# Spring 1976 Volume 18 Number 2 85p SCUSSIO FNDS

# **Flexibility and Mixed Ability**

Mixed Ability Jack Walton

Mixed Ability Teaching in Practice Harvey Wyatt

**Cooperative Teaching in a Junior School** *R. W. Forward* 

Non-Streaming and the Common Curriculum *Maurice Holt* 

**'Insight' – An Experiment in Social Education** Stan Bunnell and Freda Perkins **Reservations on Reconstruction** *Gabriel Chanan* 

Schools Within Schools: the Countesthorpe Experience Michael Armstrong and Lesley King

Learning Resources in the Mixed Ability Classroom Peter North

Review Pat D'Arcy

# FORUM

is organising

A Special Workshop Conference

## on

# MIXED ABILITY TEACHING

2-4 April 1976

at

THE WOODLANDS SCHOOL, COVENTRY

and

#### COVENTRY COLLEGE OF EDUCATION

The Woodlands School will provide special workshop conditions. Sessions will cover planning, teaching and resources, based on Science, Mathematics, English, History, Geography departments, both for teaching years 1 to 3 (11 to 14 years) and for years 4 and 5 (15 to 16 years).

Sessions are also arranged on (i) a school reprographic centre in operation, (ii) planning and producing worksheets, (iii) resource centres, (iv) Mode III examining, as aspect of mixed ability teaching, (v) remedial provision in a mixed ability situation. There will also be a session on pastoral care and mixed ability.

The conference will be opened by the Headmaster, Dr D. Thompson, on 'The Move to Mixed Ability at Woodlands—How and Why', followed by Harvey Wyatt (Deputy Head) on 'A Supportive Organisation for Mixed Ability Teaching'.

#### BOOK NOW

(Accommodation strictly limited)

Cost, about £12.00. For details, write to The Manager, FORUM, 11 Beacon Street, Lichfield, WS13 7AA.

Mark envelope 'Conference'; enclose s.a.e.

# Editorial Board

Michael Armstrong Countesthorpe Upper School, Leicestershire.

Clyde Chitty Deputy Head, Roger Manwood School, London.

Kenneth Coram Headmaster, Bandley Hill Junior Mixed School, Stevenage.

Annabelle Dixon International School, Geneva, Switzerland.

Margaret Gracie Warden, Blaby Teachers' Centre, Leicestershire.

H Raymond King Ex-Headmaster, Wandsworth School, London.

Roger Seckington Principal, Heathfield High School and Community College, Earl Shilton, Leicestershire.

Peter Thomson, Lecturer, Youth and Community Studies, Dartford College of Education.

Jack Walton Senior Staff Tutor, University of Exeter Institute of Education.

Roy Waters District Inspector ILEA.

Harvey Wyatt Deputy Head, The Woodlands School, Coventry.

Editors Brian Simon Professor of Education, School of Education, University of Leicester.

Nanette Whitbread Principal Lecturer, City of Leicester College of Education.

*Editorial Communications.* MSS and contributions to discussion (800 words maximum) should be addressed to the Editor, 11 Pendene Road, Leicester, LE2 3DQ. Tel: Leicester 705176.

#### **Business information**

Correspondence relating to subscriptions etc, should be addressed to The Manager, 11 Beacon Street, Lichfield. Tel. Lichfield 51159.

Forum is published three times a year, in September, January and May. £2.50 a year or 85p an issue.

# **Towards the Unified School**

This special number takes a new look at mixed ability grouping, or non-streaming, to use the original term. When FORUM was first established, eighteen years ago (in 1958), its general platform was twofold: first, FORUM united those who favoured comprehensive secondary education, and set out from the start both to report progress and to provide a medium where the problems involved could be aired and discussed. But second, FORUM also, from the first, united those who favoured modification of the rigid systems of streaming then practised in both primary and secondary schools.

Our early numbers, and conferences, devoted a good deal of attention to the experience of those primary schools which were already moving over to non-streaming as a general principle of school organisation. This culminated in the evidence submitted to the Plowden Committee which argued the case for non-streaming at some length, evidence which was published in book form, together with supporting articles, in Non-Streaming in the Junior School (1964). One point we made then is worth reiterating; it is that research resources should be devoted to 'the whole question of class organisation and teaching method'. Investigation should be directed to 'the comparative effectiveness of class, group, or individual learning situations'; new techniques, we held, 'were opening up new possibilities for the development of individual and group work in school, while team teaching may also have implications for the junior school – a technique which, by its nature, cuts across the streamed class teaching approach of the past'. This is the direction research should take 'rather than research into whether streaming is needed or not', since this, raising as it does fundamental questions concerning aims, must be largely a matter for subjective judgment. Hence, we argued, 'to devote research resources to this latter question is to look backward - not forward. The real educational challenge today is how best to educate the mass of the children - not a selected few'.

We welcome, therefore, the announcement by the NFER of its 'action-research' project on mixed ability teaching in the comprehensive school, especially since the plans involve collaboration with teacher groups in different areas of the country. FORUM has, over the years, carried many articles on teaching non-streamed groups in comprehensive schools, while together with the Comprehensive Schools Committee we have organised one-day conferences on this topic – the first some ten years ago, the last this year. From the first, then, FORUM has supported and encouraged this movement, holding that the abolition of the divisive 11 plus examination and the establishment of comprehensive schools *necessarily implies* the abolition of divisive practices within the comprehensive school – that is, the development of the unified school.

In line with our concern with this issue, FORUM is organising a weekend, residential workshop conference on mixed ability teaching in the comprehensive school, as announced opposite. This will be based on, and use the resources of, a school that has pioneered this approach at the secondary stage. Accommodation will be severely limited, but we hope to provide a model capable of replication elsewhere. In the meantime we offer this special number as a contribution to a fresh consideration of this matter.

There is no doubt that, although the arguments for non-streaming at the secondary stage are incontrovertible, and although the evidence suggests that teachers are moving over more and more to this principle, very real difficulties are involved. This move, as we have always stressed, involves a fundamental rethinking of the nature of the educational process, and so of both the methodology and the content of education. Many schools are in fact taking this road, and experiencing the rewards.Their experience needs to be more widely known, while the resources required to carry this change through to success also require to be known. This is certainly one of the keys to success.

All the more important, then, that education be strongly defended today against both government and local authority cuts. The schools are ready and anxious to implement new approaches which have been shown in practice to be in the interest of the children. The teachers are there and waiting. It is of the utmost importance that, just at this time, the schools should be given the resources they need to move ahead along the lines already determined.

# **Mixed Ability**

#### **Jack Walton**

In this 'keynote' article, Jack Walton, a member of the Educational Board, takes a new look at the move towards non-streaming at the secondary stage, and suggests a flexible approach.

Among the reasons for the development of streaming in this country were a desire to help children to learn more effectively and a desire to enable teaching to be more efficient. Interestingly enough these could be listed amongst the reasons for unstreaming in the 60s and 70s. The point in making these statements is to underline an important consideration related to ability grouping, a consideration which is not often stated – the motivations for both homogeneous and heterogeneous groupings could be regarded as child centred in so much as a concern for the needs of the child is associated with both positions. Of course the expression 'child centred approach' has certain associations which today make it a rather uneasy bedfellow of the teacher centred approach of the 30s. To favour mixed ability teaching now appears to place the teacher on the side of the angels. The rather Orwellian polarisation - streaming good, unstreaming bad - like many other sharply contrasted value positions is less than helpful. Over recent years the result has been to generate much emotion and concern and consequently prevent a rational approach to the epistomological and pedagogical problems posed by alternative forms of grouping children. It may even be true to suggest that the problems have not been correctly defined and the right questions have not been asked. This paper is an attempt to reconsider mixed ability grouping within the context of present day curriculum development.

## The rationale

Mixed ability teaching has both cognitive and affective components in its rationale. Cognitively it has been a response to research findings. Intelligence testing of the type associated with the 11 + has been found less than satisfactory as an instrument for grouping children either in different schools or in different classrooms. The earlier, rather naive, assumption that there are three types of children is now regarded as only less naive than the assumption that it is possible to obtain homogeneity in a class of thirty based on some concept of general intelligence. Possibly it was secondary school mathematicians who first questioned general ability grouping by pressing for setting on the basis of a particular ability in mathematics.

The greater understanding of the effects of the environment upon learning performance has also coloured the debate on both sides of the Atlantic. Whether one agrees with Bernstein or Labov, the conditions in which children are nurtured at home and in the wider society outside are going to affect the response to the learning situation in the institutional setting of the school. This environmental background, different for different children, also suggests that certain types of testing will be quite ineffective.

Additional to the consequent change in the attitudes of teachers and others to the more traditional interpretation of the nature of intelligence, the work of sociologists and other observers of life in the school and in the classroom has been responsible for causing concern about the effects of labelling children. There is little need here to review the literature about self-fulfilling prophecies, alienation and the like.

Perhaps the point is made that the movement against streaming has behind it not just a gut feeling but a considerable weight of research. Schools, particularly secondary schools, however, are still in the business of knowledge accumulation and as most research findings concerned with academic progress appear to suggest no real difference in attainment between those cohorts who have been streamed and those who have not, the research evidence which would persuade many people has not yet been forthcoming. Some interesting points and questions are raised by this search for irrefutable evidence relating to attainment. Undoubtedly it illuminates the real concern the teachers have for children in their care. Many of the teachers who require this sort of evidence cannot be labelled backwoodsmen. They are displaying a proper professional anxiety. Yet are they ever going to receive the assurance they want? It is becoming axiomatic in curriculum development that in any innovation losses occur

as well as gains. The standards of the curriculum which is being modified don't necessarily relate to those of the new curriculum. The attainment that results from mixed ability teaching may, therefore, be an attainment which needs to be associated with different goals – not merely as a changed form of grouping but within the context of a changed content and style of teaching appropriate to mixed ability classes and also appropriate to the personal and societal requirements of the late 20th century. Mixed ability teaching is a curriculum problem. What sort of standards of attainment are required?

# Affective support

Whilst a cognitive basis for a move to mixed ability teaching has been underlined, the affective support cannot be minimised. Much of the research evidence anyway appeals to the heart as well as to the head. In the middle 1970s we are reaping some of the whirlwind of the child centred movement of the 60s. As indicated by a contributor to the Journal of Curriculum Studies, the metaphors used in educational documents have over recent years become child based rather than teacher based, rhetorical rather than discursive.1 This change in emphasis may not be just a reflection of educational change but also of social change. David Jenkins in one of the Open University curriculum units selects his metaphors to describe the curriculum scene from Ashley Cooper. The classical landscape with its 'formal mockery of princely gardens' has been replaced by the 'horrid graces of the wilderness' of the romantic landscape.<sup>2</sup> Musgrove contrasts the cultures implied by these two landscapes, 'The counterculture is Dionysiac, not Apollonian: heady, intoxicated, tactile, erotic. It is the other face of order: the frenzied corn-god at the heart of systematic Neolithic agriculture; self-flagellants in 13th-century Siena, just when they were inventing double-entry bookkeeping; the high point of witchcraft in 16th-century England, just when Puritan rationality was promoting modern capitalism and science. And it is also, as Nietzsche said in The Birth of Tragedy. the music of Wagner: Valhalla and Valkyries. But Apollonian man is the potter-painter-sculptor: he imposes himself on nature, moulds it and shapes it, gives boundaries to shapes. He is thus an author, and so has authority. He is competent, well-organized, a good statistician. He is the law-maker-engineer. He has been fashioned most perfectly over the past two centuries in the French Grandes Ecoles. He is a graduate of the Ecole Normale Superieure. And he is obsolescent.'

## **Over-indulgence**

It could be suggested that the very considerable emphasis that has been placed upon the affective, the romantic or the Dionysiac in recent years has resulted in curriculum terms in a psychiatric rather than a psychological approach, in an over-indulgence rather than in a responsible locum parentis, in a rather irresponsible optimism rather than in a more judicial appraisal of the needs and abilities of children. Perhaps there has been created a stream of consciousness which suggests that there is something inherently wicked in mixed ability teaching, with the result that teachers are being pushed into situations in which they feel affectively they ought to operate rather than into situations which rationally they can justify. The emotional overtones associated with unstreaming have not been particularly helpful and may have resulted in teachers who, when faced with the daunting prospect of heterogeneous classes in the autumn, are vainly searching for new methods rather than more calmly addressing themselves to the curriculum rationale of which mixed ability teaching is just a part. Perhaps if mixed ability teaching was demoted to a sub-set of flexible grouping, which itself was a response to certain curriculum goals worked out by the school, there would be a greater chance of responding to the problems that many teachers face when teaching mixed ability classes. Maybe the problems would no longer exist.

The difficulties associated with mixed ability teaching often appear to give greater concern to secondary school teachers than to their colleagues in the primary school. In a recent issue of the Educational Research News published by the N.F.E.R. (September 1975), one article entitled 'Action on Mixed Ability' was directed entirely at the secondary school. The article commented upon 'the increasing use of mixed ability groups' which it stated 'is certainly one of the most significant developments in secondary education in recent years'. A recent N.F.E.R. nation-wide survey is referred to. 'The survey, in which over 1,000 schools have taken part, shows that mixed ability groups are employed as the basic method of organisation for most of the curriculum in the first year (i.e. with 11-12 year olds) in just over half these schools; in the second year this falls to 37 per cent and by the third year all but a quarter of the school turn to more homogeneous forms of grouping.'4 A three-year project estimated at a cost of £95,000 and concerned with exploring some of the issues associated with mixed ability teaching in secondary schools was started in October 1975. Different from the enquiry into mixed ability teaching in

the primary schools, this will be an action research project aimed at helping teachers to move to some solution to what has been located as one of their more serious pedagogical problems.

At first glance it would appear that before the children reach 11 in junior or primary schools or 13 in many middle schools, heterogeneity seems to present no serious problems. It seems that these problems are strangely secondary in origin. A number of questions are however raised by these assertions, the answers to which can only be found by some comparison and contrast of certain characteristics of the primary school with those of the secondary school.

