ABSTRACT
        This handbook describes research projects of the
School of Education, University of Bristol. Eight current projects
are briefly described, and references are listed for each. These
projects include (1) a pilot project working with probationary
teachers, (2) a study of teachers' support agencies, (3) a
longitudinal study of language development in preschool children, (4)
a study on reading readiness and reading instruction, (5) a study of
local education authority advisers and educational innovation, (6) a
replication of the Coleman Study, (7) a project to develop
independent learning materials, and (8) research on emotional effects
of the menstrual cycle in adolescent girls. The handbook then
describes two past research project; one on the administrative tasks
of head and senior teachers in large secondary schools, and the other
on supervision and student learning in relation to school experience.
The handbook also discusses the School of Education's efforts to
involve teachers in small research projects. Finally, computer
activities in the School of Education are described, and a list of
reports and papers available from the School of Education is
presented. (CD)

The Research Unit

Handbook

University of Bristol

School of Education

Research Unit

LIST OF CONTENTS

UNIVERSITY OF BRISTOL SCHOOL OF EDUCATION

THE RESEARCH UNIT

The Research Unit was first established in 1963 with part of an earmarked grant from the Department of Education and Science for the promotion of educational research. Bristol was one of only four universities to take up the offer of the grant and was the only university to use the money to establish a self-contained Research Unit. The money was offered on the understanding that the Unit would eventually become the responsibility of the university and be financed by U.G.C. funds. Thus the Research Unit at Bristol was initiated as a separate sub-division of the School of Education with the aim of providing a concentration of resources relevant to educational research, which also could serve the teaching side of the School's activities.

There are four permanent Research Fellows and one half-time Research Assistant. At the moment two of the posts of Research Fellow are vacant. In addition, the Research Unit has a sizeable proportion of contract staff and a team of permanent secretarial staff led by the Research Unit secretary.

During the vacancy of the post of Director of the Research Unit the management of day to day affairs of the Unit is carried out by a Chairman, this responsibility being held by one of the Research Fellows. The planning and co-ordination of research projects, including those based outside the Unit, is dealt with by the Research and Development Committee which comprises the three Professors of Education, Project Directors and other members of the School of Education.

Activities of the Unit

1. **Research**

    Research in the Unit varies in both its character and scale from small psychometric experiments carried out with a few children to large scale surveys of schools and teachers on a national basis. Outline accounts of the Unit's current research activities are contained in this Handbook.

    The major part of this work is funded on a contractual basis by national bodies such as the Social Science Research Council and the Department of Education and Science. In acting as host to these projects the Unit provides supervision, technical resources and accommodation. In return the Unit is enabled to expand its range of central facilities and distribute their use in an economic way.

2. **Teaching**

    Although the members of staff of the Research Unit are engaged primarily for their research role many of them undertake a considerable teaching load within all divisions of the School of Education. Some of this teaching is in subjects in which the individuals were initially trained but much of it is aimed at fostering an awareness and appreciation of research methods and findings. Wherever possible, issues and problems arising from research projects are used as the basis for teaching and student projects.

    In this context special mention must be made of the Teacher Research Groups which aim to involve local teachers in research projects involving their own schools and pupils. Not only does this give them some guidance in the principles of research method but the meetings serve as a vehicle for creating an awareness of many untapped research reports and journal articles.

3. Support Facilities

As a result of its research commitment the Unit has a continuing policy
of acquiring resources and equipment especially adapted for its work.
Among other things this comprises extensive computing equipment including
both programmable desk calculators and a powerful mini computer.   There
are also extensive facilities for recording and observing children and
mothers in play situations.   Some of this equipment is still used mainly
by particular projects but is expected to become available for more
general use in future.   Because data processing has become such a large
part of research, the Unit is developing this activity as a special resource.
To a large extent the staff chiefly concerned with programming act in an
advisory capacity to staff and students both within Education and, on
occasions, to departments with similar interests.   A limited amount
of teaching in computing is undertaken using the Unit's mini-computer and
there are further plans to use the computer as a teaching aid for displaying
graphical data and demonstrating interactive processes.

4. Report Publication

Because of the nature of educational research and its involvement with
schools and other institutions there is a need, absent from research in
many other fields, for feeding back information to a very large specialist
readership.   Because of the combined pressures of urgency and specialism
of readership it has been found expedient to distribute reports of
Research Unit work direct from the Unit.   In some cases these limited
editions are produced within the Research Unit and in others the printing
is done externally and the Unit serves as the distributing agency.
This runs as a self-financing operation and the steadily increasing demand
for these publications is evidence of its success.

The items marked with an asterisk in the project
bibliographies are obtainable on request.
Information about these and other Research Unit
publications is included on page 28 of this
Handbook.   Requests for items and further details
should be sent to: The Research Unit Secretary
19 Berkeley Square, Bristol BS8 1HF.

