounds of children in forming groups (68). It may be, for example, that certain

children are inhibited from participating freely in group discussion by the presence of a child with a dominating personality. Also, since children from different social backgrounds bring different skills and expectations with them to the classroom, perhaps this should be taken into account when forming groups; children from varying backgrounds may not respond in the same way to a particular method of teaching or to a particular learning situation.

There is always the danger that grouping, particularly when based on ability or attainment, will lead to the kind of regimentation which it was originally designed to avoid. In this context, the need for flexibility in grouping has been stressed by several authors (cf. 11, 64). Indeed, Betts (8) suggests that groups should have a constantly-changing membership. The permanency of groups is obviously related to the basis used for grouping. When pupils are grouped on the basis of reading attainments, which they commonly are, frequent changes are not common (32). When they do occur, they tend to be 'upwards' (14). Groups formed for particular projects on the basis of children's interest will be less permanent than groups based on reading skills.

The size of a group and the number of groups in a class are clearly interrelated. A teacher who is commencing group instruction would probably be advised not to attempt forming more than two groups. In time, he may increase the number to three. Thereafter the number of groups he will have will depend on the kind of activity the children are engaged in. Most American teachers use three groups for reading instruction, though some have two, four or five groups (67).

There are no clear guide-lines regarding the optimum size of groups. However, it is well to bear in mind that the size of a group is likely to affect the unity of the group, its efficiency in dealing with tasks, and the satisfaction of group members. Studies in social psychology, which have examined the effectiveness of groups of varying size in the solution of different types of problem, suggest that the greatest likelihood that each individual will contribute his best occurs in a group of three or four members (24, 69). There is a danger in larger groups that only the more forceful will express their ideas (15). This can lead to feelings of dissatisfaction among the members who do not get an opportunity to communicate. It has been suggested that in the classroom, small-group work makes it easier to learn interpersonal skills (55). For certain kinds of activities, of course, larger groups may be indicated. However, it would seem that the larger a group becomes, the more likely it is that the unity of the group will be lessened and that the members will form into sub-groups. There is some evidence that groups larger than a dozen tend to form such sub-groups (59). If the teacher's purpose requires a group in

which all the individuals will interact and in which each will give of his best, then the formation of small groups would seem to be indicated.

While the literature in some popular journals for teachers over the past ten to fifteen years reflects considerable enthusiasm for group work, there also has been a number of criticisms of grouping. It will be clear that not all of these apply with equal weight to all forms of grouping.

Some of the criticisms of streaming have been applied to grouping within the class. For example, it has been pointed out that, while differences between children may be reduced by grouping, they never disappear. For a variety of reasons, not all children, even in a small group, will profit from the same lesson given at the same time (67). Indeed it has been argued that 'children differ so widely in interests, capacity to learn, and motives that it is impossible to provide adequate stimulation and guidance through the use of the same materials and group instruction' (31). Some forms of grouping have also been criticized because they lead to a rigidity in the class organization. Again, the implication that some children are slow or stupid, which certain forms of grouping may imply, could be harmful to pupils. The Plowden Report states that 'clearcut streaming within a class can be more damaging to children than streaming within a school' (19, p. 292). How a child feels about his low status may, however, depend less on classroom organization than on the emotional climate of the classroom (9).

How valid these criticisms are, and in what circumstances they are most likely to apply, is not clear, and unfortunately, research evidence on the effects of grouping is meagre. The desirability of some form of grouping within classes seems to be taken for granted and most publications on the subject concern themselves with methods of grouping and descriptions of projects or techniques suitable for group work. The research that is available is on the whole poorly controlled and so is inconclusive. Some studies suggest that grouping brings gains in reading which are better than one would expect with other forms of organization (e.g. 10, 31, 61). Others, however, suggest the contrary (3, 40). This conflict of findings is perhaps not so surprising when one considers the variety of ways in which grouping can be carried out, and the variety of methods which may be employed in a grouped class. These are not always adequately specified in research reports, nor are terms always used in the same way. One study, for example (41), while making use of grouping, was probably really examining the effects of adapting instruction and materials to individual differences.

A study recently carried out in Sweden by Dr Eve Malmquist (51) promises to throw some research light on grouping practices. In this study, the findings of which are not yet available, the efficiency of conventional

class teaching and group work methods have been compared over a three-year period. Another fruitful research approach to group-work would seem to lie in the study of group structure and process, using children of different ages, in laboratory situations. The study of small groups under well-controlled conditions would seem to be an essential step towards a fuller understanding of group dynamics in the classroom.