## The primary school?

'How do they do it?' is often the cry of secondary school teachers who cast envious glances down the age range to the nearby primary school. The 'it' is of course mixed ability teaching. 'Are they, however, doing it?' Perhaps the secondary school teachers are being to some extent deluded. Deanne Bealing reported, 'Despite the relatively informal classroom layouts adopted by the vast majority of teachers, there was so much evidence of tight teacher control over such matters as where children sit and move that it seems highly doubtful that there is much opportunity for children to choose or organise their own activities in most classrooms. There was widespread use of groupings based on similar abilities and attainments although the overwhelming majority of teachers were working with unstreamed classes'.<sup>5</sup> Many primary schools indeed set or group within the class to avoid teaching mixed ability groups all the time. Secondary heterogeneity has tended to appear a much more all or nothing affair.

However, when primary colleagues do work in a similar situation they are significantly different from those in the secondary school. Primary school teachers are on the whole class teachers, secondary school teachers are subject teachers. A primary school teacher works with the same children most of the day. The children have a sense of location, the teacher has a knowledge of the children. The Paddington Station life of the secondary school does not create the conditions which favour other than the accumulation of knowledge in a rather traditional way. It has been implied earlier in this paper that perhaps only certain kinds of results can emerge from certain kinds of activity. The secondary school life style as it now exists is possibly not conducive to mixed ability teaching.

Primary school colleagues do have problems with mixed

ability teaching. As a result they often break down the class groups as indicated above in spite of the more favourable teaching/learning climate. In a significant number of schools they practice cooperative teaching across the year. One of the very real advantages of this cooperative teaching is that it permits a greater flexibility of grouping. As one teacher remarked in a recent survey, 'Mixed ability teaching on a class basis presents difficulties. Cooperative teaching across a year permits groups with common problems to be easily withdrawn and accommodated'.6 Maybe we in secondary schools are not really seeing what is happening in primary schools. More important, the methods of secondary curriculum organisation on a subject basis and the range of small-time modules militates against anything other than the most formal style of teaching, a style of teaching which is probably not very suitable for mixed ability groups. Paddington Station was earlier referred to. Continuing the analogy – going from a primary class room to a secondary classroom is like going from home to a British Railway waiting-room. The former is usually colourful and welcoming, the latter often bare and sometimes hostile. The environment of the former is much more conducive to experiment and innovation.

Whether primary schools teach mixed ability groups all the time or not, what is important particularly where cooperative teaching across a year is practiced is the flexibility of grouping that is possible. Maurice Holt in a previous issue of **Forum** asked the question, 'Is unstreaming irrelevant?' And advocates a flexible school which supports a variety of grouping patterns.' Maybe we should be talking more about flexible grouping than nonstreaming or un-streaming.

## More difficult?

Rigidity of timetabling, little flexibility of group size and composition, short-time modules all have been instanced as some of the possible reasons why mixed ability teaching may be more difficult in secondary schools than in primary schools. The time span of a lesson may be worth commenting upon. Often the traditional secondary lesson has been forty minutes in length. There is some evidence to support the view that many teachers experienced in mixed ability teaching prefer longer time modules, for example, double periods. It has been suggested elsewhere that time within an institution is the independent variable any modification of which causes the other dependent variables, such as teaching style resources, etc. to change.<sup>8</sup> Double periods for example, will have different requirements than the single period. Certain changes will have to be made, particularly in the pattern of resources used, in order that the teacher may retain his control – control of the learning situation rather than control from the point of view of discipline. Resource provision of the right type is essential in a heterogeneous grouping, particularly if the time span of the lesson has been increased.

An attempt has been made in other publications to explore both the character of resources and their relationship to teaching and learning (Westbury, 1973: & Walton & Ruck, 1975). Resources in both cases have been regarded as tangible artefacts which can be used by both teacher and learner in the classroom. Westbury takes an illustration from the nursery school. 'David Olson has reported the development of an educational toy that is an effective means of teaching the concept of diagonality to pre-schoolers but, at the same time, making no demands on the teacher. His toys were placed in a nursery school with the request that teachers were not to provide any instruction as to how to make the pattern but merely to keep the toys, properly assembled, on the shelf; they were to let the children play with them as they would with any other toy in the school. After seven months, controlled and experimental children were tested on their mastery of the concept of the diagonal. 64.1 per cent of the experimental group received maximum scores in the test of diagonality as compared to 39.6 per cent of the controlled group; even the unsuccessful children in the experimental group went about their attempt to solve the test problem with strategies which were superior to those used by the controlled children.'10

Walton attempts to classify resources into additive and integrative. The former he suggests are not perceived as essential by the teachers, the latter are regarded as absolutely necessary.<sup>11</sup> Both Westbury and Walton emphasise the importance of integrative resources in any departure from conventional classroom teaching. Mixed ability teaching presumes a departure from conventional pedagogy and makes appropriate resource selection a categorical imperative. Resources, if appropriate, increase the teacher's control. Their preparation and development are expensive in terms of teacher time and require far more pre-planning than is the case when using very traditional resources, such as the textbook.

# Flexible grouping?

Earlier it has been suggested that mixed ability teaching

is basically only one item emerging from the curriculum rationale. Nevertheless it has tended to receive in practice greater attention and cause greater worry than any other aspect of the curriculum. Holt's suggestion – that the real issue is flexible grouping not un-streaming – has the merit of causing less myopia.

Perhaps we would do better if we considered the whole curriculum and our hopes and aspirations for it. What do we want it to do? What is to be the character of the learning and teaching that takes place? What responsibilities do we wish to give to the students in their own learning? How should knowledge be approached?

To some extent these questions have already been raised by David Hawkins and Michael Armstrong in previous issues of Forum. Hawkins contrasted the scholastic tradition associated with the more traditional and adultdominated teaching with the fluent understanding which implies, 'a richly interconnected network of ideas and stored knowledge evolved by abstractions from many passages of experience.<sup>12</sup> The setting for the teaching and learning associated with the scholastic tradition is boringly familiar. That for 'fluent human understanding' is far less formal, requires more imaginative resources and very sensitive and knowledgeable teachers. Armstrong exemplifies this approach in a recent issue of the Forum (Spring 1975) and indicates a preference for Hawkins' reconstruction of knowledge rather than Bruner's representation of knowledge.18 Both the approaches may well be associated with heterogeneous grouping. The problems, however, posed by supporters of 'the reconstructionist school' appear to be that - whilst it is difficult intellectually to disagree with their approach - many of us may not have the time or experience to deal frequently with children in the sensitive way that, for example, Michael Armstrong worked with Carol during her experience in the primary school<sup>14</sup>. Possibly for most people Bruner may have initially more to offer. Bruner's conviction is, according to Brian Simon, that 'the pedagogical problem is how to represent knowledge, how to sequence it, how to embody it in a form appropriate for young learners'. Bruner acknowledges that 'how one manages to time the steps in pedagogy to match unfolding capacities, how one manages to instruct without making the learner dependent, and how one manages to do both these while keeping alive their zest for further learning – these are very complicated questions that do not yield any easy answers.<sup>15</sup> Bruner however has provided a curriculum which attempts to answer some of these problems, and this curriculum (M.A.C.O.S.) has demonstrated its suitability for mixed ability classes, although they were not con-

sidered when the project was developed. The point that is being made is that wholistic curriculum planning departing from the over-domination of the teacher acting mainly in a telling or lecturing capacity, the provision of appropriate resources and a representation of knowledge in forms appropriate to children, reduce the non-streaming issue to irrelevance. Knowledge in no sense goes out of the window, in fact its role becomes more important.

Teaching is a fatiguing if worthwhile occupation. Innovation causes anxiety. It would appear to be safer and perhaps more reasonable to opt for the Bruner approach while introducing, where possible, Hawkins' ideas of reconstruction. As Hawkins stated recently, 'As to whether that argument leads towards or away from the views of Jerome Bruner I cannot say. We certainly orbit around some of the same large questions, though perhaps somewhat out of phase.'16 The approaches of Bruner and Hawkins are complementary rather than contradictory. Both are thinking in total curriculum terms. By addressing themselves to the real problems of teaching and learning they appear to solve the problems of mixed ability teaching by ignoring them.

#### References

- 1. Cheverst, W. J., 'The Role of the Metaphor in Educational Thought: an Essay on Content Analysis', in Journal of Curriculum Studies, Vol. 4, No. 1, May 1972.
- Jenkins, D., 'Romantic and Classic in The Curriculum Landscape,' in *Course* 283 Unit 6, Open University 1972.
  Musgrove, F., 'The Curriculum for a World of Change,'
- in The Curriculum: Research Innovation and Change, eds. Taylor, P. H. & Walton, J., Ward Lock Educational, 1973.
- Educational Research News. N.F.E.R., Sept. 1975
- 5. Bealing, D., 'The Organisation of the Junior School,' in Educational Research, Vol. 14, No. 3, 1972.
- Walton, J. and Welton, J., Rational Curriculum Planning: Four Case Studies. To be published by Ward Lock Educational in 1976.
- 7. Holt, M., 'Is Unstreaming Irrelevant,' in Forum, Vol. 11, No. 2, Spring 1969.

- 8. Walton, J. 'Some Restraints Affecting Curriculum Development,' The Curriculum: Research, Innovation and Change, eds. Taylor, P. H. & Walton, J. Ward Lock Educational, 1973.
- Westbury, I., 'Conventional Classrooms: "Open" Class-rooms and the Technology of Teaching', Journal of Curriculum Studies, Vol. 5, No. 2, Nov. 1973; Walton, J. 9. & Ruck, J., Resources and Resources Centres, Ward Lock Educational, 1975.
- 10. Westbury, op. cit. 11. Walton and Ruck, op. cit.
- 12. Hawkins, D., 'Two Sources of Learning,' Forum Vol. 16, No. 1, Autumn 1973.
- Armstrong, M., 'Comprehensive Education and the Reconstruction of Knowledge', Forum Vol. 17, No. 2, Spring 1975.
- 14. Armstrong, M., 'Reconstructing Knowledge: an example', Forum Vol. 17, No. 2, Spring 1975.
- 15. Simon, B., Review of Bruner J., 'The Relevance of Education' in Forum Vol. 10, No. 1, Autumn 1973.
- 16. Hawkins, op. cit.

# ADVANCE NOTICE

The Summer FORUM (Vol 18, No 3) will be a Special Number on Examinations and Assessment. Articles by Wynne Harlen and Brenda Engel focus on the primary/middle school age range. Professor Jim Eggleston, Michael Armstrong and Jill Hume deal with the secondary stage. The emphasis will be on new forms of assessment to tackle teachers' wider objectives in contemporary education. The number will include a special Editorial Board statement on the single (common) examination at 16 plus.

#### ORDER YOUR COPY NOW

from: 11 Beacon Street, Lichfield SW13 7AA

# Mixed Ability Teaching in Practice

#### Harvey Wyatt

Harvey Wyatt was head of geography for nearly ten years before becoming deputy head at The Woodlands School, Coventry, a school that has pioneered the move to nonstreaming at the secondary stage. He writes here on the practical problems arising in this transition, and how they may be overcome.

Much has been written about the philosophy of mixed ability teaching in the last decade, but far less has been published on the more pragmatic day to day implementation of such practice in the classroom. This article does not presume to follow further the theoretical basis for mixed ability teaching, but rather to study the way in which this has been translated into practice at The Woodlands Comprehensive School, Coventry.

Having made a philosophical decision as far back as 1963 to unstream the school, it has been the task of senior staff together with their colleagues to solve the great practical problems this system of teaching imposes in terms of both time and effort. After twelve years of unstreaming one can state with certainty that the individual teacher in the classroom can solve very few of the problems without adequate support and training in a number of crucial areas. The management structure of the school must be such that every teacher receives such support. One might list an imposing range of requirements but in this paper the four most essential developments are studied - the development of resource centres, workcard production, in-service training of staff and classroom organisation. Each element will be studied separately, but in the actual practice of mixed ability teaching the four elements are inextricably linked.

### Development of Resource Centres

The development of a resource centre system, whether localised in departments or centralised for the whole school, is important to the success of mixed ability teaching. The Schools Council Working Paper 43 (1972) list six elements in its definition of a resource centre

- a. production of home made resources;
- b. selection and acquisition of other resources;
- c. classification and indexing for retrieval;
- d. storage
- e. use, including guidance, lending etc.;
- f. evaluation and weeding.

For a variety of reasons, but mainly the physical separation of departmental blocks within the school and the historical structure of departmental resources it was decided that the localised resource centre would be the pattern at The Woodlands School, supported and serviced by a centralised reprographics unit.

The first stage was for departments to identify the resources they possessed e.g. books, periodicals, newspapers, pictures, maps, worksheets, slides, filmstrips, records, audio-tapes, models, and following this to plan adequate indexing and retrieval systems so that resources could be made available to all the staff in the department. The geography department were the first to attempt such a system and in an initial period of a month, with all six staff committing themselves to devote several hours a week to indexing and sorting, the resource centre was launched. Other departments in their varying ways followed this example, seeking advice and modifying their own systems as they progressed. For the first time, on a large scale, staff were able to share not only their experience but their materials.

Storage systems were designed that would meet the needs of all departments and simple contracts placed with our own craft department for the preparation and construction of storage boxes and shelving. This served the dual purpose of raising interest within the staff and at the same time reducing the cost of production to a minimum. Again the organisation of the whole operation from the centre eased the practical problems for staff and prevented frustration and long delays over the arrival of materials. To supplement the resource centres the school provided an efficient system of reprographics, financed centrally from capitation, with departments feeding in their requirements for work as it arose, without the secondary problems of costing and purchasing of materials.