TEACHER INDUCTION PILOT SCHEMES

National Monitoring and Dissemination Project

Since 1966 the Research Unit has carried out a series of research and development projects, all funded by the Department of Education and Science, on the induction of probationary teachers. The T.I.P.S. Project arose from this earlier work and from a government decision to establish pilot schemes to experiment with new forms of probationer induction in accordance with the recommendations of the James Report and the subsequent White Paper.

The Department of Education and Science has now funded a four-year (1974-1978) national project, based on the Research Unit, to promote, co-ordinate and inform the monitoring and dissemination activities of the 'official' and 'unofficial' pilot schemes. The key features of the funded or official schemes are that probationers have reduced teaching loads, plus the equivalent of one day per week for in-service training and that each school has appointed a specifically trained teacher tutor. The unofficial schemes are, generally, trying out alternatives to these approaches.

The Bristol team has a dual monitoring commitment: to the two official schemes in Liverpool and Northumberland and to several unofficial schemes. Broad agreement has been reached with the local evaluators and organisers about an evaluative research design focusing on six levels: individual probationer; school; professional centre; L.E.A.; regional; national.

The emphasis of both the evaluation and the dissemination is upon practical, operational needs at each of the six levels. The dissemination strategy has two broad features: the creation and support of a communication network of interested agencies to facilitate the exchange of practical information via working conferences, a newsletter and individual contacts; and the wider dissemination of monitoring and dissemination findings via interim reports and regional conferences. At national level the Bristol team works closely with H.M.I. and the Induction and In-Service Sub-Committee of the Advisory Committee on the Supply and Training of Teachers.

Duration: October 1974 to September 1978.

Funding: Department of Education and Science: £58,000

Staffing: University Supervisor: Professor E. Hoyle
            Project Director: R. Bolam, Research Fellow
            Research Associate: K. Baker
            Secretarial Staff: Mrs. B. Wells
                                    Mrs. J. Moore

Probationary Year Project : Relevant Publications

BOLAM, R., 1971. "Guidance for probationer teachers", Trends in Education, 21, 41-48.

* BOLAM, R., 1973. Induction programmes for probationary teachers Bristol: University of Bristol, School of Education. (A report on an action project which highlights the problems and issues associated with the organisation and evaluation of induction programmes in four L.E.A.s during the year 1969-70.)

BOLAM, R., 1973. "Improving the induction year : some comments on the White Paper proposals". Secondary Education, 3, 3, 3-6.

BOLAM, R., 1973. "School-based training (cycle 2) in the United Kingdom" in BEHRSTOCK, S. (Ed.), Continuity in Teacher Education : Report of a W.C.O.T.P. European Seminar. Morges, Switzerland. World Confederation of Organisations of the Teaching Profession.

BOLAM, R., 1975. Innovative Teacher Induction Programmes. Ph.D. Thesis, University of Bristol.

* BOLAM, R. and TAYLOR, J.K., 1972. The Induction and Guidance of Beginning Teachers . A paper read at the Annual Meeting of the British Association for the Advancement of Science, Section L (Education), at Leicester, England.

DALE, I.R., 1973. An Analysis of Factors Affecting the Reaction to Teaching of Teachers in Their First Year of Service. Ph.D. Thesis, University of Bristol.

* TAYLOR, J.K. and DALE, I.R., 1971. A Survey of Teachers in Their First Year of Service . Bristol: University of Bristol, School of Education. (A report on a survey of the situation and views of a national sample of probationers during the year 1966-67.)

TAYLOR, J.K. and DALE, I.R., 1973. "The first year of teaching" in LOMAX, D. (Ed.), The Education of Teachers in Britain. London: J. Wiley & Sons.

T.I.P.S. Project : Relevant Publications

BAKER, K., (forthcoming). "A review of current induction practices for new teachers", Trends in Education

BOLAM, R., 1975. "The Teacher Induction Pilot Schemes Project", London Educational Review, 4, 1, 28-35.

BOLAM, R., 1975. "The management of educational change towards a conceptual framework", in HOUGHTON, V.P., McHUGH, C.A.R. and MORGAN, C. (Eds.), Management in Education Reader 1 : The Management of Organisations and Individuals. London, Ward Lock.
And In: HARRIS, A., LAWN, M. and PRESCOTT, W. (Eds.), Curriculum Design and Development Reader 1 : Curriculum Innovation. Croom-Helm Ltd.

BOLAM, R., 1975. The Supervisory Role of the Teacher Tutor : A Complex Innovation. A paper read at the first annual conference of the British Educational Research Association, University of Stirling, Scotland. Forthcoming in Research Intelligence, B.E.R.A. Journal.

BOLAM, R., 1975. 'Resources for INSET', British Journal of In-Service Education, Vol. 2.1, 4-7.

BOLAM, R. and PRATT, S., 1975. The Management of Innovation in Schools : Units 4-5 of Course E321, Management in Education. Bletchley : The Open University Press. (Section 5)

* BOLAM, R. and BAKER, K. (Eds.), 1975. The T.I.P.S. National Network Conference Report. University of Bristol, School of Education.