In many of the studies of grouping, one is tempted to think that the skill of teachers was an important uncontrolled factor. As is the case with other forms of classroom organization, the success or failure of grouping probably depends very largely on the teacher. Indeed, there is reason to believe that teaching skill plays an even more important part in group-teaching than in some other forms of organization. Adequate preparation is a prerequisite for successful group work. Indeed, one of the criticisms that has been made of group teaching is that it makes too great a demand on the teacher's out-of-school time. Pupils too must be prepared. There are now a number of publications available to aid the teacher in his choice of material and in the preparation of programmes: Malmquist *et al*'s (52) monograph is most comprehensive and there are several briefer and less complete introductions (e.g. 34, 54, 62). The teacher's task, especially in the initial stages, remains a formidable one however, and no matter what models or guides may be available, in practice it will always be necessary to adapt these to the particular situation in which the teacher finds himself.

ORGANIZATION FOR THE PURPOSE OF INDIVIDUALIZING INSTRUCTION

None of the methods of organization we have considered eliminates differences between children. They may, to a greater or lesser extent, reduce the range of differences within a group, but the 'problem' of the individual remains.

In recent years there has been increasing interest in attempting to fit the curriculum to the child rather than in attempting to fit the child to the curriculum. And indeed, this is becoming feasible in a way that has never been possible since the days of the individual tutor. This is largely because of recent advances in technology. One might have thought that school systems which had benefited so much from the invention of paper and movable type and which, at the moment, are experiencing severe shortages of teachers, would have been at least as enterprising as industry in the adoption of new mechanical and electro-mechanical aids. In fact, we find that schools have been slow to respond to the challenge of technology. But there are signs of response and today television, teaching machines, films, language laboratories and computers are finding their way into the classroom with increasing frequency (cf. 48).

Individualized instruction does not necessarily involve the use of technical equipment, and materials and instructional methods suited to the needs of individual children have been prepared for a variety of topics without the aid of such equipment. For example, individualized reading programmes, requiring only the use of selected books, have been in vogue for some time.

At its simplest, individualized instruction involves no more than focusing on the individual child—his interests, his particular strengths and weaknesses—and then providing him with learning tasks geared to his attainments in each curricular area. This, it is argued, cannot be adequately done when the child is taught as the member of a group (44).

So far there has been very little evidence on the value of individualized instruction as compared with other forms of instruction. The evidence that is available is far from conclusive. Karlin (42), for example, refers to one study that found no difference in reading gains between a group following the individualized reading approach and one following a basal reading approach; he also cites another study that found group teaching superior to an individualized programme in third-grade classes. Jenkins (40), on the other hand, working with second grade children found that a method involving self-selection of reading materials produced better results in the areas of reading vocabulary and reading comprehension than did conventional group teaching methods. A more recent study by Aronow (3) with fourth and fifth grade children supports Jenkins's finding. After reviewing a number of unpublished studies, Lofthouse (46) suggests that sufficient research evidence is not yet available to warrant changing from the traditional to an individualized reading approach.

In the case of more elaborate forms of individualized instruction involving the use of computers, it is perhaps too soon yet to judge their value. Rather spectacular claims have already been made for teaching reading to children using Moore's 'talking typewriter' (58) and there is considerable interest in the preparation of instructional programmes suitable for use with computers (4). In general, however, it seems that as yet we know too little about how human learning takes place to use computers really effectively (23).

Strictly speaking, the term individualized instruction refers to an approach to teaching rather than to a form of organization. However, the adoption of methods for individual instruction carries certain implications regarding classroom organization. The 'class' is no longer the unit being taught; indeed it becomes no more than a collection of individuals working separately. The greatest changes in organization from conventional conditions are required in the case of computer-based teaching systems, in which each pupil in a class has his own input-output

facilities linked to a central computer, thus permitting the pupil to receive a unique sequence of materials and to proceed at his own rate. In this kind of situation the whole concept of the class occupying a separate room with a single teacher becomes meaningless; one could just as well have the individual pupils sit in separate rooms, or at least in separate cubicles.

Closely tied to the idea of individualized instruction is the concept of the 'non-graded school'. Indeed it has been said that the chief purpose of non-grading is to individualize instruction (21, 45, 73).

Most schools are graded; that is, they are divided vertically into a number of sections called grades or standards, each with a definite curriculum or programme. The child is expected to progress step by step through the various grades, usually at the rate of one grade each year. Such a method of organization assumes that all children require more or less the same amount of time to get through the school programme and that the sequence of topics as presented in the curriculum is appropriate for all learners.

