

Approaches to Differentiation in Primary Schools

Key Points

- Differentiation was defined as 'the process whereby an attempt is made to provide learning experiences which are matched to the needs, capabilities and previous learning of individual pupils'.
- School subject coordinators recommended the use of a range of differentiation techniques including whole class teaching, group work and individual attention.
- Few schools had a specific, whole school policy on differentiation, although the majority of Principals said it was implicit in all subject planning.
- The largest proportion of teachers said they made provision for a wide range of pupil attainment, a substantial minority made provision for lower and higher attainers, and a minority did so for lower attainers only.
- Differentiation was mostly by task set in English, mathematics and science. However differentiation was more difficult in science with some teachers differentiating on the basis of anticipating a different outcome for the same task, except where the less able had to have an easier task.
- Major problems in providing differentiation identified by Principals, subject coordinators in schools, teachers and Education and Library Board staff were lack of time, limited human resources, pressure from other educational innovations and classroom management.
- Board staff said teachers reported difficulty in drawing up schemes of work and developing supporting materials to cover the full range of pupil ability.
- Teachers reported that they received no advice in school on grouping for differentiation although most Principals and over half the subject coordinators said advice was given.
- Principals and teachers had not received any inservice (INSET) support specifically for differentiation in the last 3 years and found inservice training days to be only of moderate relevance to differentiation. Inschool support was felt by most teachers to be of lasting value.

1. Introduction

1.1 Focus of Study

This Research Briefing summarises the findings of research commissioned by the Department of Education into existing provision of differentiated learning in primary schools. Information was collected by a series of questionnaire surveys, interviews and case studies focusing upon schools and the Education and Library Boards.

1.2 The Policy Context

The Education Reform (NJ) Order of 1989 provides for a common curriculum which is broad, balanced and relevant. The Statutory Subject Orders of the Northern Ireland Curriculum aim to provide children with continuity of educational experience commensurate with their needs and attainment in terms of programmes of study for each key stage. If children are to progress through the attainment levels of the various subject attainment targets at different rates and to various extents, then school policies, teaching programmes and schemes of work need to ensure differentiated learning.

1.3 Definition of Differentiated Learning

Differentiation was defined as 'the process whereby an attempt is made to provide learning experiences which are matched to the needs, capabilities and previous learning of individual

pupils'. This definition implies that teaching must take into account differences in learner characteristics. This in turn requires careful assessment, flexible planning and the provision of a variety of approaches to learning and teaching.

2. Main Findings

2.1 Planning and Approaches to Differentiation

"All abilities must be catered for, ie the highest achievers are sometimes ignored or worse, rewarded when finished a task, with more work which neither stretches or stimulates."

Most Principals had no separate policy document for differentiation but suggested that it was embedded in all subject planning. It was not an issue discussed with Boards of Governors. Larger schools planned in year groups and smaller ones as closeknit teams but the real responsibility for differentiation in schemes of work lay with individual teachers.

The majority of subject coordinators and teachers said they made provision in their teaching for a wide range of ability, a substantial minority made provision for lower and higher attainers, a minority made additional provision for lower attainers only, and a small group did so for higher attainers. The preferred approach to differentiation by the majority of English, Mathematics and Science coordinators was a combined method of whole class teaching, group work and individual attention.

2.2 Putting Differentiation into Practice

"Grouping is the closest you get to matching tasks to the child, unless a pupil has special learning difficulties. They need onetoone but giving it is almost impossible in the time."

Over half the Principals and teachers in the survey said they differentiated in homework only between low attainers and the rest. Subject coordinators were slightly more likely to differentiate in homework for a wide range of ability. A minority of each group did not differentiate in homework at all.

Teachers' Perspectives on Good Practice in Differentiation

Good practice in differentiation was defined as identifying pupils' individual needs, helping them progress at tasks commensurate with their ability and recognising potential. The ideal in primary classrooms was to provide for individual needs and the research showed that strenuous efforts were made to differentiate in this way. The greater detail gathered in the case studies through observation and interviews revealed that catering for group needs constituted a more realistic target. It was felt to be impossible to treat all pupils as individuals, in spite of the demands to do so and teachers were unable to differentiate to the extent that they themselves would have liked.

"Children are being given the opportunity, particularly the more able, to reach their potential in primary school. There is no 'stopping point' and you cater as best you can for the average and lesser ability.

Children are not presented with what for them is 'double clutch' and they should get the chance to feel good about themselves, that they can accomplish a task with help and then achieve success independently."

"I expect to see a range of resources used for a range of ability in the classroom and if a child needs to develop a skill, this should be met partly by appropriate materials."

"If it's going well and I have a few different groups working at what is suitable for them

then I feel I am differentiating. Individuals No mater how highly structured it is, its impossible, but I try to make allowances as time permits."