BOLAM, R., BAKER, K., HILL, D. and McCABE, C., (forthcoming March, 1976). D.E.S. Reports in Education : The First Year of the Teacher Induction Pilot Schemes. Department of Education and Science.

EDUCATIONAL INNOVATION AND THE ROLE OF L.E.A. ADVISERS

In 1972, the Department of Education and Science funded a one-year study of the theory and practice of educational innovation. This study arose from the conviction that, although institutionalised innovation was now an apparently permanent feature of education at all levels, it was far from clear that current strategies are as effective as they might be. In strictly practical terms, the needs and problems of the users of innovations - teachers and schools - have, it was argued, been neglected; more fundamentally, the formulation of an adequate theory of changing had been neglected. Accordingly, the main aim of the study was to conduct a critical review of the literature on planned organisational change in education, concentrating on:

(a) relevant typologies, models and theories of planned change;

(b) strategies of planned change;

(c) current institutional forms of planned change.

The study was carried out by R. Bolam, Research Fellow, in 1972-73 and a report on the project was produced in 1974. This report outlined a conceptual framework which was subsequently used as the basis for two related projects: the first, on L.E.A. advisers, is described below; the second, on the evaluation of the teacher induction pilot schemes (the T.I.P.S. Project) is described elsewhere in this Handbook.

The project on "L.E.A. Advisers and Educational Innovation" had three main aims:

(a) to study the innovative aspects of the work of L.E.A. advisers;

(b) to relate these to their overall functions;

(c) to identify some of their principal training needs.

Its rationale was that advisers have a potentially crucial part to play in providing external support for schools that are engaged in maintaining and improving their educational practices. It was also considered that the quickening tempo of organisational, institutional and curriculum change were all likely to make increasing demands upon the L.E.A. adviser, particularly in relation to the management of change. Yet in spite of their manifest, increasing and potential importance, little systematic research knowledge existed about them.

The project had three stages: first, a questionnaire survey of 230 advisers in 14 L.E.A.s provided a rough outline of the advisers' various functions; second, a series of detailed interviews with 50 advisers in 7 of the original 14 L.E.A.s provided detailed information on the way in which advisers' work relates to educational innovation; finally, intensive case-studies are made of the role of advisers in three innovations of different types. A report of the project will be available early in 1976.

Duration: April 1973 to June 1975.

Funding: Department of Education and Science: £16,000

Staffing: University Supervisor: Professor E. Hoyle
Project Director: R. Bolam, Research Fellow
Research Associate: G. Smith
Research Assistant: H. Canter

Educational Innovation and the Role of L.E.A. Advisers : Relevant Publications

* BOLAM, R, 1974.   Planned Educational Change : Theory and Practice.
        Bristol: University of Bristol, School of Education

 BOLAM, R., 1974.   Teachers as Innovators, DAS/EID 74.   53.
        Paris: O.E.C.D.

 BOLAM, R., 1975.   Innovative Teacher Induction Programmes.   Ph.D. Thesis,
        University of Bristol.

 BOLAM, R., 1975.   'The management of educational change : towards a
        conceptual framework' in HOUGHTON, V.P., McHUGH, C.A.R. and MORGAN, C. (Eds.)
        Management in Education Reader 1 : The Management of Organisations and
        Individuals.   London: Ward Lock Educational
        And In: HARRIS, A., LAWN, M. and PRESCOTT, W. (Eds.), Curriculum
        Design and Development Reader 1 : Curriculum Innovation.   Croom-Helm Ltd.

 BOLAM, R., 1975.   Innovation at the Local Level.   Unit 25 of Course E203:
        Curriculum Design and Development.   Bletchley: The Open University Press.
        (N.B. Section 2 on L.E.A. Advisers.)

 BOLAM, R., 1976.   'Teacher-centred curriculum innovation : foundations,
        institutional premisses, consequences' in HAMEYER, U., AREGGER, K.
        and FREY, K. (Eds.), Bedingungen und Modelle der Curriculuminnovation.
        Weinheim : Beltz.

 BOLAM, R. and PRATT, S., 1975.   The Management of Innovation in Schools.
        Units 4-5 of Course E231 : Management in Education.   Bletchley: The Open
        University Press.

* BOLAM, R., SMITH, G. and CANTER, H., (forthcoming).   The L.E.A. Adviser and
        Educational Innovation.   University of Bristol, School of Education.

 SMITH, G., 1975.   Report on the Questionnaire/Survey of Inspectors and
        Supervisors in the Asia/Pacific Region.   Background Paper 3 (CARSA (75) BP/3)
        for the Commonwealth Regional Seminar/Workshop on Educational Administration
        and Supervision, Kuala Lumpur.   Available from Commonwealth Secretariat,
        Marlborough House, Pall Mall, London SW1Y 5HX.

A STUDY OF EDUCATIONAL SUPPORT AGENCIES

The aim of the project is to study in detail the relationships between teachers in school and the various agencies, for example, teachers' centres and local advisory services, whose function could be defined as one of providing them with support, advice or training.