Non-grading, on the other hand, is 'an attempt to relate completely what we know about individual differences to conceptions of school functions, curriculum and vertical organization of the school' (27). In the non-graded system, as the name implies, grades or standards are abolished. Classes or groups may cut across age boundaries and children whose ages span two or three years are placed together irrespective of ability or attainment. Children may stay in such a unit for two or three years. A class consisting of six, seven and eight-year-olds will probably very quickly focus the teacher's attention on the wide range of differences in the class, and on the impossibility of teaching all the class the same things at the same rate. Non-grading is seen as forcing the teacher to assume his responsibility of providing appropriate learning opportunities for each individual child. Its adherents claim other advantages too. Most importantly, the child's progress is seen as *continuous*, unbroken into artificial steps. The bright child can move on quickly, and average and dull children are not judged in terms of pre-determined norms (a practice more common in the U.S. than in Britain, which perhaps helps account for the growth of non-graded schools in America). Non-grading is also seen as taking pressure off the teacher to bring all children to an arbitrary standard within a year.

Ungraded school projects can vary a good deal in the details of their organization and in their attempts to adapt curricula and instruction to individual needs. For example, the amount of independence granted pupils may vary. In this context, the type of approach that relies a good deal on programmed material is rather different from the one that leaves

much more of the planning and decision-making to the individual child. The bases for forming classes and for upward progression may also vary. In some schools, the same teacher keeps a group of children for several years. In others, this is not the case. Again, pupils may move from one teacher to another either individually or as a group (29). These are accepted variations in non-grading programmes. In some cases, however, it would appear that schools are non-graded in name only. Teachers continue to use 'graded' practices and to pursue 'graded' goals, and little attention has been given to curriculum revision (2, 33).

There is, as Dufay (21, p. 32) points out, 'a scarcity of data pertaining to the successes of the ungraded school'. Goodlad (26, p. 222) makes the point more forcibly when he says that 'non-grading is supported by some plausible-sounding claims rather than by research'. What is available by way of research, however, is not unfavourable. In Milwaukee, evaluation of a non-graded school system showed that pupils in non-graded schools did slightly better in reading and showed better personality adjustment than did pupils in graded schools (57). An examination of the Bellevue programme suggests that children are certainly not retarded in attainments by reason of the non-graded system, and indeed there is some evidence that teaching and learning are improved (7). A number of studies on a smaller scale than these have reported basically similar findings supporting non-graded programmes (33, 37).

Like other forms of organization, it may be that the ungraded system affects pupils in different ways. Williams (72), for example, reported that brighter children tended to do better on tests of scholastic attainment in a non-graded school, while a graded organization tended to favour weaker pupils. The findings of this study are, however, complicated by the fact that pupil-teacher ratios differed in the schools studied. A number of studies suggest that parents and teachers prefer the ungraded system and feel more involved in education (7). This can hardly be but good, though whether such involvement is intrinsic to ungrading is another matter.

In general, while research on non-grading is 'inadequate and inconclusive' (30), there is a growing interest in this form of organization, perhaps because as one proponent of the system points out, 'logic is firmly on the side of those of us who wish to accommodate the individual student, who believe that the differences among students are profound, who are thoroughly disenchanted with that Prussian heirloom, the grade, and who would rather eliminate it than constantly seek to circumvent its entrapments' (21, p. 32-33). While most educationists would endorse efforts to recognize and cater for individual differences, not all would

accept that ungrading is the necessary or even the desirable way of doing this.

Opposition to non-grading schools is often based on the fact that a good deal of expense is involved in providing necessary equipment that will keep children occupied individually. This, however, is a problem that will have to be faced eventually. Too many schools are seriously under-equipped for the job they are doing. Another problem related to non-grading involves the provision of adequate curricula and materials suitable for individual instruction. Such material is not yet available. The teacher can do a certain amount, but this makes heavy demands on his out-of-school time, and anyhow, most teachers probably have not the necessary skills to provide suitable material for all children in all subjects. Indeed, since it is more difficult to teach a non-graded class than a graded one and since the techniques of teaching are rather different, one might reasonably assume that teachers would need special preparation before undertaking the new kind of teaching.

If the chief purpose of non-grading is to force teachers to recognize and cater for individual differences, it might well be asked if such a radical step is really necessary to attain this end. It has been argued that most of the things done in the non-graded school can, in fact, be fitted into the normal school organization (45). Besides, non-grading can bring its own problems: children may get through scholastic programmes quickly, but other aspects of their development, physical and social, may not keep pace (cf. 5).

Many of the concepts guiding non-grading programmes, such as the emphasis on the individuality of the child and the need to tailor curricula for each child, are undoubtedly important ones. But non-grading, any more than any other form of organization, will not automatically improve teaching or learning. The Report of the Bellevue Continuous Growth Program (7, p. 150) notes that 'non-grading does not in itself solve the plaguing problems of teaching, such as those of classroom control, of reaching emotionally disturbed children, or of preventing reading problems'. However, the Report is hopeful that non-grading does provide 'the opportunity to alleviate these problems by allowing an atmosphere in which the individual needs of children may be met more adequately than does a traditionally graded structure' (7, p. 150).