"You cannot ask yourself to do the unobtainable. If you can manage it, three groups ideally. But to differentiate in this class of 27 to the level felt to be appropriate to me as a teacher, five groups are needed plus individual attention for the weakest children' who are slow but not remedial. I have to be superorganised."

Teachers in the study differentiated in classwork by 4 main methods:

1. **By Task** In the survey it was revealed that in English, mathematics and science the majority of teachers differentiated by task set in subject specific groups.
2. **By Outcome** In the case study schools differentiation in science was by outcome (the same task but different anticipated results in mixed ability groups).
3. **By Differentiated Access to Resources** In the survey differentiation in access to resources might mean varying the duration of resource use or restricting its extent and variety. In both the survey and case study teachers provided differentiated access to resources in English and mathematics but to a much lesser extent in science.
4. **By Differentiated Access to Inclass Support** All case study teachers reported giving inclass support according to pupils perceived attainment levels and the needs of the moment. Teachers in the survey provided differentiated inclass support to a much greater extent in English and mathematics than in science. Differences emerged between Key Stage 1 and Key Stage 2 teachers. Key Stage 1 teachers in the survey tended to give more inclass support than Key Stage 2 teachers to the lower attainers in all 3 core subjects. Key Stage 2 teachers in the survey tended to give more inclass support to the higher attainers particularly in Science.

Although most Principals and over half the core subject coordinators said that their staff did receive advice on grouping for differentiation from within the school, the vast majority of teachers said they did not receive advice on grouping for differentiation. The first preference for grouping pupils for differentiation was by subject ability, with mixed ability groups based upon the teacher's judgement a close second preference, followed by general ability grouping.

2.3 Problems with Differentiation

"Where do we get the time to do it all? Only at home. Plans have to be made but they also have to change. Time is always a constraint."

Principals, subject coordinators and teachers considered the main internal problems in providing a differentiated curriculum to be: the lack of time for planning and preparation, pressures of classroom management, small classrooms, large classes, the identification of learning gains and the lack of motivation for group work.

"We need two adults in a room when group work is taking place. If a pupil has a problem there must be an adult to approach for help if differentiated teaching and learning is to take place."

Differentiation was also said to be hindered by external factors: limited teaching support and auxiliary assistance, limited parental support for differentiated practices and the adoption of new teaching and assessment methods.

Lack of space was clearly a problem in the case study schools with an average class size of 28. A large class or the combination of a large class and a small classroom imposed

considerable constraints on the storage and management of the wide variety of resources needed for differentiation, making the management of group work extremely difficult.

"Teachers cannot see the wood for the trees. There is a lack of confidence about what they are doing."

The Education and Library Board curriculum support staff almost all felt that composite age classes were the greatest obstacle to successful differentiated practice. Board staff said teachers faced problems with drawing up schemes of work, matching tasks to large numbers of pupils and producing resources for the extremes of pupil attainment. The Board staff believed subject coordinators needed training in both classroom and resource management in the differentiated teaching of the 3 core subjects to enable them to advise colleagues in all aspects of differentiated practice.

2.4 INSET and Differentiation

"Training days are too subjectorientated and do not focus on the elements of differentiation which are found to be causing difficulty in classrooms."

Most Principals and teachers had not received any inservice (INSET) support in the last 3 years specifically for differentiation. Over half the Board staff said teachers had not made requests for support for differentiation although identified needs in school could be met. The majority of Principals and teachers said INSET training days were only of moderate relevance to differentiation.

All case study teachers felt a day spent in school examining their own differentiated practice was more useful than an inservice training day. The small number of teachers who had received inschool support felt it was of lasting value but felt support staff should be in school for longer periods of time and that more resources should be allocated. Inschool support provided by Education and Library Board support staff was found by subject coordinators to be of more value than INSET training days.

2.5 The Impact of the 11+ on Differentiation

"The new 11+ emphasises rote learning. As science coordinator I emphasise pupils must learn by doing. They must predict, test and then record results. This is not possible in the 11+ test. They are learning facts without practical work."

The largest group of Principals, subject coordinators, teachers and Board staff saw some negative effects on differentiation from 11+ selection. The emphasis on syllabus coverage and a common examination at 11+ was felt to be incompatible with the essence of differentiation, namely matching the task to the child and building on progression. Teachers compensated for the negative effects by trying to persuade the parents of less able children to opt out of the examination, giving extra support earlier to 11+ candidates or catering for the whole ability range. After selection tests were over, teachers undertook more differentiated work especially through topic work and in science more investigative work. Education and Library Board staff suggested more inservice training on differentiation and its classroom implications and the provision of more exemplar material for schools as a response to the negative effects of selection.

2.6 The NI Programmes of Study and Attainment Targets

The majority of Principals, subject coordinators, teachers and Board staff considered that the Programmes of Study and Attainment Targets provided a framework for differentiation and had challenged teachers to adopt a wider range of teaching methods. However, the case study teachers maintained they had always used a variety of teaching approaches.