The rationale for the project is that within the education system there seems to be a growing tendency to create more support agencies, resulting in both overlap of provision and considerable confusion amongst teachers as to which of a bewildering variety of agencies is best fitted to fulfil their needs.   Little empirical work exists on this aspect of education and the project is designed to investigate this area.

The project is concerned with three aspects of the problem; firstly, teachers' perception and utilisation of support agencies, secondly, support agencies' perception of teachers and finally, support agencies perception of interaction with other support agencies.   The research will be carried out over a period of one year 1975/1976 and the approach taken will be that of a detailed case-study of a small number of schools and support agencies in one L.E.A.

Duration: June 1975 to May 1976.

Funding: Social Science Research Council :   £5,546

Staffing: University Supervisor: Professor E. Hoyle
             Research Associate: Hazel Canter
             Secretary: Mrs. M. Harvey

Background References

* BOLAM, R., 197 .   Planned Educational Change : Theory and Practice. University of Bristol School of Education.

* BOLAM, R., SMITH, G., and CANTER, H., (forthcoming).   The L.E.A. Adviser and Educational Innovation.   University of Bristol School of Education.

GROSS, N., GIACQUINTA, J.B., and BERNSTEIN, M. 1971.   Implementing Organisational Innovations.   Harper & Row,

HAVELOCK, R.G., 1969.   Dissemination and Translation Roles in EIDELL, ?. .., and KITCHEL, J.M.,   Knowledge Production and Utilization in Educational Administration.

O.E.C.D./C.E.R.I., 1973.   Programme Area III.   Project I.   Creativity of the School.

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THE RESOURCES FOR LEARNING PROJECT AND ITS EVALUATION

The Project

In April 1974 the new county of Avon was formed from Bristol and parts of
the counties of Gloucester and Somerset. Before the formation of the new
Local Education Authority the Bristol L.E.A. made plans for a central unit to
serve the secondary schools of the proposed new county.

The Resources for Learning Project and the associated Resources for Learning
Development Unit have grown out of a former project which was funded by the
Nuffield Foundation. The new project is jointly funded by the D.E.S. and the
Avon Education Authority, the grant from the D.E.S. to the L.E.A. being conditional
upon the mounting of an internal or formative evaluation.

The planning of the project allows for the production of materials within
the following curriculum areas: English, Mathematics, Social Studies, French and
Science. Materials have now been prepared for first-year secondary school pupils
and during the subsequent life of the project materials are being prepared for
second-year and third-year pupils. (The work in French and Science was time-
tabled to start one year behind the other subjects and will only cover first and
second-year work.) The materials are to be produced by a team of subject editors
working in conjunction with teachers from the local secondary schools.

The following principles are regarded as important by the project team and
the funding bodies:-

1. The project is to be regarded as an exemplar of resource-based
   learning which may or may not be replicated elsewhere.

2. The materials are for independent learning rather than for
   teacher-based classroom instruction.

3. The project is seen as an opportunity for 'grass roots' innovation
   and curriculum renewal, hence the emphasis upon teacher participation.
   It is the intention of the Unit to develop a coherent and articulated
   series of learning materials rather than to mount an 'on demand'
   or 'supermarket' service.

The Evaluation

The evaluation being undertaken by the University of Bristol School of Education
is complementary to the evaluation being mounted within the project. The
independent evaluation project is funded by a D.E.S. grant to Professor Hoyle,
University of Bristol, School of Education. The internal evaluation is mainly
concerned with the products being developed within the Unit, the cost of producing
such materials and the dissemination of the techniques associated with their
effective use in the classroom. The independent evaluation is concerned with
monitoring the effects of the work of the Unit on the organisation, relationships,
curriculum and patterns of teaching and learning in the participating schools.

The Purposes and Targets of the Evaluation

The main purpose of the evaluation is to enable those who might consider either the continuation of the project within the Avon L.E.A. or the mounting of a similar project elsewhere, to estimate the consequences of such an action.

To achieve this aim it is necessary to provide a description of:-

1. The existing curricula and practices of the secondary schools that will participate in the project.

2. The intentions and actions of those responsible for creating the Resources for Learning Development Unit.

3. The operations of the Unit and their effects upon the curricula and practices of secondary schools.

The Phases and Methods of the Evaluation

The first phase of the study involves two kinds of investigation:-

1. Documentation of the activities and policies of those concerned with the setting up of the Unit.

2. A survey of curricula and practices of schools that will be brought into the co-operative.

The second phase of the study is in two stages:-

1. The development of observation and interview schedules which will endorse the operation of the Unit and its direct and indirect effects within schools.

2. Two specially appointed observers will be trained, and in conjunction with the research assistant, will carry out focussed observations and interviews in the schools to which they are assigned over four terms. Their individual reports will be combined by the principal investigator in the final report. The number of schools covered by observation will be determined when the number and character of participating schools has been decided.