The centre is organised by a full time member of staff who is responsible for the production of materials and assisting in the in-service training of staff in reprographic techniques. As demand for various services has grown new equipment has been purchased and the centre is currently producing over one hundred items of work a week. Staff can now obtain duplicated worksheets, laminated photographs, television and radio cassettes, overhead projector acetates and other more complex individual services. The originals from which copies are produced are stored in the departmental resource centre and only taken to the reprographic centre when duplicating is required.

In this way staff no longer need to retain the materials they produce individually, but can work as a team on the production of resources and avoid the unnecessary duplication of work and hence staff time is more economically deployed. By relating these ideas to the points mentioned in the section on worksheet production it is clear that the combination of staff planning, development of resource centres and centralised reprographic services create much greater opportunities in the teaching situation for the individual teacher to provide a much wider and more varied diet of materials for his pupils.

# **Workcard Production**

The relationship between the development of resource centres and the production of workcards is a close one. An analysis of this aspect of mixed ability teaching carried out in a questionnaire to school departments revealed the following pattern. Basically there were four types of workcard in operation in the school at that time. There was the single workcard designed to be used by the whole class. On the whole it lacks structure and therefore fails to satisfy either extremes of the ability range. It represents most teachers' first hesitant step in the progress to something more adequate.

Secondly there is the single structured workcard which starts with concrete operational problems capable of solution by the majority of pupils in the group and progresses in both breadth and depth to more abstract problems. It often leads to a sense of depression or failure on the part of the least able because they find few success points in the programme and seldom finish a complete card.

A third, and much more successful approach is an extension of the second, where a series of shorter cards are designed to complete the whole programme. Again the cards are graded in difficulty, the earlier cards presenting concrete problems provide a series of success points for the least able. At the same time a situation is created in which the teacher can assist individuals or small groups who may be experiencing difficulties. The later cards will extend the more able pupils and present open-ended, problem-solving situations. Certainly this type of workcard at present is the best solution achieved when it is really well structured. It also allows for a whole range of associated resource materials, carefully selected, to be used as a supplement to the basic programme e.g. book material, tapes, photographs, diagrams, filmstrips, acetates.

Ideally different workcard programmes for different levels of ability on the same topic would be an excellent development. This may involve the production of three or more schemes of work. In their essentials the programmes would follow the same sequence as the graded workcards. Some good examples do exist, but they represent an expenditure of time and energy that is probably not possible over the whole syllabus.

Whatever approach is adopted there are certain basic requirements that need consideration.

- a. Decisions must be made about the starting point for the programme. This may require a degree of pretesting or a knowledge of pupils background information from other subjects or from outside the school.
- b. The card must start from the pupils' own experience (not what we think is their experience).
- c. The programme must move from the concrete and particular to the abstract and general.
- d. The card must be developed so that the programme progresses in small and manageable steps.
- e. Success points must be found for all pupils in the scheme of work i.e. by the use of self-checking systems or discussion with the teacher as a means of offering encouragement or support.
- f. The most able pupils must be extended by the use of problem solving techniques which are not always within their capabilities, therefore demanding the teacher's active involvement.

The successful development of workcards can best be achieved by careful cooperative planning. The head of department is critical in the process, by formulating policy through the syllabus, acting as a catalyst to his staff, by delegation of responsibility for work and for the overall general standard of that work. He must ensure that the workload is shared fairly, production deadlines met and professional attitudes to work adopted.

The workcard has to be seen as only a part of the total teaching strategy and must have a relevant part in the whole programme of the department's work. Most departments have found that to use workcards to the exclusion of other techniques rapidly leads to boredom on the part of the pupils.

The objectives to be achieved in the workcard must be clearly defined and understood by all staff using the programme. To this end it may be useful to include a set of teacher's notes with each programme. In addition if staff visit each other when the workcard is actually being used by a class this is a further aid to understanding.

Associated resources to be used with the workcard need to be identified at the outset and not introduced piecemeal at a later stage. It may well be, however, that after a period of use the whole programme needs redrafting and the resources expanded. If difficulties are experienced in the construction of a workcard it is often useful to look at successful examples from other departments in order to grasp basic principles of construction, design and content. It has been found that the concept based approach using the idea of J. S. Bruner's spiral curriculum, dealing with mechanical processes through to a divergent, open ended approach has been the most successful.

Finally, there must be a careful system of evaluation. A departmentally agreed policy for vetting all workcards is necessary, and is the responsibility of the head of department to initiate. The general consensus of opinion is that there is little value in discussing the quality of a workcard in a departmental staff meeting, initially. Many of the basic weaknesses will present themselves more clearly in the classroom situation and the card can then be modified in the light of practical experience.

In many subjects, particularly mathematics and the sciences, an assessment test based on the workcard programme will be the most effective way of measuring the pupils understanding. Such a test should present opportunities for the very able to score highly and the least able to find a measured amount of the test within their competence.

Pupils must play an active part in the process of evaluation and they are often very perceptive about the quality of a card. They will have views about the place of the workcard in the total scheme of things and their views should be sought. An unrelieved diet of workcards is a recipe for failure, boredom, or even classroom disruption.

# In-service training of staff

The preceding sections pre-suppose a level of in-service training which is still uncommon in even large secondary schools. Without this training such a venture will be less than successful. With rapid promotion of young staff the rate of teacher turnover in large schools is relatively high. Senior staff often need a measure of retraining if they are to cope with the extra stress that mixed ability work inevitably brings.

Again it is important to stress that the style of management in a school can facilitate or hinder in-service work. If it is thought to be a successful element in the securing of sound mixed ability teaching it must be supported by personnel and resources to achieve the objective. At The Woodlands School one of the deputy heads together with the person in charge of reprographics and a half time adviser on technical resources such as radio and television, make up the team responsible for coordinating inservice courses. In addition to those within the school, L.E.A. advisers, teachers from other schools with particular expertise, examination boards, and others have all contributed.

Although courses run at national or local level obviously play an important part in staff development, there is little doubt that the large school can and should provide 'on the job' training and service many of its needs from within. Any school that claims to have carried-out mixed ability for any length of time has an obvious wealth of experience and expertise amongst its own members. This must be developed and harnessed for the benefit of the whole staff.

It is important, initially, that all staff see examples of successful mixed ability teaching in action. To that end every term arrangements are made for staff to visit members of their own department in a teaching situation and also to watch or participate with members of other departments. In this way a number of objectives are achieved. All staff gain an increased awareness of new techniques and ideas in the teaching of mixed ability classes, young staff often gain in confidence by seeing, rather than talking at second hand about the classroom situation and occasionally older members of staff learn something about enthusiasm by watching a probationary teacher at work! The whole of this programme is organised centrally by the deputy head in consultation with heads of department.

In the three years since a full programme of in-service training was instituted a whole series of short courses have been organised within the school. It may be of some interest to list some of the more successful ones:

Developing School Resource Centres Individual Learning and Workcards The Role of the Head of Department The Needs of the Probationary Teacher Mode III Examining and Continuous Assessment Audio-Visual Techniques The Problems of the Slow Learner

In addition a continuous dialogue has been instituted within departments by means of regular meetings, supplemented by in-depth studies of their curriculum and methods, attended by selected visitors who may have experience of the questions under discussion.

It is imperative that teachers within a school should share their knowledge on mixed ability teaching and it is too important for it to be left to the whims of chance. It must become as much a part of the school structure as any other major element and as such merits consideration by all schools. It will open a number of avenues to greater self-criticism and the attitudes of cooperation that are likely to arise are as important as the more tangible results of the operation.

# The classroom situation

There can be little value in the development of resource centres, workcard programmes and in-service training unless they are translated into sound classroom practice. Again it needs emphasising that the individual teacher must not be left to find his own salvation. The work of a unstreamed class needs to be structured not only in terms of content but of the varying teaching strategies that need to be employed by the teacher. A teaching department must make it a high priority to consider the elements that should be included in the course of a year's study. Many patterns are likely to emerge but for the sake of discussion it may be profitable to look at one pattern as an example. The staff of the geography department decided upon the following elements as a reasonable pattern for any year in the junior part of the school. Suggested Elements in the Syllabus for a Given Year.

0/

Booster or base lessons	25
Workcard programmes (individual or graded)	25
Discussion work in groups	20
Role playing or operational games	10
Fieldwork or data collection	20

This may serve as an example of programming even if various other departments use a different balance of activities. Looking at the listed components more closely raises important issues about the teaching of un-streamed groups.

Most papers on the theory of mixed ability teaching suggest that this means the abandonment of any formal classroom teaching. In our experience this assessment needs questioning. The excitement generated by an enthusiastic teacher talking to children, and the awakening of interest, is not to be surrendered lightly. The fact that some children may not grasp the full meaning of what is being said is not a reason for abandoning the booster lesson as a way of teaching. Certainly it must be said that the contact between teacher and class must be in shorter, more concentrated bursts than traditionally. This, however, is a statement that may even be true in the streamed situation and teachers, in large numbers, have always tended to talk too much!

The workcard is an important weapon in the armoury of the teacher with an unstreamed group. Again, an undiluted diet of workcards has been found to cause a rapid waning of interest on the part of pupils. Most children when asked, suggest that about a quarter of their total time spent on workcards is a satisfying proportion, provided the cards are well structured and unambiguous in their content. The workcard element should be carefully interspersed through-out the total programme to avoid concentrated, unrelieved spells of such work. This element will enable the teacher to work in a much more individual way with particular children or small groups.

Opportunities should be created for children to plan their own work and to discuss their programmes and results as frequently as possible. Careful planning and structuring of the broad objectives of such an exercise by the teacher before a lesson starts, is likely to produce a more satisfactory result than a 'free for all' situation. The actual composition of groups will vary according to the individual teachers' priorities. In practice, however, friendship groupings have been found to be the most satisfactory way of working, with only selective movements in the case of disruptive or anti-social combinations. Small groups of three to five working together followed by a plenary session in which pupils report back to the whole group has proved a successful format. In this way pupils can exchange ideas with only a small amount of selective guidance from the teacher. For the teacher inexperienced with mixed ability groups this will certainly be the most difficult strategy to adopt. Initially, problems of movement and noise level will create tension, but certainly gentle perseverance and a desire to create a really social and cooperative attitude within the group is an objective worth striving for.

Another way of developing and encouraging group work is by the use of role playing or operational games. Under these conditions each pupil will be much more tightly structured in his responses, and discussion can more easily be directed along particular channels by the teacher. The skill of the teacher in selecting the correct role and therefore the right level of response from each pupil will be largely instrumental in the success of the operation. Our experience is that once the written element plays a lesser part in a programme of work the patterns of so called intelligence amongst pupils are less obvious. Some children of quite low academic ability often respond much more positively in discussion, especially in areas involving a more emotional response.

Finally, field work and the collection of data of varying sorts can play an important part in developing skills and attitudes, at a level appropriate to each pupil. The skilled teacher can design cards that will accomodate a very wide range of pupils. For example, in an environmental survey some children may be collecting information, on a base map, of the age of housing, whilst the most able could be producing more sophisticated material on density of housing per hectare, or number of people per room from census enumeration data. At the end of the exercise the teacher must collate the material in such a way that all pupils, irrespective of ability, see that they have made a valuable contribution to the work.

In the final analysis the classroom practice is about variety and balance. It cannot be achieved by the young or inexperienced teacher on their own within the confines of their own classroom. These skills will only be developed by detailed and organised discussion, and planning with colleagues. This in turn can only be achieved if there is a proper style of management, sympathetic to the aims of unstreaming and prepared to divert the human and physical resources necessary for its success. Ultimately it is crucial that staff, parents and pupils should be as one in the belief that a mixed ability school is a better way to achieve higher social and academic standards. Twelve years of experimentation have revealed for us most of the problems of mixed ability teaching and allowed us to probe some of the solutions.

## BULK ORDER REDUCED RATES SCHEME FOR STUDENTS

Forum can be obtained cheap by students in Colleges and Universities. The price of each copy to individual students has been reduced to 35p. for a MINIMUM ORDER of 20 copies (one free copy for every 20 ordered). Lecturers in Colleges of Education and University Education Departments are asked to take advantage of this substantial concession, which does NOT apply to back numbers. Please fill in the order form below.

Name .....

Address .....

• •	• •	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	٠	•

College or University.....

Please send me.....copies of Forum on the reduced rates scheme for which I enclose cheque/postal

order for....

Return this form to the Business Manager, Forum, 11 Beacon Street, Lichfield, WS13 7AA.

# Co-operative teaching in a Junior School

#### **R. W. Forward**

After long experience as a teacher and head teacher in Devonshire, Mr. Forward was appointed as Adviser for Primary Education for North and West Devon in 1975. He writes here of his experience in moving to flexible forms of grouping through co-operative teaching as head of Blue Coat School Pilton at Barnstaple.

It is always hazardous to attempt to forecast the nature of the society that our children will grow up into. It seems likely however that society will continue to undergo fairly rapid change, will remain challenging rather than docile, permissive and persuasive rather that authoritarian. With this in mind we can, as teachers, make some assumptions about the qualities, attitudes, skills and knowledge we should be encouraging and developing in our pupils.

At the Blue Coat Pilton Junior School in Barnstaple, over a period of staff discussion and study we tried to identify these goals in some detail. Space does not allow a full description and most of the goals we identified were unremarkable. We wanted our children to be literate, articulate and numerate and to possess certain basic information. We placed more emphasis than is usual perhaps on the development of learning skills – observation, experimentation, library usage and so on, we also saw the creation of enthusiasms and interests as vital. Most importantly we wanted actively to encourage the growth of such personal and social qualities as independence of mind, self reliance and a sensitivity to the needs of others.

It was when we came to examine the restraints operating against these goals in our school that a major innovation seemed necessary.