A not illogical development of the non-graded school and the increasing use of technical aids would seem to be the total abolition of the classroom. It has in fact been argued that classes and classrooms are irrelevant terms: what is needed is a little place of one kind or another for each child rather than a classroom (70). The Eveline Lowe Primary School,

run by the Inner London Education Authority, is an experimental school without classrooms. The school is built on an open plan, with a large number of bays with benches or chairs and tables where children can work on their own (70).

There can be little doubt that the current emphasis on individualized instruction—however the details of the instruction may be worked out—is threatening the sanctity of the classroom as we know it. However, it does not seem likely, or indeed desirable, that all children's school learning should take place in bays or cubicles. Some of it probably should, but there will always be a need for a room where children can meet and learn together as a group. It seems likely that in the school of the future the pupil will spend part of his time with machines operated by adults, part of his time with automatic machines and part of his time in classes with teachers (1).

CONCLUSION

Our consideration of four different methods of organization within the primary school and of related research must lead to the conclusion that no one pattern of organization has been shown to be superior to others. This could partly be due to the inadequacies of the available research. For one thing, there has been too little research, and too many school practices that only have 'venerable old age to recommend them' (28, p. 233) continue unchallenged in our schools. Many new practices too are being introduced without adequate examination. The research that is available too often involved uncontrolled variables, or the objectives of organization were not clearly stated, or organizational patterns had so much in common that it was impossible to unravel the effects of different patterns.

But there is probably another reason why no one simple pattern emerges as superior to others. Betts (9) has noted that some people fasten on 'individualized reading' or 'grouping by reading levels' or 'grouping by interest areas' as 'the *one* way for *all* teachers to teach *all* pupils in *all* classrooms'. It would indeed be pleasant to have a system or plan with universal application. But the answer to the problem of classroom organization is probably not to be found in any single system. More likely it will be found in a *variety* of methods of organization. It seems reasonable to assume that some learning activities are best done individually; again, heterogeneous groups might be indicated for project work, while small relatively homogeneous groups might be the best form of organization for something like the learning of skills involved in word recognition. The real issue is not which procedure is best in any absolute sense, but rather what is the role of each in contributing to more effective pupil learning

(31). Research then should be directed towards the identification of the form of organization most suited to particular kinds of learning. In the context of reading, Russell and Fea (64) have pointed out that the habits, skills, interests and attitudes characteristic of efficient reading could be listed, and that on the basis of this list it should be possible to formulate hypotheses as to the ideal classroom organization for each. These hypotheses could then be tested experimentally. Similar procedures could be adopted for other subject areas. This approach is likely to provide much more guidance on classroom organization than has been available in the past.

While there is a great need for sound research on organizational practices in the school it would be a mistake to expect such research to solve all the teacher's problems. School organization *of itself*, it would seem, does little to improve educational practice (29). Whatever system of organization is devised, it will still be the teacher's responsibility to adapt instruction to the individual children in the classroom. Indeed, Betts (9) has suggested that the professional competence of the teacher is the key to the problem of class organization, while Russell and Fea (64, p. 910) have speculated whether 'teacher ability may not be the only factor in determining the success of any organizational pattern'.

While things like the teacher's competence, his knowledge of the individual child and his teaching skills are probably more important than any external arrangements, good organizational practices still have a role to play in providing conditions conducive to good teaching. Some learning activities are probably best done in large groups, others in small groups or individually. In deciding on the organization most appropriate to a particular topic, the teacher must take into account the characteristics of the learners and the possibility of adapting the curriculum to individual needs. His own skills and the satisfaction he derives from different forms of organization are also relevant. Administrative expediency too must be considered: a plan, desirable on some grounds, but not administratively feasible, is not likely to work for long.

All this implies that the most successful forms of organization are probably ones not based on a consideration of children alone or of curriculum alone, or of teacher qualification alone, but on all three. The pattern of interrelationships between these three areas is extremely complex, and future research should be directed towards their elucidation. The findings of this research should provide the teacher with broad guidelines on which to base his organizational practices. Research, however, cannot offer infallible principles which can be applied automatically on all occasions. It is the task of the teacher himself to assess the relevance of research findings to the unique situation in which he finds himself.

He may indeed have to try out different organizational methods—do his own research—before deciding which ones are most appropriate to the topics and particular children he is teaching. In this way, the teacher's own experimentation and judgment become the final stage in the research process—to the mutual advantage of research and teaching.

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