Duration: September 1975 to August 1978

Funding: Department of Education and Science: £50,695

Staffing:
University Supervisor: Professor E. Hoyle
Project Director (Evaluation): G.B. Hughes, Research Fellow
Research Assistant: R. Arnold
Observers: To be appointed.
Secretary: Mrs. D. Western.

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Resources for Learning : Relevant Publications

* HUGHES, G.B., 1975.   The Target Population of the Avon Resources for Learning Project.   University of Bristol.

* HUGHES, G.B. and ALSTON, R., 1975.   An Anthology of Children's Responses to Resource-Based Learning.   RLDU/University of Bristol.

LANGUAGE DEVELOPMENT IN PRE-SCHOOL CHILDREN

This is a longitudinal study of a sample of 128 children selected from the population of pre-school children in Bristol to give equal representation to both sexes, four classes of family background and eight months of birth. The sample contains two age-groups: half the children were 15 months old at the time of the first observation, the other half were 39 months, and each child is observed at 3 monthly intervals over a period of 2½ years.

The aim of the study is firstly to describe the language of this sample at each of the age-points at which observations are made, and secondly, on the basis of these descriptions and from other information obtained from assessment of physical, social and intellectual development and from interviews with the parents, to seek for explanations of observed differences in the language of children of the same age. In particular, the following questions are being addressed:

1. To what extent is the sequence of linguistic development invariant across children?

2. What is the relation between a child's spontaneous verbal behaviour and his linguistic ability as assessed by tests of comprehension and production?

3. How great is the variation between children of the same age with respect to:

   (a) their level of linguistic ability?
   (b) their habitual use of language both as speaker and as hearer?

4. To what extent can the variations in (3) be attributed to:

   (a) differences in physical development and/or measured intelligence?
   (b) sex, position in family, socio economic status of the family, etc.?
   (c) specific cognitive and linguistic characteristics of their experience, such as the contexts in which speech is used, the frequency of model structures in parental speech, etc.?

The largest part of the project is the collection, transcription and coding of the samples of the children's spontaneous conversations in their own homes at each of the 3-monthly observations. The recordings are made using a radio-microphone, worn by the child, which is linked to a tape recorder via a pre-set time-sampling device devised by members of the Research Unit. This allows recordings to be made without a researcher having to be present in the homes. Following the transcription of the tape, each recorded speech sample is coded according to a scheme of linguistic analysis, devised by the project team, to describe the context, meaning and form of each child utterance and the utterances that precede and follow it. A team of 40 part-time assistants has been trained to help with these very time-consuming tasks. After coding, the speech samples together with data from the language tests that are administered at each observation and from the other tests and interviews will be analysed with the aid of the Research Unit computer in the light of the questions mentioned above.

The research began with two pilot studies, 1970-1972. The phase of data collection in the main study began in January 1973 and will continue until March 1976. Transcription and coding of the speech samples has been progressing in parallel with the data collection. The first phase of computer-assisted analysis began in August 1975 and will continue until September 1976; this analysis is aimed at producing descriptions for chosen age-points. A one-year extension has been granted to allow further analysis to be carried out focussing on the developmental aspects of the data.

A follow-up study of some of these children is already being carried out: 'Children Learning to Read' (see below). It is hoped to follow up another sub-sample, investigating the role of language in the transition from home to school.

<u>Duration:</u>   January 1973 to September 1977.

<u>Funding:</u>   Social Science Research Council : £69,994

<u>Staffing:</u>

Research Director:	Gordon Wells, Research Fellow
Research Assistants:	Bencie Woll
	Chris Sinha
Technician:	Ivan Colhoun
Secretaries:	Frances Child
	Lalage Kitson
Students associated with the project:	Valerie Walkerdine (1972-74)
	Allayne Bridges (1973-)
Advising and assisting with computing:	B.L.M. Chapman.
	C. Amos

Publications

* FERRIER, L., 1975. "Dependency and Appropriateness in Early Language Development" : Paper to Third International Symposium.

* SINHA, C.G. and WALKERDINE, V., 1975. "Conservation - A problem in Language, Culture and Thought" : Paper to Third International Symposium.

* WALKERDINE, V., 1975. Spatial and Temporal Relations in the Linguistic and Cognitive Development of Young Children. Ph.D. Thesis. University of Bristol.

* WALKERDINE, V. and SINHA, C.G., (forthcoming). "The Internal Triangle : Language Reasoning and the Social Context". To appear in MARKOVA, I. (Ed.) Language and the Social Context.

* WELLS, C.G. and FERRIER, L., 1972. A Framework for the Semantic Description of Child Speech in its Conversational Context.

* WELLS, C.G., 1973. Coding Manual for the Description of Child Speech. University of Bristol School of Education.

* WELLS, C.G., 1974. "Learning to Code Experience Through Language". Journal of Child Language, 1, (2) pp. 243-269.