## Restraints

All sorts of restraints operate in primary schools which militate against the achievement of the sort of aims outlined above. Many of these are created not by limitations in space, teacher skills and resources as much as by the organisation of the school and the classroom. The isolation of the primary school teacher within her own enclosed classroom seems the central source from which many of these restraints grow. We can identify some of these. The need to individualise children's work in order to respond as closely as possible to specific needs would be fairly readily accepted as important. Yet this needs a flexibility of grouping which allows a teacher to work at times with individuals or small groups. Working in my own room in isolation from my colleagues I found this very difficult as a class teacher. My work with a small group or individual was so frequently broken into by the demands of the other children who supposedly at that time were doing self directed work of some sort. Close co-operation with one or two colleagues would have made that flexibility so much easier to achieve and the tutoring of small groups without interruption much more possible.

Again within my own room the space and variety of resources that I could offer my children were limited. If we are serious in wishing to develop in children an ability to carry out independently their own investigation and discovery we need to create work bays and resource areas where they can do this. It is possible to have a variety of activities going on within the same room and many teachers do encourage this. It is, however, much easier if we can make some separation of noisy and messy activity from quieter work areas and from where the teacher may be doing some direct teaching with a group. It is by pooling resources, space and materials with one or two colleagues that we can achieve that variety of space and depth of resources.

There is a third aspect to all this. Our own skills and interests as teachers are limited. There are areas of the curriculum in which we are not skilled, we lack some personal qualities that others have, we lack some of the teaching experience that others may be able to supply. Yet the needs of our children may demand these qualities and skills. We found that at Blue Coat, in common with many other schools, we tended to limit most of the contact of our children during a school year to their class teacher. We had no desire to create a secondary school system of specialist teaching but there seemed to be advantages in associating each pupil with a group of two or three teachers rather than with one. It has always seemed a strange anomaly to me that while we regret the limitations imposed on a child by the one parent family we cling so to the one teacher classroom. Children relate happily to two or three adults at home and I can see no reason why a primary school child should not be able to relate closely and happily and with considerable benefit to two or three adults at school. Just as he turns at home to father, mother or maybe grandparent for support in different situations so he will turn to different members of the teaching team at school. There will need to be one teacher who acts as link with home and takes a special responsibility for records and learning programmes for each child but the relationship is with the two or three teachers in the team and not only with one.

It appeared increasingly to me that some sort of cooperative teaching would help us to overcome some of the restraints inherent in the traditional pattern of primary school organisation, and make more possible the achievement of our aims. The rest of this short article and the diagrams describe very briefly the preparations and then the changes we made to our school organisation.

## **Preparation for change**

After a considerable amount of staff discussion a pattern for our reorganisation began to emerge. We set out to convert the year units, which to this time had been laid out in the traditional pattern shown in Diagram A, into cohesive small suites of areas as shown in Diagram B. Each suite contained a quiet room which held a large number of seats and writing surfaces. There was a practical area where noisy and messy work could take place. There were areas where maths and science could be based and there was a central resource area for each team where books, assignment cards, AVA equipment, and other educational materials were based. To complete the unit there were small tutorial areas in which teachers could work with groups of varying size. We gained some area by finding room in other parts of the school, changing rooms and so on, for children to hang their coats. Apart from this it was physically mainly a matter of rearranging furniture and buying some screens and carpets from the proceeds of PTA fetes and school concerts. Teachers gave much time to the setting up of the resource areas, the preparation of work cards and making proper catalogues of reference books. We also set out what we termed as 'paper banks' but which were trays full of differing types of paper, tracing paper, crayons, rulers, pencils and all the materials children needed to carry out written assignments. In the practical area art and craft materials were also set out and made readily available. There were many other preparations made that space does not allow me to detail. Children had access to these materials at all times. If we were going to develop responsible attitudes in our children then we had to start by trusting them. It is interesting to note that we never lost an expensive item of equipment or ran out of paper.

The pattern of the day's activity proved to beless complicated than we thought. In general terms this went as follows. Children went first to their pastoral groups for registration, dinner money collection and so on. These sessions lasted only a brief time then there may be a school or year group assembly. Two of the team would then withdraw with small tutorial groups into the group rooms while the other member of staff supervised the remainder who were working in the quiet room or practical areas carrying out the assignments they had been given in their group sessions. In the tutorial sessions teachers would give the direct teaching needed in maths and language, introduce new concepts, set assignments and so on. They were able to work without too much distraction and give their full attention to the group. It enabled them to get nearer to the identification of individual academic needs and respond to them. In the large group the children would be working on a variety of tasks. They would carry out the assignments given in language and maths, continue with individual project work, read and so on. They had some control over the timing of their work in the sense that they could decide which assignment to carry out first.

This pattern seemed to allow for a balance of direct instruction and self directed work. In the tutorial groups we were able to get nearer to the identification of needs and individualising work, in the large groups children gained an opportunity to be responsible for directing some of their affairs, to be responsible for getting resources, to make some decisions about timing and to follow in their individual project work some of their own interests. The regularity of the tutorial sessions allowed us to make sure that there was an orderly growth of essential academic skills and knowledge.

Later in the day the pattern altered somewhat. The withdrawn groups for tutorial sessions ceased and the emphasis was on the investigation and learning skills. The whole year unit may be following through some major

#### Co-operative Teaching in a Junior School

## **BLUE COAT PILTON JUNIOR SCHOOL**

**DIAGRAM A** 



<sup>52</sup> Team Area for 100 Children and 3 to 4 Teachers

project or there may be a number of small group investigations. This work would include a considerable amount of art and craft work and experimentation, as well as book work but there would also be specific art sessions from time to time and also some music and drama sessions. In all this the three teachers, sometimes helped by a part time teacher, would share their skills and deploy their time in ways which best helped to improve the quality of the experiences they were giving the children. Children's groupings were very flexible but language groups tended to be within the pastoral group. Other groups for project work etc. were created from the whole year unit according to interest and need.

There would also be time given over by the team to games, a specialist day when the team had the hall for P.E. and music room available to them and teachers gave extra time to teaching in these rather specialist fields according to their special skills. On Friday the whole of the upper school was given over in the afternoon to optional activities. Teachers each took charge of one area of activity, music, pottery, folk dancing, drama, science club and so on and children were able to opt into these activities for a few weeks, generally speaking for a half of a term. These Friday clubs gave children a chance to extend their experience in an area which particularly interested them and an opportunity to mix with children from other teams.

It is extremely difficult in a short article to describe in detail the varied activity of 400 children working in this flexible and open way. There is no space to describe the planning needed to get a good professional and personal balance in each team, the importance of having clearly understood structures for decision making, the new responsibilities and demands this system makes on teachers, and the new skills which have to be developed. There is the opportunity for continuing professional discussion which springs from having to face common problems in the team, there is the chance to support and help new teachers and students to develop their skills and for each teacher to recognise their own areas of strength and weakness.

There are obvious and less obvious dangers. The much feared personality clashes can be largely avoided if there are clear structures for settling professional differences on policy. There is a danger of too many fixed points appearing in the day's activity, a tendency towards unsuitable complexity. There is a loss of the individual autonomy possible in an enclosed classroom and consensus decisions have to play a larger part.

As time passed we modified and adapted the pattern of work at Blue Coat Pilton but there were lasting advantages. We had widened the variety and quality of the resources available to our children, including those of teacher skills and interests with all this means in developing children's interests, knowledge and skill. Furthermore we had done it without losing the close teacher/pupil relationship needed for the pastoral care of a young child and the security of a work area small enough to still be intimate and comprehensible. The greater flexibility and the wider range of grouping possibilities had enabled us not only to create smaller teaching groups but also learning groups which had note of the interests and personality needs of the pupils. It helped I am sure in our own professional development. If nothing else it helped to break down the needless isolation that we had accepted for so long as primary teachers. Hopefully it created an environment in which the qualities and skills I mentioned as being important earlier in this paper, could be more readily developed in our children.

(Continued on next page)

Co-operative Teaching in a Junior School

#### **Blue Coat Pilton Junior School**

#### STUDY PLAN 4th YEAR

#### 1. General Studies-Integrated Work

a. Prescribed Activities	Mainly by individual assignment cards – suited to child's need 1. Skills: Teacher has in mind practice of essential skills Work in language, maths process, reading, handwrit- ing
	2. Discovery Work: Often open ended but teacher wishes pupil to have contact with specific and defined new experience, knowledge or skill – also a chance for expression, developing of study skills, 'learning to learn'.
b. Unprescribed Activities	Interest projects of all kind spreading right across subject areas. Teacher may or may not supply starting point. From there child directs own studies. Teacher has in mind the developing of interests, the child's need to explore and find out for himself and the developing of independent, self-reliant attitudes of mind, etc.
c. Withdrawn Groups	For direct teaching in maths, language, reading etc. where needed – small group work – discussion seminars and so on.
d. Large Group Work	Year Group projects: planned, implemented and evaluated by teaching team jointly for all the year group children. Aim is a shared experience – bringing together year team – will involve visits, excursions, speakers, films etc. – formation of small common goal or interest groups – (meant also as a counter-balance for the large amount of individual work done often alone). Teachers able to use particular expertise in exposi- tion, display – or in local knowledge of environment etc.
2. Pastoral Group	Teacher has special responsibility for this group ( $\frac{1}{3}$ of year). Children begin each day in pastoral group – administrative details dealt with – registration etc. – assignments arranged – some motivation for work such as creative writing sometimes takes place before children begin general studies. Acts as a regular meeting time with 'their teacher' in 'their home base'. We assume this gives a needed sense of security in the very fluid team situation. (We are starting to question though whether this 'mother hen' need is quite as great as we thought!)
3. Specialist Day	Opportunity for teacher to use special skills – Physical Education, Music, Science in this year. In other teams special skills could embrace Educational Drama or a foreign language.
4. Remedial Reading	1 teacher is released to help remedial readers, 1 teacher has 'personal tutorial' session, 1 teacher supervises Q.P. (Quiet period – mainly library or personal projects).
5. Clubs – Hobbies	Includes all Upper School children (170 9–11 years) and 8 teachers, including head. Lasts from 2.15 to 4 p.m. on Fridays. Clubs set up all over 3rd and 4th Year team areas, hall and music room. Teachers have charge of one or more clubs. Children opt for club – give 2nd and 3rd choice. <i>Must</i> stay in club $\frac{1}{2}$ term – Aimed at encouraging worthwhile leisure time interests. Clubs include Music (School Orchestra), Dance/ Drama, Crafts (clay, basketwork, enamelwork), Ramblers (Nature Study), Chess- Stamps-Photography, Indoor Games (badminton, table tennis), Needlecraft, Project Club.

# Non-Streaming and the Common Curriculum

#### **Maurice Holt**

After some time in industry, Maurice Holt taught mathematics in an independent school before moving to Chipping Norton School as Deputy Head. Since 1969 he has been Head of Sheredes School, Hoddesdon. He deals here with the crucial question of the common curriculum in the non-streamed situation.

It seems we are all non-streamers now. One hears of comprehensive schools meticulously divided by the end of the first year into two ability bands, but where the staff have convinced themselves there is no streaming. I suppose it's progress of a sort. Comprehensive education and nonstreaming, goes the feeling, is a sort of ham-and-eggs conjunction. It's becoming fashionable to say that the argument is no longer about why we unstream, but how.

I find this a disturbing view, because so often in educational innovation the way you do it depends on your reasons. It's fine at the beginning, with perhaps a handful of teachers swept on to action by their enthusiasm and energy; the trouble begins when innovation has to be sustained by extending the original ideas and involving more and more staff. How much total non-streaming extends beyond the second year? Beyond the third year? How many integrated humanities schemes survive into the fourth? Now more than ever, with money and staff getting scarcer, innovation needs to succeed and to gain the staffroom support of more than a few zealots. It needs to be done for the right reasons and in the case of nonstreaming I don't think they are all that obvious.

Of course you and I can agree that the comprehensive school should offer the best chance to all, and that hardly squares with rigid groupings by ability; but to capture the hearts and minds of most comprehensive teachers something a bit more substantial is required. Suppose, then, we assert that our prime aim is social education, hence non-streaming. What are the implications for curriculum content and method? The resulting uneasy compromise will ensure a conventional approach by the fourth year. Or suppose we advocate non-streaming because we want each pupil to construct, as the phrase and ideology go, his own reality. Is the implication an individualised learning system? How are pupils to be grouped? And again, what kinds of understanding are pupils to lead themselves into? What kind of public acceptability can such a school command?

Since Sheredes School opened with first-year pupils only six years ago, the five years of compulsory education have been seen as a continuum with the aim of initiating all pupils into those forms of knowledge and understanding which command wide acceptance as the attributes of an educated person. For let us accept that the comprehensive school should maximise the life-chances of each pupil. This means giving him the autonomy to make his own judgments that can only come from an understanding of our culture. And if this understanding is derived from distinct modes of development of the mind, then that is what is needed for each pupil's intellectual and emotional development and it is our business to try to supply it. The weight of much philosophical argument suggests we should identify mathematical, scientific, historical, aesthetic, moral and religious kinds of understanding, and lead pupils to a social understanding of themselves and their relationships with others. Such a programme of liberal education must be seen as our central concern.

## **Curriculum organisation**

What are its implications for curriculum organisation? First, the approach is broad and unified, so neither the grammar-school subject-based curriculum nor the topiccentred treatments of the modern school will suffice. At once the school itself is in the business of curriculum development, involving all staff in working out strategies. Secondly, while mathematics and science correspond to existing specialisms, other aims can be met only by interrelating subjects within an area defined in wider terms. So staff in kindred specialisms must work together to decide on content, method and attitude, and logically will teach together in some kind of team system. A faculty structure therefore makes curriculum sense. Thirdly, within each faculty the varying abilities and responses of pupils mean that while the aim is for all to achieve mastery of basic concepts and ideas, the organisation must be flexible enough to enable slower pupils to spend longer over them, and abler pupils to take them further. How this is done will vary from one faculty to another, yet since the response of pupils is not an immutable constant but changes as they grow and learn, the system will need an open-access quality if staff are to be able to adapt to their perceptions of these changes. And since a range of resources and learning approaches is going to be needed, it is to these that easy access will be sought.