2.7 Teacher Educators' Views on Differentiation

The teacher educators interviewed felt student teachers were generally well prepared for differentiation as far as their practical experience allowed, 'for the first year maybe, but not for a lifetime'. Problems had to be faced by student teachers in the preparation of resources for the extremes of ability and confidence needed to be developed in science to enable successful differentiated teaching.

2.8 Student Teachers' Views on Differentiation

Student teachers, in an openended interview, showed a clear understanding of differentiation, but were very conscious of the gap to be bridged between educational theory and practice. Student teachers themselves had some doubts about how well prepared they were for differentiated teaching and learning, having noted during teaching practice the difficulties and constraints faced by experienced teachers. The main problem anticipated by the student teachers apart from large classes, small rooms and limited human resources, was matching of tasks to pupils, especially where there was a wide range of ability.

3. Recommendations

The following recommendations are made in the research:

a. Definition of Policy at Whole School Level

A clear definition of differentiation at school level is needed which would be implicit in all planning and translated into schemes of work, thus providing pupils with opportunities for differentiated learning.

b. The Role of the Subject Coordinator

Inservice training needs to be given to subject coordinators in all aspects of differentiation and its implementation to enable support to be given to teachers in all elements of the school's policy including planning, assessment and evaluation. The role of the coordinator as the key adviser for teachers on differentiation needs to be clarified.

c. Putting Differentiation into Practice

Assistance is needed for teachers in the planning of schemes of work and in the presentation of resources for a wide range of pupil attainment. Exemplars of schemes of work, advice in classroom management (especially with multiple groups) and on resource management are particularly needed in science. Advice on grouping for differentiation in science is also needed, where teachers might respond to the different needs of pupils by grouping by subject ability and differentiating by task set rather than by outcome alone in mixed ability groups.

d. The Problems of Differentiation

The shortage of human resources remains the single, most pressing problem for teachers in trying to put differentiation into practice and additional professional help is needed in schools. Closely linked is the need for regular auxiliary classroom help to assist teachers with the preparation of resources for differentiation in order to ease the pressure of time upon teachers as they plan and evaluate schemes of work and prepare resources.

e. INSET Provision

Inservice support is needed which focuses on differentiation and is matched to the needs of individual schools. In particular, inservice training days need to focus upon classroom management, matching pupils to levels, the differing needs of higher and lower attainers and differentiated teaching methods and assessment. Special inservice provision is required to meet the needs of composite age class teachers where the management of a wide age and

ability range has been identified by curriculum support staff as a major problem. In-school Education and Library Board support should be of longer duration and better resourced and supported. It should also include more teamteaching and better opportunities for the evaluation of the support given.

4. Methodology

There were 4 phases in the project on differentiation, which started in September 1993:

- Phase 1** The first exploratory phase identified major issues in differentiation through open ended interviews with the staff of 14 primary schools drawn from both controlled and maintained schools, Advisers from the Education and Library Boards and an Education Officer from the Council for Catholic Maintained Schools;
- Phase 2** The second phase comprised 4 survey questionnaires, sent to a random sample of schools stratified to take into account management type, geographic location, size and Education and Library Board. The questionnaire samples comprised:
- 210 Principals of whom 147 responded (70%).
- 150 Subject Coordinators representing English, mathematics and science of whom 98 responded (65%).
- 400 Teachers equally divided between Key Stage 1 and Key Stage 2 teachers of whom 236 responded (59%).
- 95 Curriculum Support Staff from Education and Library Boards of whom 55 responded (58%).
- Phase 3** The third phase comprised case studies, including observation and informal interviews, which were carried out in 20 classes from 7 schools with one day spent in each class;
- Phase 4** The fourth phase of the study involved semistructured interviews focusing upon differentiation with 6 teacher educators, representing the Teacher Training Colleges and the Faculty of Education in the University of Ulster, and 4 third year student teachers.

5. The Project

The contract for the project, which began in September 1993 and lasted for one year, was awarded by DENI to the InService Education Department, University of Ulster. The grant holder was Professor Brian McGarvey, Head of Department, who was assisted in the research by Dr Valerie Morgan, Senior Lecturer in Education, Dr Stuart Marriott, Senior Lecturer in Primary Education and Miss Lesley Abbott, Research Officer for the Project. The cost of the project was £39,344.

Full Report

The project described above is reported in full in *"Differentiation in Primary Schools"* by Brian McGarvey Stuart Marriott, Valerie Morgan and Lesley Abbott, DENI Research Report Series No 1 1996. A limited number of copies are available from the Department of Education.

The views expressed in this paper are those of the author and do not necessarily reflect those of the Department of Education for Northern Ireland who funded the study.

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