* WELLS, C.G., 1975. "The Context of Children's Early Language Experience". Educational Review, 27.2. pp. 114-125.

* WELLS, C.G.,(forthcoming). "Comprehension: What it means to understand". English in Education.

* WELLS, C.G.,(forthcoming). "Interpersonal Communication and the Development of Language" : Paper read at Third International Symposium on First Language Acquisition, London September 1975.

* WOLL, B., FERRIER, L. and WELLS, C.G., 1975. "Children and Their Parents - Who Starts the Talking - Why and When?" To appear in MARKOVA, I. (Ed.) Language and the Social Context. Wiley.

* WOLL, B., (forthcoming). "Issa Wana Ga". Paper to Third International Symposium on First Language Acquisition, London September, 1975.

Copies of these papers available upon request.

TRANSCRIPTS of the first recordings of each child are also available for purchase from the Research Unit Secretary.

CHILDREN LEARNING TO READ

The aim of this project is to explore in detail the interaction, in individual children, between oral language ability, relevant pre-school experience and initial motivation with respect to reading, range and type of texts and instructional materials, and relative emphasis and timing in the strategies employed by the teachers concerned in the initial stages of reading instruction.   An attempt will be made to delineate more precisely those patterns of interaction that are predictive of successful, and those that are predictive of unsatisfactory, progress, with particular attention to the ways in which failure is most likely to occur.

Design of the Project

The study is being conducted at two levels.   At the first level, a case-study approach based on monthly classroom observations over the two years of Infant Schooling is being adopted to 20 children who are already subjects in the Bristol Language Development Project.   These children have been observed at 3-monthly intervals since the age of 3 years 3 months, and detailed analyses have been made of their oral language development on the basis of recordings of spontaneous speech and of a number of tests of language ability.   In addition to providing indices of oral language ability, the observations already made of these children provide evidence of the amount and quality of linguistic interaction in the home and of the relative importance of the various purposes for which language is used.   Because of the amount of information already obtained with respect to these children, they are an admirable sample for the detailed study of individuals, and it is anticipated that the case studies that will be made of these children will yield important insights into the processes involved in the development of reading ability.

However, case studies, by their nature, do not permit generalisations to be made about the relative importance of the variables that have been studied, nor about interactions between these variables.   Accordingly a second level involves a larger sample of children, selected from the same school classes as the original 20 children up to a maximum of five in each case, and studied in less detail.   Measurements will be made with respect to this sample on four variables: oral language ability on entry to school;   reading ability at 5 years;   school organisation as related to the teaching of reading;   dominant strategies employed by the teacher.   Tests of reading ability will be administered at age 7 years and again at age 9 years, and it is anticipated that the results of these tests will yield data amenable to analysis of variance in terms of the independent variables described above.   In addition, the observations carried out during the two years of Infant Schooling will provide evidence of the processes of interaction that lead to the profiles of ability that will be constructed on the basis of the test results.

Children Learning To Read - Publications

RABAN, B., 1974. "Models of Learning and Reading" : <u>Reading</u>, Vol. 8, No.3.

WELLS, C.G. and RABAN, B., (forthcoming) "Oral Language and the Development of Reading". To appear in CASHDAN, A. (Ed.) <u>The Content of Reading.</u> Proceedings of the U.K.R.A. Conference, 1975. Ward Lock.

AN ENGLISH REPLICATION OF THE COLEMAN STUDY

This represents one third of an international study on the determinants of achievement in secondary education. The two findings of Coleman et al which caused substantial political repercussions in the United States were that the variation in achievement among schools accounted for no more than between eight and twelve percent of the variance and that when the effects of home background had been removed the school effects accounted for almost none of the remaining variance.

Subsequent challenges to the methods of analysis by Jencks, Smith, Mayeske et al have done little to change this position and the present study seeks to examine the effect of different measures of achievement. Whereas Coleman used standardised tests of verbal and non-verbal ability as his criterion the present study uses a variety of forms of curriculum-related measures which may be more sensitive to between-school differences. The present study also uses samples of different nationalities where different educational practices might be expected to play a part and for this reason it involves both Irish and English samples where curriculum based exams which are nationally standardised are available. In the Irish study a comparison of curriculum based and general ability measures is being made on the same sample of pupils.

The English component of the study uses a final sample of 44 secondary schools in the Home Counties and includes only those pupils taking GCE examinations with the London University Examinations Board.

Data is obtained by questionnaire to these pupils, to the teachers who are taking them for the examination subjects and to Heads of the schools. Additional information is obtained from Form 7 (schools) and data on achievement in the GCE examinations comes direct from the files of the London University Examinations Board. For approximately one third of this sample additional information is available on the verbal reasoning test taken by pupils prior to entry to the secondary school and this is used as evidence of entry qualifications to the school.