Plainly, parcelling pupils up into a rigid ability set or band will not only run counter to the idea of tracking and building on the response of each pupil to the common core; it will make things much harder to organise. On the other hand, the teacher needs the option of deciding which sort of groupings will best serve his present purpose. Possibly the whole year group can watch 'Lord of the Flies', then discuss it in non-streamed groups of class size, which could then break into smaller non-streamed groups of six or eight to act out the resulting ideas; or the non-streamed class of 25 or 30 can go straight into individual writing on an idea offering enough scope for the whole ability range; or the teacher might hive off half-a-dozen talented pupils to write a follow-up play, while he talks to the others in twos or threes before they write individual pieces.

## Flexible non-streaming

What is wanted, therefore, is a flexible non-streamed format within which the common curriculum can be implemented. Given that premise, the logic of such a format is unassailable. From the teacher's point of view, he has the flexibility but he also knows why it is there. He has the autonomy to choose the tactics that will give the best pay-off, within strategies which he has helped evolve with other members of the team. It is a demanding role, and one for which few colleges or departments are likely to have trained him; but we find it is not without its satisfactions, and the team is there to give him support when he needs it.

So much for general implications: each school must in

the nature of things work out its own precise approach depending on a situational analysis of the constraints upon it. We have found it convenient to group the compulsory five-year curriculum under six faculties: mathematics, science, expressive arts (linking English, drama, music), humanities (linking English, history, geography), creative activities (linking all art and craft subjects) and physical activities. Of these, the first three are taught by a team of three staff to each half-year group of 75 pupils; humanities by six staff across the whole year group; creative activities by 7 or 8 staff across the whole year group; and physical activities by 3 to the half-year for PE. 6 to 8 to the whole year for games. A horizontal yeartutor system reinforces these groupings and gives a tight formal interlacing between academic and pastoral arrangements; informally, the distinction is even less meaningful, since the teacher-pupil link needs to be a close and supple one. But the teacher is certainly in authority; he is there to transmit the culture, and he knows a bit more about it than the pupil does. A certain degree of distance is needed to provide, as it were, the potential gradient across which knowledge flows.

The non-streamed format will be exploited differently in each faculty. The blocked timetable (much easier to write, incidentally) gives heads of faculties and their teams the choice they need. In mathematics, the basic unit of the non-streamed group of 25 may be taught primarily by one teacher through the year; in science, Nuffield Combined leads on to Schools Council Integrated Science, and so it is convenient to aim to put a biologist, chemist and physicist in each half-year team and rotate over the three terms. (Each specialist, though, needs to be familiar with all the work, particularly in the first three years). In humanities, the basic module is a unit of 3 to 5 weeks and each group of 25 moves in this way from one teacher to the next. This faculty also subsumes religious education, and each team of six staff can include appropriate specialists. In creative activities essentially the same system is followed but with a longer time module.

In addition to these six faculties, that of languages offers French to all pupils for the first three years, and in the third year all pupils have the opportunity to take up German or Latin as well. From the fourth year, though, languages are optional. And while all pupils are doing enough science for five years to gain one O-level or CSE pass in integrated science, provision is needed from the fourth year for those with a particular aptitude or interest to take extra science as an option and obtain a double certification. In fact, only two option groups in the fourth and fifth year are necessary to provide options to meet these needs and further personal skills in business studies, art and craft and so on. Creative activities leads in any case to a mode 3 CSE for all in Design; while humanities leads to mode 3 O-level and CSE in English, history and geography.

This curriculum not only provides the intended compulsory liberal education, but also meets certain instrumental requirements which are placed on schools. The introduction to a foreign language, and physical education for health and as a preparation for leisure, can be regarded in this light. The timetable is made up of four 70-minute periods in each day, since we find the longer time is essential if all our learning strategies are to be deployed effectively in non-streamed groups. Indeed, in humanities and creative activities a double period is provided weekly in each year.

## Examinations

The divided 16-plus examination may influence nonstreaming policies in the fourth and fifth years. We avoid this completely in humanities by dovetailing the GCE and CSE mode 3s in each subject (where also half the marks go for coursework over these two years). The same is true in creative activities, and in both these faculties the non-streamed format holds good for 5 years. In science the exams have different styles, and the need for an extra option doesn't help. Even so, the ability-range in the examination groups can be kept wide. The same problems arise in languages, where in the first three years the use of a variety of approaches, and the scope offered by team teaching, mean that the advantages of a mixed-ability format can be retained. In mathematics, where a modern syllabus is adopted, grouping pupils into two broad Olevel and CSE sets can be left until the fifth year and is really a matter of self-selection by pupils. There is no evidence of pupils becoming alienated because of this;

they can see the O-level/CSE bifurcation as an imposed constraint, and know that since they entered the school it has, through its non-streamed, unified organisation, transmitted the same set of messages to them. Through the weekly meetings of the school forum they have gained a knowledge of democratic procedures, and our aims in moral education have been resolved partly by the fact of non-streaming, partly within expressive arts through roleplay work, but mainly by example in the way in which the school conveys a fraternal style in the quality of relationships. The common curriculum gives the reality to this, and non-streaming reinforces it.

The fact that 80 per cent of curriculum time in years 4 and 5 is compulsory does not lead to pupil disenchantment; last year, for example, only 6 fifth-years of the 150 in the year group took up the option of leaving at Easter, and of the remainder well over 80 per cent obtained 5 or more subject grades in O-level or CSE. Instead of extrinsic choice in the fourth year between a rag-bag of subject options, our pupils enjoy intrinsic choice within each faculty. The non-streamed format offers them a choice of learning modes, and the teacher may often extend this to a choice of content. Yet the basic masteryareas of the common curriculum can be covered, and must be if the task of the comprehensive school is seen in these terms. Entry to Sheredes School is by straight parental-choice, but the ability distribution of our intake is well representative despite our nearness to a reorganised former mixed grammar school. The present first-year intake has increased from 5 to 6 forms of entry, and there is no evidence that our emphasis on a compulsory curriculum within a non-streamed format has made the school an unacceptable choice. On the contrary, we find that once parents have seen how it is organised, and sensed the advantages of an initiation into a coherent programme rather than a mish-mash of subjects with an undertow of banding and the old grammar/modern split, they are happy to endorse the view that such a programme is perhaps what comprehensive education is all about.

# 'Insight'—An Experiment in Social Education

#### **Stan Bunnell and Freda Perkins**

Stan Bunnell and Freda Perkins teach at Queen's School, Bushey, Hertfordshire, of which the former is Head.

There has been a revolutionary widening in the areas with which the school curriculum is concerned. Schools have always been aware of the need, in terms of information and awareness, to educate pupils to be responsible members of the society that they will enter on leaving school. This has become a more complex task in a society where values are constantly changing, and where parents increasingly look to the school to provide teaching in spheres which were previously regarded as the responsibility of the home. The school is also subject to the same uncertainties; the blurring of the distinction between moral and religious education and the undertaking of a greater responsibility for sex education and personal relationships whilst being careful not to inculcate dogmatic moral standards are examples of this.

It was this combination of a firm conviction of a need for a seriously thought-out programme of social education combined with uncertainty about what it should include that made the development of a flexible approach all-important. Whatever was included it was accepted that there were two fundamental conditions – it should be a course that included all members of the fourth and the fifth year and that it should be non-examined.

There were a number of elements that were considered to be essential components of the course. Careers was one of these. The Head of the Careers Department had felt that to run independently in mixed ability groups a course in careers timetabled weekly was an impossible task in terms of relevance to all pupils and that careers could have a more relevant and constructive contribution within the more flexible framework of a course in social education.

Initially a committee of interested staff was formed with the brief to establish a course in social education in a comprehensive school of 1300 for one double lesson each week for all fourth and fifth year pupils. Like many such schemes it began with the formulation of wide generalities and aims ('an awareness of individual and community needs and responsibilities') and ended with the close consideration of group sizes, individual staff interest, availability of staff on the timetable, use of 'non-interested' staff who might be available and the provision of time for outside visits.

The course begins in the fourth year with a two-week introduction based on a contemporary social problem. Films like 'The Last Bus' or 'Sentence of the Court' are used. The aim at this stage is to involve pupils in meaningful discussion of a theme based on incidents well within their comprehension. The rest of the first term is spent on two themes - conservation and consumer education. The second term begins with an introduction to local government and continues with individual and group surveys of various aspects - housing, social services, planning, transport, education, leisure. The term ends with a mock council meeting. The first half of the third term is given over to careers. Pupils complete a school careers form and an interest questionnaire. They are then placed in broad interest groups, in which further careers lessons take place. At the end of this term they have a course on some of the social and moral and religious implications of our society and these are worked out in an examination of our attitudes to christenings, weddings and funerals.

During this year pupils are withdrawn for half a term in single-sex groups for the showing of informative films, film strips and slides on sexual intercourse, procreation, venereal disease, and personal relationships. These are followed by discussions led by members of staff who have been specially selected for this aspect of the course. Great thought is given to the level of information and approaches through discussion with gynaecologists, marriage guidance workers and the examination of visual aids and books available. This is undertaken by the teaching group. The contact is through the teachers in the group and not through outside speakers. We regard this as important in terms of establishing an atmosphere not only where full and frank information can be given but also where questions can be asked and problems brought into the open without embarrassment or hesitation. A meeting is held for parents at which they are told what we are doing and shown the audio/visual materials which are used. This work continues into the fifth year with the same groups.

In the fifth year careers visits, films and speakers are arranged; these differ according to the interests of different groups. Practical options are also made available, from which two must be chosen. These consist of music, drama, toy-making, art, cookery for boys, woodwork for girls, film-making, helping in local primary schools, leisure pursuits. Choices cannot be made of options which are already being studied.

For the film-making and in some of the research projects we have had the cooperation of the Young Volunteer Force Foundation, a local community education project, with a base in Watford. One of the noteworthy features of the film-making based on story themes is the amount of time pupils are prepared to give to preparing material and their acceptance of routine and refilming, even from those who are antagonistic to homework and easily bored by attempts elsewhere to check and improve their work. Research projects have included housing (the report of which was presented to the local Member of Parliament at the House of Commons) and play groups. These groups tend to establish a more informal atmosphere than the school-based groups. They are more closely-knit; but this in its turn often presents problems of and experience in resolving conflicts in personal relationships. Some, on the other hand, find the less structured approach too difficult to accept and ask to be allowed to join a school-based group.

The average size of a group is fifteen; this makes discussion informal and constructive, and also allows groups to be taken out in the school minibus. From the outset we were determined to have mixed-ability groups. As far as possible groups are formed from house tutor groups which were the teaching-unit in the first year, in some subjects in the second and third years, and which meet together several times a week throughout the five/seven year period of schooling. There are problems of presenting themes in such a way that the less able are not swamped by abstract intellectual theory. However, in discussion it is often the more able who need encouragement in voicing their inner feelings or in asking questions. The less academic often show more initiative in person to person research or in work with younger or handicapped children. One result of this bringing together of all pupils in mixed-ability groups to consider topics outside the accepted school curriculum has been a greater degree of social integration; it has given some impetus to a continuing identity with the school of all pupils in their fourth and fifth years. It has provided the priceless experience of success in something connected with the school for pupils who might have missed it in their other work, and this has changed their attitude to the school and, in some cases, to the rest of their work.

In the first year staff were responsible for all the groups dealing with their particular theme. It was soon found that the advantages of specialised knowledge and experience were outweighed by the disadvantages of regularly unsettling groups and not being able to follow a structured pattern through the first year. Generally, staff now stay with the one group. From the beginning the Headmaster gave high priority to specialised and experienced members of staff being made available; it is now an established tradition that both deputy heads are team members. As far as possible staff consist of those who volunteered for the work. One teacher (at present the Careers teacher) is specifically responsible for the administration of the scheme.

When Insight began it was received by pupils and parents alike with indifference and, in some examination conscious parents, with hostility. Now it is an accepted and exciting part of our education. It is accepted by pupils, staff and parents alike. Some of those who were hostile have completely changed their ideas about it after seeing it in practice.

Inevitably an account like this gives the impression that the scheme ran smoothly and has evolved an entirely satisfying and acceptable framework. In practice we have been frequently dissatisfied with some aspects and with some approaches. We are constantly rethinking and re-planning. The flexibility of approach enables us to subtract from or add to the scheme without upsetting our faith, our aims and our sense of purpose. Where formerly we felt worried about neglecting or dealing only spasmodically or fragmentarily with this complex field, we now have a framework in which we can present and develop what we feel is essential in the light of the changing needs of our pupils and society and of our own experience gained from the scheme itself.

# Reservations on Reconstruction

#### **Gabriel Chanan**

Gabriel Chanan, who takes up the discussion initiated in FORUM by Michael Armstrong and David Hawkins, has been editor at the National Foundation for Educational Research since 1969. His book, *What School is For*, was published by Methuen in 1974.

In their mutually-reinforcing articles (Forum, 17:2 and 17:3) Michael Armstrong and David Hawkins have between them performed the vital service of identifying the key curriculum question for the next generation of schooling: what changes will knowledge itself undergo in the course of becoming accessible to the whole populace? We are to focus our aims not on the transmission but on the reconstruction of knowledge. 'What is required is not a rejection of the school or the schoolmen's knowledge, however bourgeois in origin, nor even of the scholastic tradition itself, but a reconstruction of the relationship between knowledge and individual experience and intuition . . . We are seeking to extend a power of generalization and conceptualization without losing the strength of an understanding which is rooted in a sense of particularity' (Armstrong).

## Some reservations

The reservations which follow are by no means intended to obscure the great value of having had this focus defined. We should try to sustain the vision of creative interrogation of complex knowledge which has now been set forth.

Hawkins calls Armstrong's extended example (the description of how Carol got to know the primary school children) 'carefully chosen'. It is an enchanting story and a rare insight into a moment of critical growth. But it is not a good example for the thesis of reconstruction in general. The knowledge at issue here – Carol's knowledge of how to get to know children – is knowledge which could not have been better provided, perhaps not provided at all, by formal education. Even if there existed a time-honoured corpus of brilliant works on how to get to know children, they would be no substitute for Carol's

experience here. In fact, not only is there no such corpus but educational theory is possibly the most dubious area of formal knowledge in the canon. There is not much in it to compare with the specificity and vividness of Carol's own account.

To really test out the thesis of reconstruction, we ought surely to take examples where formal knowledge is strong and the possibilities of direct perception are weak. It would not be possible to generalize extensively from Carol's story to areas of knowledge such as the world pattern of trade, elements of scientific principle, the various creeds of man, the history of the modern world – all of which are part of the rightful cultural heritage of all pupils. It is not that these areas cannot be shown to have some connection with each pupil's experience, and are therefore open to some group verification and reconstruction; but that the aim here would surely be impeded by allowing the pupil to see them as revolving round his own experience. He must learn to see his own experience, on the contrary, as a point of entry to vast issues of which the centre of gravity is elsewhere.

Let me add at once that I don't believe the Armstrong/ Hawkins position to be intrinsically hostile to this kind of aim. Indeed, Hawkins' example clearly endorses something like it for mathematics, and in the later part of his second article Armstrong speaks of 'the reintegration of formal and informal modes of learning'. Nevertheless, it seems to me that what the reconstructionist position so far lacks is an adequate characterization of generalized knowledge. Such a characterization is, in fact, an aim towards which the articles hint, so my reservations are really attempted extensions. But there are also passages which seem to embody certain impediments to making the necessary extension. There is the approving quotation (Armstrong's first article) of Peter Prosser as wishing to 'abandon structure', which amounts to saying that we will have an education which is all content and no form. The 'scholastic tradition' is then attributed a 'characteristic linearity', an 'unavoidably one-dimensional character'. Yet *all* human communication is sequential, and if we wish to cultivate a better grasp of the simultaneous 'architecture' of reality, we have to cultivate more cunning and better cross-referenced sequences – which is exactly what the best of the scholastic tradition does.

# Advanced planning?

More particularly, there is the concluding passage of the same article, where an injunction is laid down against 'prescribed standards and predetermined goals' (italics in the original). This puts a jinx on virtually any serious advance planning of curriculum content, and correspondingly places too much reliance on ad hoc inspirational energies. It implies an education system in which there is no fall-back position from being at the pinnacle of one's teaching powers, and too much vulnerability to the permanently shifting climate of topicality created by other cultural agencies. Perhaps the more operative questions are how far in advance, with what provision for revision, and taking account of what criteria should goals be prescribed.

Let us leave aside the issue of established knowledge that question-begging phrase so beloved of Peters and Hirst – and consider simply such a problem as how to conceive of contemporary world trade. (I take my example at the fullest scale, but the same applies at a national or any other scale.) Clearly each part of the total truth is accessible to someone's personal verification but the whole is accessible to no one's. The only way to conceive it at all is through generalization. We wouldn't even know how to start comparing individual testimonies without first constructing some general thesis. Once proposed, the general thesis can be improved by invoking individual testimonies direct and indirect. But the general thesis can never be a description of the full complexity and abundant detail of the situation. A complete dossier of individual testimonies would be utterly indigestible. Thus all formal knowledge has to settle on some appropriate level of generality, which always leaves some unaccounted for distance between it and individual cases. Nevertheless, without generalized knowledge there would be no propositions visible to all, no meeting ground of individual experience, and therefore no rationale for common action or complementary understanding.

Once we accept the need for generalized knowledge, we can see that, precisely because it always violently conflates the multiplicity of individual cases, its *form* is one of the most critical things about it. But here we must distinguish between the form which the disciplines take in their best expressions and the much more rigid form which they take in traditional educational treatment. It is not the nature of the disciplines themselves that determines traditional education. On the contrary, great violence is often done to their intrinsic nature. As Bernstein says, the fact that the disciplines are open-ended, that their best expression consists precisely in their tentativeness, their appeal to verifiable evidence, their inbuilt provision for modification – all this is a closely guarded secret of the education system.

# Formal knowledge

If it is to become an open secret, if the negotiability of knowledge at all levels is to be made tangible, we are surely released to draw much more generously on formal knowledge. Precisely because we are not saying 'this is the case and you must accept it' but 'this is the proposed understanding of the case, which is now open to our further investigation' we are able to present as much material extra to direct perception as we find to be digestible. For the balance between direct perception and symbolic representation must surely shift in favour of the latter as adulthood is approached. There is no direct connection between individual experience and, say, the physical geography of most of the world, the facts of most human history, most of the scientific knowledge amassed by man or most of the art and literature created by man. The individual's educational progress cannot but mean increasing reliance on connections through various forms of symbolism, and reliance on the testimony of increasing numbers of other people, and this is why it is entirely suitable and necessary that the latest stages of education should have a rather different balance of personalverifiable/symbolic-generalized elements from the earlier. What particularly needs further investigation as part of the new articulation of the two is the way in which individuals may make a personal judgment of things remote from their own experience by analogy with their own experience; how they can learn to use impersonal evidence to interrogate other impersonal evidence; how impersonal evidence can be judged on its own consistency: and how the biases and limitations of the channels of information themselves can be detected.

# Schools Within Schools: The Countesthorpe Experience

#### Michael Armstrong and Lesley King

A recent number of FORUM (Vol. 17, No. 3), focusing on 'The Question of Size', suggested the formation of 'schools within schools' as a possible solution to the problems of large schools. Here two teachers from Countesthorpe College, Leicestershire, develop this approach, based on their own experience.

'The process of education, at best, implies a dynamic relationship between teacher, pupil and task out of which knowledge is reconstructed, for both pupil and teacher, in the light of a shared experience.'

In a previous article in Forum (Spring 1965) one of us, Michael Armstrong, described one episode in his own recent teaching experience at Countesthorpe Upper School which seemed to illustrate this relationship. In the present article we want to describe the academic and pastoral structure by means of which our school has sought to foster the relationship. The article describes what has from the start been known at Countesthorpe as the 'Team' system, although the term has always seemed to us somewhat unsatisfactory. To prevent misunderstanding we would point out in advance that the 'Team' system has nothing to do with what is normally known as 'team teaching'. It has different origins and a different purpose, and it is to a description of these that we now turn.

# **Miniature schools**

The idea of 'teams'-miniature schools within a schoolgrew out of a sense of dissatisfaction with the School's original curriculum strategy. That strategy sought to reconcile two apparently conflicting principles. One was the principle of autonomy – that every student should be responsible for determining the choice and direction of his own course of study with the help and support of his teachers. The task we set ourselves was to create the conditions in which autonomy could thrive. We did not intend meekly to submit to each student's passing whims and fancies, for unless teachers are ready to be positive, forceful and ambitious in their expectations of their students they cannot hope to create the conditions for a thriving autonomy. We did intend, as Stuart Maclure of the TES once wrote, to try to 'match the education to the pupil rather than blame the pupil for failing to correspond to the kind of education which is on offer'. The second principle was that of a common curriculum - our commitment to the major disciplines of human thought, the traditional forms of knowledge, mathematics, science, the humanities, the arts. We were convinced at the time, and remain convinced, that every student has the ability to pursue knowledge in all these forms, and that our task was to help each student to do so. At first we sought to reconcile the two principles by insisting that all students spend equal amounts of time studying each of the major areas of knowledge we identified (two to three seventy minute lessons each of English, the Social Studies, Maths and Science) while insisting at the same time that within each area all teachers encourage each student to pursue knowledge in his own distinctive way.

The strategy failed, not so much because it is in principle impossible to reconcile autonomy with a common curriculum (though it is certainly exceptionally difficult) but rather because the context within which learning and teaching took place frustrated whatever attempts at reconciliation we made. We began to see that the context we needed in order to make a success of student autonomy was one in which teachers and students could take part in a kind of continual conversation with each other - not a dialogue, discussion or argument but something more free-ranging, intimate, expressive and egalitarian, that is to say a conversation. Only through conversation, so we felt, could a teacher learn to identify and value the intellectual demands and interests of his students and a student those of his teacher. Only such a context seemed to offer us a realistic hope of reconciling the students' and the teacher's experience and concern.

Yet the context in which we were working at the time did not encourage conversation to any great extent. How could it when our curriculum strategy entailed so clear a division between a teacher's academic and pastoral roles, between the teaching group and the tutor group? Our organisation, like that of many other comprehensive schools, kept tutorial guidance and teaching apart as distinct activities with separate structures. Guidance was organised through a pastoral system of year groups and tutors; teaching through an academic system of subject departments and subject specialists. Some tutors never taught their tutorial group. Those who did, taught them no more than one subject and no more than two or three lessons a week.

We needed a way of bringing the pastoral and the academic systems into one. Most students, if they are successfully to direct their own course of study, need sustained and systematic guidance from teachers who have come to know them well by working with them closely for a long time. The tutorial roles should therefore be at the centre of the academic system rather than on the periphery. The tutor's job is to work with his students, not just within the area of his own academic specialism but across the curriculum, teaching whatever he himself is most interested in and involving himself in whatever most absorbs his students. The more he participates in the work of his students across the curriculum the greater his chances of spotting and turning to advantage opportunities for extending and deepening the range of their intellectual and personal concern. And thereby he helps them to direct their own studies successfully.

We did not want to deny the excitement, or even the necessity, of specialisation in secondary education. We knew and accepted that some of us would always be happiest teaching our own special subject to students who had chosen to study it. But we also knew that many of us had to become more than specialists if we were to achieve the academic goals we set ourselves, let alone the pastoral goals. In theory, perhaps, every teacher needs to be both tutor AND specialist. In practice some teachers combine the roles more easily than others. In any case the two roles are complementary. The tutor needs the specialist to take over where his own enthusiasm or expertise run out. The specialist needs the tutor to provide the supporting framework that enables a student to make sense of specialisation.

This, then, was the background against which we set about reconstructing our curriculum at the end of our first two years. We now divide each year group of students into units of 100 to 150 students each. Each unit becomes the direct pastoral and academic responsibility of a group of from five to eight teachers. Students and teachers together make up the 'team'. The group of teachers come from differing specialist backgrounds, usually, but not invariably, English, Social Studies and Mathematics.

The common factor is their readiness to assume a new kind of teaching role - new, that is, in secondary as opposed to primary schools. Their job is to get to know the students in their team (which is usually divided into tutor groups of some 20 to 25 students with one tutor). to work with them over a wide range of activities, and to guide and assist their entire course of study within the college. There is no longer a strictly compulsory core of studies which all students have to follow, but it is one part of the tutor's role to help his students to achieve a balanced curriculum involving all the major disciplines. Tutors spend at least half the week with the students in their team, working in one particular area or set of rooms which becomes the team's base, and is as far as possible exclusive to the team concerned. Thus teachers and students together make up a kind of mini-school within the overall framework of the College, semi-independent, close knit, distinctive in place and character.

### **Team time**

For timetabling purposes the week is organized in two halves of ten periods each. One half – colloquially called 'team time' – is spent by the students in their team area working with their teacher tutors. The other half is devoted to specialist activities under the direction of specialist teachers from outside the team. Any student who has no specialist activity to take part in on one occasion or another during the specialist half of the week can remain in his team area working under the guidance or supervision of one or other of his team teachers. Conversely there have always been students who have spent one or two lessons of team time engaged on outside specialist activities for which they could not otherwise find room on the timetable.

The difference between 'team time' and 'outside specialist activity' is a difference of emphasis. It would be wrong to think of the latter as the time when students study 'subjects' and the former as the time when they don't. It would also be wrong to imagine a sharp division between 'specialist' and 'generalist' teachers. The difference is rather in the kind of relationship between teacher and student and between both teacher and student together and the activities they engage them, that is to say between them and the curriculum.

Within the team the relationship between teacher and student is intended to be as many-sided as possible. The team's overriding objective is to help its students to make sense of autonomy and to put it to use in the expansion of

intellect and personality. The teacher tries to get to know each one of his students as well as he can, both personally and intellectually, not simply for the sake of the pleasure of knowing them but in order to help them to develop their own powers of mind and feeling. This, so we feel, he can only do by talking with students, working alongside them, teaching them and learning from them over as many activities and subject matters as he can cope with. Sometimes he will be teaching his own individual specialism, sometimes following the particular interests and concerns of the student, sometimes teacher and student will be working together on activities neither is necessarily familiar with. The teacher has to be ready with his own ideas and responsive to those of his students, over a very broad area of knowledge. The boundaries between 'academic' and 'pastoral', between different 'subjects' or 'disciplines', between 'work' and 'play', between teacher and taught, become, of necessity, elusive and shifting within the team situation.

By contrast, when students work with specialists outside the team, they go primarily to engage in a particular definable set of activities or to study a particular body of knowledge with the help of an acknowledged expert. In this context teachers and taught will probably concentrate more narrowly on the subject in hand. Within the team, such narrow forms of concentration, desirable and necessary though they certainly are in their place, can never form more than one part of the spectrum of teacher's and student's activity.

For all these reasons, team time is hard to pin down in a precise description. In order to suggest something of its character and content one of us, Lesley King, has looked back over the work of one of her present fourth year students during the first six weeks of this autumn term and over the period of pre-term preparation when she was getting ready to receive a new group of students entering the school for the first time. What follows is a brief account of just one teacher's experience of working in a Countesthorpe 'team'.