The primary method of analysis is multiple step-wise regression which is carried out for each of eleven GCE "O" level and four "A" level subjects. These subjects were chosen to be representative of the breadth of school curriculum and at the same time to maximise the numbers of pupils in the sample. All pupil variables were analysed into between school and within school components and then separate correlation matrices for the within school analysis, the between school analysis and an analysis of total variance for each of the eleven school subjects used. Some supplementary analyses of variance were carried out and attempts made to use the combined results to predict the amount of explained variance due to between and within school effects for each of the subjects chosen.

Although the original contract was due to end on the 30th June 1975 an extension has now been granted until March 31st, 1976 without further funds.

Duration: March 1974 to March 1976.

Funding: Boston College, Massachusetts, U.S.A.: $40,000

Staffing: Co-principal investigators: Dr. G. Madaus (Boston Coll. based at Dublin) · Prof. M.A. Brimer (Hong Kong)

Staff involved: B.L.M. Chapman, Research Fellow. C. Amos.

An English Replication of the Coleman Study :   Background References

COLEMAN, J.S. et al,   1966.   Equality of Educational Opportunity.
    Washington D.C.,   U.S. Department of Health, Education and Welfare.

JENCKS, C., 1972.   Inequality: A reassessment of the Effects of Family
    Schooling in America.   New York : Basic Books.

SMITH, M.S., 1972.   Equality of Educational Opportunity :   The basic
    findings reconsidered.   In MOSTELLER & MOYNIHAN (Eds.)   On Equality
    of Educational Opportunity.   New York : Random House.

EMOTIONAL LABILITY AND THE MENSTRUAL CYCLE
IN ADOLESCENT SCHOOLGIRLS

A major part of the study is a field exercise using a small sample of sixth form volunteers from a local comprehensive school. The study is exploratory and its main purpose is to develop suitable research techniques for obtaining data on mood, energy levels and mental alertness and to place these in the context of the menstrual cycle. Daily records are kept over a period of several months and during this time additional information is collected on various aspects of menstruation, self-concept, and related attitudes.

Duration: October, 1974 to September, 1976.

Funding: Health Education Council :   £3,500

Staffing: University Supervisor: Dr. P. Gammage
              H.E. Fellowship: Valerie Colley, B.Sc.

Background References

DALTON, K., 1964.   The Premenstrual Syndrome.   Heinemann Medical Books Ltd.,
        London.

DALTON, K., 1969.   The Menstrual Cycle.   Penguin Books Ltd., England.

UNIVERSITY OF BRISTOL SCHOOL OF EDUCATION RESEARCH UNIT

THE ADMINISTRATIVE TASKS OF HEAD AND SENIOR TEACHERS IN LARGE SECONDARY SCHOOLS

With a view to producing materials to be used for in-service training of teaching staff* the Department of Education and Science funded a research project which had the following objectives:-

To determine the nature of the administrative tasks facing Head and Senior Teachers and other Senior Administrative staff.

To determine the distribution of these tasks over time, paying particular attention to:

(a) the distribution of daily work loads;

(b) the distribution of work loads within each term and over the year.

To examine alternative strategies for task-redistribution.

For the purposes of the study large secondary schools were limited to schools having a six-class entry or greater. A sample of such secondary schools was drawn, to be representative, insofar as this proved practicable, by size and type of large secondary schools in England and Wales. The. intention of the sampling was to select representative institutions rather than to weight the number of each type proportionately. In all, some 32 schools were used at differing stages of the analysis. The research approach used a mixture of diary, audio recording and case-study approaches, and the data was analysed using a specifically constructed thesaurus of key words.

The report contains chapters dealing with the following:-

the duties of senior staff;
the pace, pressure and volume of work;
patterns of administration and the school year;
major administrative tasks;
formal responsibility, task delegation and organisational hierarchies;
welfare provision and associated work patterns;
communications;
the school office, bursars and secretaries.

The report also contains conclusions and appendices which deal with research methods and presents an abstract of the keyword list.

* HEADS TASKS : a handbook of school administration.

To be published by the N.F.E.R. 1976.

UNIVERSITY OF BRISTOL SCHOOL OF EDUCATION RESEARCH UNIT

SUPERVISION AND STUDENT LEARNING IN RELATION TO SCHOOL EXPERIENCE

In 1971 Bristol University School of Education published reports on two studies carried out by Dr. Edith Cope into School Practice. Both studies were supported by the Department of Education and Science, and were concerned with exploring the consequences of College-Supervised and School-Supervised practice respectively. These two reports – School Experience in Teacher Education and A Study of a School-Supervised Practice – were well received and the ideas mentioned and the issues explored have formed the basis for a great deal of public and professional discussion since their publication.

As a result of identifying some of the problems associated with normal patterns of school practice Dr. Cope decided that an action-based study, which would allow for active participation by lecturers, teachers and students, should form the third stage of this sequence of investigations. As in the two previous studies, the D.E.S. was prepared to support the venture and co-operation was also given by L.E.A.s for the involvement of schools, and Academic Boards for the involvement of colleges.