\*

'I first met Phil at his middle school at a time when I was really much more concerned with my present fifth year group's examination work and future prospects. I was interested in my new group but had no time to give them my attention. I talked to Phil for about 15 minutes, giving him a booklet of basic information and a bus pass

application form. The interview was quite a difficult one. He was obviously nervous. His voice was rather throaty and I found myself talking slightly more softly than usual. I remember that he asked no questions but in answer to my query said that he was looking forward to coming to Countesthorpe. I wasn't convinced and asked him if he minded having a woman for a tutor. Some boys resented being landed with the only woman in the team. He said no. I remember little else about the first meeting. My notes, taken at the time and added to that evening, tell me more. Phil doesn't like Maths but likes English very much. He reads adventure stories, thrillers and ghost stories. He wants to give up French but might like to begin learning German. He is also interested in what he has heard of Control Technology and Art. He plays softball, table tennis and volley ball. He has an athletics star award. (He didn't tell me this; he was wearing it.) He also plays the piano accordion and would like to do some music.

I met him again shortly afterwards when he and the rest came from the middle school to look round our school. I remember being anxious that they should be impressed by the school. I'm always a bit afraid that fifth year students will show off in that tough way they sometimes do. Then I'll shout, and so on, and so on. I showed my group round the different teaching areas in the school. Afterwards we went back to the 'pod' - the small separate building that was to be our team area - and I explained about it being 'their' area. Then I left them for a bit as they seemed very tongue-tied, and asked one of my present fifth formers to talk to them. He said afterwards that they asked mainly about sport and music. They looked very small. We went for coffee and of course they hadn't any money. I offered money to lend but they daren't say yes. We were all rather shy. Fifth and sixth years looked at us as if we were from another galaxy. I was glad when the time came to get on the coach again. They waved as they left. I have no special memories of Phil except that he was not at all forthcoming. The notes from his middle school gave the following information address, birth date, reading age (14), arithmetical age (11). They also mentioned that he was 'able' but 'underachieving', wanted to be a computer programmer, collects matchboxes and plays soccer for the school team. The headmaster did not mention him in particular as outstanding or specially worrying.

I later met his parents at the first parents evening. This was to show the parents around the school and answer general questions, not specific ones about students. Over coffee his parents said that he was not happy at his middle

school but felt that our system would suit him better. I was relieved. Until then I had half thought that Phil was not just shy but hostile, to the school or me or both. It was a good evening altogether. There were one or two arguments but they were productive, no useless chit chat, no 'do you push them enough'. The school looked impressive. I got quite excited for the first time about the next year although my mind was still crowded with my present group and their work. I began to think that all the other teachers who felt rather dreary about going back into the fourth year (after spending two years with their previous groups) must be crazy. From this time my mind began to dwell more and more on the new group. I made an elaborate record book for next year - name, address, birth date, previous school/tutor, my own notes, annotated school notes, room for the timetable when it was worked out. It was important to do this to focus my mind on the group.

By this time our new team of seven teachers were meeting informally whenever possible. Most of us had worked together before in the same team, two of us were new to the team. We spent some time discussing the place of mathematics in team work. In our last team maths had been completely separate from the rest of team work and had been taught by only one of us, the team mathematician. This time round we all wanted to share in the maths teaching in one way or another. Then we could begin to explore the relationships between maths and other team work. This time, too, we'd asked to have a scientist working in our team so that we could begin to introduce more scientific activities into the team work. I was glad that science would no longer be a wholly specialised activity outside the team framework.

During the summer holidays I began to collect material and work out my ideas for the beginning of the year. By the end of term it had been clear that none of us felt the need to start the new year off with a grand, common theme - something like The Family with which we had begun our last team's work. We each had our own ideas about how we would start the term off in our own groups. We swopped ideas informally but there was no master plan. Some of my new students had asked for particular things – material for a project they were thinking of doing, a nursery school where they could work, a certain book or type of book. I got together a book on UFOs, material for tapestry making, ghost stories, 'The Life of a Robin' by David Lack. I read through once more all the books in the Penguin English Project series. I arranged a link between the team and a home for mentally handicapped children at Glenfield. At the very end of the

holidays I wrote out an 'emergency banda' made up of suggestions for writing for students to try during the first few days, mostly autobiographical in theme.

I came into school three days before the start of term. I find this very important personally although I do little of worth. I wander around, polish the tables, arrange the tables, rearrange the tables, think in sociometric terms about the tables. I clutter the noticeboards and walls with things and wish that I had more aesthetic sense. I made a decision to risk all from the beginning this year and brought in plants and various objects, hoping nothing got broken or spoiled (nothing has).

It's important to start work as soon as the new students arrive but not simply to impose it – which is difficult when you don't really know the students. Various departments had laid on demonstrations or talks about the kinds of activities they offered, but they didn't seem to be very successful. I felt a bit apologetic and thought things were flagging almost immediately. I got angry with several teachers for not planning their sessions well enough, or so I thought. But the students didn't seem to mind as much as I did. They quite like to chat and circle around each other. By the second day I relaxed more and concentrated on talking individually to students in my group. I didn't leave my area at all.

This is what Phil wrote at the end of his first day:----'I saw new faces as soon as I walked into the pod. Some look friendly and some don't look friendly. I'll have to make friends with them sooner or later. The school is very big and I'll be glad when I know my way around. Countesthorpe is a different school entirely from my last. The teachers seem more friendly and there is much more better things to do. The classes, or pods as they are called here, are a lot more open and don't seal you in like the old fashioned classes at my last school did'. We talked about this and about his timetable. On the basis of chats with his teachers at the other school, chats with me, and what he had heard from specialists here he chose the following subjects to study (in addition to what he would be studying in team time which would include maths, English, social studies and a variety of other things) – art. visual communication, music, control technology, chemistry, PE and games. He had changed his mind about German after talking it over with his parents. He was specially excited by the idea of Control Technology because of the construction involved, Music because of the possibility of using the organ and synthesiser, and Visual Communication because of a conversation with the person who was going to teach it who had talked about the possibilities of photography. Later he dropped

PE and Games and said he would play five a side during team time if he felt the urge. He also added Typing at my suggestion. Here, then, is his present timetable:—

		p. ever		
Monday	Tuesday	Wednesday	Thursday	Friday
1 Art	Maths	Music	Team	Maths
2 Chem	Team	Typing	Team	Team
3 Team	Vis.Com.	Chem	Team	C.Tech
4 Team	Typing	C.Tech	Team	Team
			-	-

Each week he uses one of his team lessons to do some extra maths, normally Friday 2. I work with him on Monday afternoon, Tuesday morning, all day Thursday, and Friday morning. He is alone on Friday 4. It is an atypical timetable because of the Thursday when he works in the team area all day. But he says he enjoys planning that day most of all. I usually choose then to introduce something new, or at least to have something new handy. We also talk fairly formally then about the progress of all his work, in team and out. I still need to make quasi-formal arrangements to talk with him as he will not initiate a conversation. As soon as I speak though, he rattles on about his work, fishing, astronomy, the piano accordion.

At the start of term I'd suggested to Phil that he kept a journal. This is how he described his school life after two weeks. 'I have been at this school now for two weeks and now I have settled in and doing subjects I like to do and enjoy. Once you get to know the other students they are friendly towards you. When you get down to hard work, time seems to pass a lot quicker, but the first week we were just working out timetables and going to the different classes to see what the different subjects were like and so time seemed to drift slowly by! I like it at this school you learn things at your own pace and not like at my last school where for example in maths you go through different subjects in that category like an express train so you don't gather much knowledge'.

Phil has been at the school for six weeks now. He does not work quickly, but he sometimes takes work home to finish if it interests him or ideas are fresh in his mind. Sometimes I encourage him to do this, but more often he decides himself and tells me. His journal is no more. His first story was called Life of Gold, about explorers being eaten by ants. This was in response to my reading two equally horrifying short stories to the whole class. We talked about his story and I suggested that the theme would make a good poem. He agreed and wrote one quickly. It was a splendid rhyming ballad. We talked about poetry in general. In the process he altered the rhythm of one of the verses in his poem. He insists that poetry must rhyme. I said it needn't and gave him some poems, written by students, that don't rhyme. The only one that impressed him at all was one that got in by accident almost, with an insistent rhythm and very regular rhymes. He copied it into his exercise book he thought it was so good. I questioned him about his reading. We chose 'The Naked Sun' by Isaac Asimov. He has just finished it and is now going on to read an Evelyn Waugh novel he found in my box. From discussion about what makes a good book has emerged his own novel, 'Invasion', a science fiction story which promises to go on for several chapters. The subject is time travel and I have helped with technique while feverishly reading up about relativity. He tries to explain the scientific theories behind the plot to me. As yet the novel is in a rough state, but he shows me every page. He sometimes works in the library at this. He discovered the Thesaurus one day by chance while writing his novel there and changed the word 'shouted' to 'bawled'. Now he uses it regularly with great excitement. His other written work, apart from the now defunct journal, includes a piece about his friend's grandpa, written after I had read a small group some descriptive pieces, and the beginning of a short piece called 'The Book of the Dead' written after reading the ballad 'The Griesly Wife'.

During the second week of term Phil told me that he would do some work in Astronomy after explaining about his telescope and how it worked. I was a bit worried that he felt he had to 'do a project'. This doesn't seem to be the case though as he is very interested to learn about nebulas and galaxies, partly in order to make his science fiction writing more convincing. Out of our conversations about astronomy we are now starting some historical work on the 'great figures' like Galileo and Copernicus.

I soon found that we were both getting out of our depth in our struggle to understand relativity, despite a lot of reading and discussion. It was time to bring in outside help. I had already mentioned it to a sixth former studying physics and one morning we were given a lecture on the subject during team time. We felt that things were slightly clearer then but we still need more guidance. Luckily a student teacher working in the team at the time was the expert we were looking for and he plans to work quite closely with Phil and me on this topic.

Other work that Phil has got involved in so far this term includes a survey of the birds in Countesthorpe which a friend in his class has started. I hoped that he might be interested in working around the theme of old age after I had read the piece about his friend's grandpa. He thought about it for a week but decided that he wasn't really interested. I was quite sorry about that. Then there's maths. Although I work quite closely with a few of my students on their maths work Phil is taught almost exclusively by the maths specialist. That's the way he prefers it at the moment and I am happy to leave it like this as long as both he and our maths specialist are satisfied with the way things are going.

Phil's work has begun well. My main regret, looking back over the past six weeks, is that I haven't managed to interest him yet in some of the things that excite me most – like local history, or child development, or the kind of work that involves students in experience outside school. There are other students in my group who are already involved in one or other of these things but so far Phil has not chosen to be. As I continue to work with him one of my aims will be to try and convince him that these things are worth studying too'.

: # 1

We have been working in teams now for three and a half years, long enough to recognise their value, short enough to know how far we are from making the most of the opportunities they present us. In order to define that opportunity we would return to a proposal put forward by David Hawkins in Forum in Autumn 1973. He wrote as follows: 'As many kinds of subject matter are now organised, it is not obviously nor easily possible to transform the teaching of them to a more self-directed and informal style of work in schools. Under these circumstances we are rather likely to fall back into the old polarities. By one party the tradition of the formal course will continue to be seen as for the most part a dreary, ineffective and superficial "coverage" of subject matter on its way to ossification. By the other party the advocacy of resource-based learning will be seen as a

denigration of both rigour and discipline in the mastery of subject matter. What I hope is that this old issue be buried and that we address, instead, the question as to HOW wider ranges of subject matter, of that stuff alluded to in curricula as syllabi, can be revived and reconstituted and extended so as to make it more diversely accessible and appealing to growing minds, more interwoven in the texture of a rich school environment'. We are rash enough to think that in our teams we are beginning to create the kind of context in which the questions which David Hawkins asks can be fruitfully investigated and even, maybe, answered. That is how we would want to define our opportunity.

#### A SUBSCRIPTION TO FORUM

To: FORUM,

11 Beacon Street, Lichfield.

- \* Please send three issues of Forum, starting with Vol. .... No. .... to the address below. I enclose cheque/P.O. for £2.50.
- \* Please send a Banker's Order Form to the address below.
- NAME .....

ADDRESS .....

.....

\* delete as appropriate

# Learning Resources in the Mixed Ability Classroom

#### **Peter North**

Peter North, who writes here on the new approach required to mixed ability teaching, has taught at Hackney and Greenwich, including seven years as a Head of Department at Crown Woods School, London. He is at present Senior Lecturer in Sociology at Avery Hill College of Education.

Too often when teachers speak of 'resources' they refer to 'resources for teaching'. In much everyday use 'resources' means showing a film, handing out thirty identical worksheets, or opening a text book. Resources are seen as an extension of the teacher's role qua 'teacher' - the central agent in a classroom directing, structuring, providing and controlling the dissemination of knowledge to the pupils. Resources neatly parcel up knowledge to be handed out to deserving groups of pupils organised within tight boundaries of subjects and streams. Within the mixed-ability situation there needs to be a deliberate breaking down of barriers. With the annihilation of the myth of classroom homogeneity and its narrow emphasis of boundaries between teachers and taught, pupil and pupil, subject and subject, the role of resources must undergo a fundamental change.

When Freire writes of the oppressors that 'the very structure of their thought has been conditioned by the contradictions of the concrete, existential situation by which they were shaped', he pin-points the fundamental dilemma which confronts every teacher who attempts the shift from the streamed class to mixed ability learning. It is not enough to reorganise teaching groups - merely to implement organisational changes in the distribution of children between forms. For a mixed-ability classroom to become a place of real learning there needs to be a parallel shift in the teacher's consciousness. The teacher needs to reconstruct his or her perceptions of the class. A new perception must be developed which owes nothing to generalised notions of stratified ability or the appropriateness of specific forms of knowledge. Instead the activity of the classroom must be clearly related to the reality of the individual child. In this context teaching must become learning, classes must become people and children must be seen as individuals. Resources from that

point can only enter the classroom as 'resources for learning'.

The adoption of such a position forces the teacher to face the new situation of mixed-ability classrooms head on. The teacher's activity ceases to be the preparation of appropriate techniques for the communication of gobbets of knowledge through structured resources. Instead he must develop situations where children are able to learn in appropriate ways from appropriate resources. If classrooms are seen to be made up of people, and children are seen to be individuals, then learning must be allowed to proceed in a variety of different ways each suited to particular needs. When the teacher imposes upon the group a consciousness directed by false notions of homogeneity and differential ability then mixed ability learning becomes a sham. It is in this way that teachers become pre-occupied with a quest for resources which embody stratified conceptions. 'Multi-level resources' are sought. Material is developed which aims to stretch the most able, occupy the dull and to provide fodder for the lumpen masses in the middle. Such an approach recreates streaming in the mixed ability group and is often all too evident in the pages of publishers' catalogues and Staff Room conversations.

In developing resources, therefore, the teacher in the mixed-ability situation must work from the presumption of the basic heterogeneity of children. The question cannot be 'How shall I teach that class' but 'How can I enable each of these children to learn'. In a sense this too is a false question for it implies that teachers have some special relationship to learning. Whilst it may be an effective rationale for a teaching profession, taken to extreme it can easily deny the validity of those learning situations which impinge upon the child when away from the orbit of the school. When the teacher accepts that he is but part of one segment of the child's learning experience then he sees his role in context, and can begin to see how faint an image is cast upon the child by what are conventionally termed 'resources'. Any consideration of 'resources' in such a context must involve an awareness of those resources children bring into the classroom, and the effect that 'school resources' have upon the real resourcefulness of the child.

John Darke in an article on 'Mixed Ability Science' (Forum, Vol. 3, No. 1) commented on the effect of the teacher withdrawing from his accepted role of initiator and director of classroom activities during a project on water. 'There was a first month of bewilderment with children sometimes pleading with me to tell them what to do; children acting with something akin to despair. "I can't think of anything to do with water". But a pattern of work began to emerge which was encouraging. Increasingly the impulse came from them. They began using me more as a consultant than a respository of information and instructions. More or less successfully, they began to find out about boiling point, solution, orange juice, water and detergents, etc.' Vivienne Griffiths makes a similar point when writing about a Humanities Curriculum Project Group: 'The students started asking questions of the material for themselves, without looking to me to do this ... I started to intervene less because it was becoming unnecessary; the relevant contributions were coming from them'. (From - 'People in Classrooms', edited by John Elliott and Barry Macdonald, University of East Anglia Occasional Papers, No. 2).

The child, however, brings more into the classroom than just the ability to organise his own learning, important though that is. Children live in houses, belong to families and share in the life of the community. All of this they bring with them into the classroom. Too often the activity of that classroom is centred on the recreation of a pale image of that real world which exists out there beyond the school gate.

The representation of the real world inside the classroom can so easily become unrelated to that world as it exists. Resources within the classroom should provide that essential link with the outside reality, supporting and encouraging children in their explorations. Kelly, in *Teaching Mixed Ability Classes* (Harper Row, 1974) suggests three main functions of learning resources. Resources can be *aids to motivation, aids to learning* and *stimulus to the imagination*. He rightly stresses the close inter-relationship between all three functions. One of my favourite resources is a British Museum replica of a cuneiform tablet bearing the Babylonion legend of Mar-

duk. It costs little more than £1. In considering 'myth' as a topic with 11/12 year olds this little tablet captivated the children's interest. 'Were those marks really made over three thousand years ago?', 'What was it made of?', 'Who made it?', 'Where is the real one?', 'What does it say?'. The clues to many of the answers to these questions were found in the tablet. The script could be copied and compared to pictures of cuneiform script in the library. Roger Lancellyn Green's collection of myths would be discovered with the tablet's story translated; stories would be written around the origins and discovery of the original tablet. and some enthusiastic individuals would set to with sharpened sticks and lumps of clay inveigled from the pottery teacher. My little block of cuneiform inscribed clay provided a link between the classroom and the reality which was the focus of our study just as did a colleague's Roman oil lamp, and another's family of gerbils.

However, such 'aids to motivation and imagination', whilst having a value, are no better than gimmicks if employed without proper support. Resources are, quite rightly, aids for learning. With thirty twelve-year-olds, a classroom, and one BM replica, the potential for learning to take place is, to put it mildly, somewhat limited. If the 'gimmick' works and acts as a spring-board into explorations and discovery of the 'real world', many more resources are going to be required. Too often it is at this point that the average, overworked teacher gives up in despair. The collection and organisation of a body of resources which will provide the basis for developing and imaginative work by children is a project which daunts many. The easy way out - the worksheet - is sometimes too readily taken. Often too one hears the cry, 'It would be a good idea if we had a proper Resources Centre', implying some form of centralised bank of media-based materials serviced by hordes of technological minions.

Both approaches – the worksheet and the Resources Centre – seem to me to be admissions of defeat, grounded in a failure to appreciate the nature of learning in a mixed-ability class. Worksheets do have their uses. In subjects which possess a basic structure the worksheet can show the way. In certain cases they can provide a prop for the child who has been absent or works at a totally different pace from the rest of the class. Particular skills like using the Library, or working a tape-recorder, can often be communicated efficiently through the worksheets. Where even the best written worksheets so often fail is in their extreme itemisation and codification of complex phenomena. Many, I regret to say, are not well written. Apart from the typographical atrocities they inflict upon the eye, they often contain vocabulary, language structures and conceptual frameworks which are beyond the understanding of their readers. Most serious of all, worksheets can warp a child's conception of learning. How many worksheet-fed students would agree with the words of Samuel Johnson, 'If it rained knowledge, I'd hold out my hand; but I would not give myself the trouble to go in quest of it'.

The establishment of a centralised Resource Centre is again only a partial answer to the learning needs of the mixed ability class. As Keith Evans has pointed out ('Multi-media Resource Centres: A Cautionary Note', in *Secondary Education*, Vol. 1, No. 3), the grand style of Resource Centre on the American model is often not only beyond the financial capability of many schools, but may in fact hinder the teachers in their job in the classroom. For the majority of teachers, resources need to be accessible and near at hand. Often the most effective approach is the simplest. A collection of cardboard boxes containing a range of relevant material on a topic, plus a few simple slide viewers and a tape-recorder can provide a basic foundation for mixed-ability enquiry work from which to move out to wider resources. For information not contained in the box students can then use the school library, or the local Public Library. In the larger school, a departmental room or office can provide a further area of resourcing.

The keynote is flexibility. Children should be confronted with a wide range of resources, some open-ended, some structured, some employing demanding language and concepts, others providing a basic understanding. Learning is a complex process. There are no sure guides or easy paths. Motivation and comprehension are as important as structure and effort. The teacher who really faces up to the mixed ability situation must face up to this one fundamental fact. There is no right way to learn. There are many ways. The mixed ability classroom can only exist as a learning environment if it wholeheartedly accepts this fundamental premise.

# Review

## Knowledge Definition

Class, Codes and Control, by Basil Bernstein, Routledge and Kegan Paul (1975), 167 pp. £3.50.

This collection of papers is basically about what 'knowledge' teachers put in front of their pupils and how they put it. As the third volume in the Class, Codes and Control series it is subtitled Towards a Theory of Educational Transmissions – and any readers who really want to find out what Professor Bernstein is saying in this book will have to be prepared to put up with that kind of language until they are sufficiently familiar with his labels to perceive what he has in mind. Having struggled, I think it is worth the effort – particularly in Chapter 5 'On the classification and framing of knowledge'. For me, this is the central and most interesting chapter of the book. It is the paper which I now want to discuss with other friends who are teachers in order to explore more fully its implications for teaching and learning in primary, secondary and further education.

I would certainly not recommend that readers start with the introduction unless they know Professor Bernstein or his previous work very well. In it he takes us through the papers which subsequently appear in the book, no doubt with a clear picture of what they are about and how they link with each other in his own mind - but in a way that with no prior knowledge as a reader, I found very confusing. It may be that it would be more illuminating to read the introduction as a sort of epilogue. Certainly the first three chapters which comprise Part I of the book are easygoing by comparison. Between them they sketch in a broad picture of what is happening in schools along two dimensions - academic and social. Throughout the book, Bernstein distinguishes (by means of a variety of labels) between a prescriptive approach to learning and an open ended and questioning approach which does not already have all the answers in mind.

Because this review must be brief, I want to comment particularly on the fifth chapter, which reflects and focuses much of the thinking that has preceded it. In this chapter, Bernstein distinguishes between a 'collected' code of educational knowledge and an 'integrated' code. Both codes apply to what is taught and to how it is taught and both have particular reference to the strength or the weakness of the boundaries in each context: how firmly are 'subjects' insulated from each other in our educational system – or come to that, teachers from pupils ?

In his theoretical study of these two crucial aspects of education Bernstein constructs a series of networks which demonstrate how each 'code' has implications for the power and control systems in the school. For instance, where the 'classification' (boundaries between subjects) is strong and the teacher's control over the selection, organisation, pacing and timing of the knowledge transmitted is also strong, clearly the power of the pupil to choose what he wants to learn and how he can most effectively learn it is very limited. Similarly, where classification and framing are weak, the chances for the pupil to establish himself at the centre of his own learning are much better.

Bernstein points out that it is possible to have strong classification and weak framing - in fact he suggests that teachers are more likely to be able to make choices about how they teach if the boundaries between subjects are clearly defined. My own view would be that he under-estimates here the powerful influence of external examinations on how the teacher seeks to transmit knowledge. The pressures of time (only 3 years, 2 years, 5 terms...) when a set syllabus has to be covered unfortunately dictate to many teachers even when they are reluctant to operate in this way – a framing of knowledge which does not allow for extensive discussion or the relation of what they are teaching to the pupil's previous experience.

It is suggested in this chapter that less academic pupils often encounter more open framing because there is less examination pressure in their teaching-learning situation, and I think this is true. Teachers are often more prepared to work less prescriptively with less able pupils and to look for ways of linking new information with areas of their experience that are already meaningful to them. What the paper does not suggest is that this flexibility would also benefit bright children too; such pupils may be able to play the game the teacher demands under a tighter classification and framing system, but even when they receive high marks for their expertise, such learning may not be of much permanent value to them.

I would have liked to see rather more attention given to this aspect of educational knowledge - assessment, which is defined by Bernstein as a third 'message system' (curriculum and pedagogy being the other two). What is welcome is the recognition that no major shift from a collection code to an integrated code will occur in this country until the universities change their present attitudes to the classification and framing of knowledge: 'if we accept for the sake of argument the greater educational value of weak classification and frames, the condition for their effective and total institutionalisation at the secondary level is a fundamental change of code at the tertiary level'.

It is made clear throughout the book that most of the hypotheses about how an integrated code might work are still theoretical for the reason just given. For teachers who are familiar to some degree at least with the differences that such a change of code involve, some of these hypotheses (which rapidly come to sound like statements of fact) may be questionable – that 'integrated codes call for greater homogeneity in pedagogy and evaluation' for instance.

But with the central issue of the book I have no argument: the crucial importance to education of how knowledge is defined and who defines it. For all of us who would like learning to become more meaningful for more children, this must be at the heart of our thinking and planning. Although in theory in these papers, Bernstein detects a move away from tight classification and framing to a more open, 'integrated' approach, in practice he accepts that the English educational system is still dominated by the collection code and in this passage he spells out what this means:

'Any collection code involves a hierarchical organisation of knowledge, such that the ultimate mystery of the subject, is revealed very late in the educational life. By the ultimate mystery of the subject. I mean its potential for creating new realities. It is also the case, and this is important, that the ultimate mystery of the subject is not coherence but incoherence: not order, but disorder, not the known, but the unknown. As this mystery under the collection codes is revealed very late in the educational life - and then only to the select few who have shown signs of successful socialisation - then only the few experience in their bones the notion that knowledge is permeable, that its orderings are provisional, that the dialectic of knowledge is closure and openness. For the many, socialisation into knowledge is socialisation into order, the existing order, into the experience that the world's educational knowledge is impermeable. Do we have here another version of alienation?' PAT D'ARCY



# The following BACK NUMBERS of FORUM are still available price 85p each.

Vol 1 No 3	Experiences with a backward class; General Subjects in the Junior School; Teaching English.					
Vol 2 No 1	French in non-selective schools; children who are backward; Educa- tion of the average child.					
Vol 6 No 3	Symposium on the Robbins Report.					
Vol 7 No 2	Special number on Further Education.					
Vol 8 No 2	Special number on the Probationary Year.					
Vol 9 No 1	The Schools Council at Work; CSE on Trial.					
Vol 9 No 3	Symposium on the Plowden Report.					
Vol 10 No 1	The Sixth Form in the Comprehensive School; Curriculum planning in a large school.					
Vol 10 No 3	Focus on Groups — teaching in groups.					
Vol 11 No 2	Two Years after Plowden; Self-directed learning.					
Vol 11 No 3	Freedom of Choice — for whom? A new Education Act?					
Vol 12 No 2	From secondary to primary.					
Vol 12 No 3	Teaching Unstreamed Classes.					
Vol 13 No 1	Teachers for Comprehensives; Mixed ability science.					
Vol 13 No 2	Assessment — for Whom? Recent trends in examining.					
Vol 14 No 2	Innovation in Education.					
Vol 14 No 3	ROSLA and De-Schooling.					
Vol 15 No 1	Democracy and Innovation in Education.					
Vol 15 No 2	16 to 19.					
Vol 16 No 1	Resource-based learning.					
Vol 16 No 2	Schools CAN make a difference.					
Vol 16 No 3	Going Comprehensive in England, Wales and Scotland.					
Vol 17 No 1	The 'new' sociology and education.					
Vol 17 No 2	New Directions: reconstruction of knowledge					
Vol 17 No 3	The Question of Size for primary and secondary schools.					
Vol 18 No 1	Mixed Ability Teaching.					
Order from: Forum, 11 Beacon Street, Lichfield.						