The focus of attention was to be upon some specified aspects of junior children's language learning, including learning to read. This was to be seen as providing a practical, classroom context in which teachers, lecturers and students could explore supervisory techniques, a range of teaching strategies and a variety of working relationships, in order to examine the consequent effects on student learning. It was intended from the start of this study that apart from defining this classroom context, groups of teachers, lecturers and students would be left to make their own approaches to the problems they encountered.

In the event this intention was fully realised and the different participating groups explored a wide variety of classroom situations and working relationships. For this reason it is felt that the conclusions represent a more realistic appraisal of the experiences of initial training than those of many similar studies.

A report on this project is now available from the School of Education Research Unit, University of Bristol, entitled Supervision and Student Learning in Relation to School Experience. The report was written by Ian Lewis (now of the University of York) who took over from Dr. Cope the direction of the project shortly after its initiation. The report describes the activities of the different groups involved and it attempts to define and analyse differences in approach both through the interpretation of the researchers and the participants. It goes on to offer reasons why school experience may be a less effective learning medium than it otherwise might be and to identify institutional developments which could well have a causative influence. The material is complementary to the two earlier reports and makes a valuable final contribution to an extensive nine year exploration of school experience.

TEACHERS' RESEARCH AND DEVELOPMENT GROUPS

Aims, Structure and Setting

These groups have been developed since 1970 in order to provide semi-structured and supportive environments in which teachers can be encouraged to carry out small-scale and simple pieces of research and otherwise increase their awareness of, and active involvement in, educational research.

It is primarily an in-service training process; and the production of research findings of any generalisable value is of secondary importance. An outline of the nature and growth of the groups is set out below:-

I. A situational analysis of the A.T.O. region was carried out by the Area Research Fellow in which schools, colleges, teacher centres and L.E.A.s were approached in order to discover something of:

      (a) local teachers' research interests, needs, commitment and ability levels;

      (b) the availability of physical and other research resources.

Simultaneously, discussions took place with a variety of other sources and agencies which had experience of developing the research work of teachers. Particular note was, and still is, taken of existing local A.T.O. and other in-service training provision, since the dangers of duplication are obvious.

Teachers appeared to have a variety of research interests and needs, some of the more salient of which appeared to be:-

      (a) To gain some insight into the nature of research approaches and processes by carrying out research projects which were small-scale and simple enough for them to control throughout but, above all, which were directly relevant to at least some of their daily teaching activities and problems. Thus, even if the findings of a piece of research concerning primary school language work proved to be inconclusive, irrelevant or dubious there would still be a minimal (and very important) pay-off for their effort in terms of an awareness of some research approaches and limitations, and a clarification and re-assessment of some of their day-to-day curriculum work in this field. The importance of this learning experience has been stressed by other sources in the relevant literature and has also been our experience; there is nothing so effective as an apparently small-scale research enquiry to make one stop in one's tracks and begin to question a large number of previously held assumptions.

      (b) To play a recognised and clearly defined part in larger-scale curriculum research and development projects which are directly relevant to their daily work (eg: the School's Council "Science 5-13" project) and to obtain continuous and intelligible feedback about such projects' aims and progress.

(c) To become sufficiently familiar with such research nomenclature,
conventions and techniques which will allow them to read and
assess published research findings in a particular field of their
interest.   On the other hand, there seemed to exist less demand
for learning about research techniques etc. in vacuo.

(d) Some teachers hoped that knowledge of research approaches and
findings would enable them to make informed class or school
policy decisions which they would subsequently be able to describe
or discuss with outsiders (eg: inspectors, parents) in this
(research) context.

(e) Although many teachers confessed to feelings of inconfidence and
ignorance about the place and potential of research and development
in education, they saw active involvement in research as a potentially
lonely, time-consuming and numerically difficult activity, and
expressed a strong need for a fairly structured and very supportive
setting.

II. This analysis thus suggested the formulation of a number of specific
curriculum objectives which appeared to be relevant and viable in the
intermediate term and around which a programme of research training and
activity could be developed.   The nature and implementation to date of
this programme is described below:

A. Resources and the Location of the research groups

Because of limited tutorial and other resources, the teacher research
groups have initially been centred in Bristol.   They usually meet
in the University School of Education Research Unit (19 Berkeley Square)
on Wednesday and Thursday evenings, although some meetings are held
in a local College of Education, and some additional ones, of course,
in the schools themselves.   The membership thus tends to be confined
to teachers working in Avon.   Moreover, we have so far concentrated
our resources on working with teachers in Nursery, Primary and Middle
Schools.

This means that the groups are not only provided with adequate
accommodation, but can also make use of the Research Unit's physical
facilities (eg: copiers, calculators and computer), and can conveniently
use the adjacent School of Education library which is aware of our work
and particular needs.   Adequate secretarial support (equivalent to a
half-time secretary) is also available - which is vital for effective
workshop and other research activities.

B. Organisational structure and the work of the research groups

1. For newcomers.   They attend an introductory workshop course comprising
only 6 or 7 evening sessions of 2 hours each with a very limited homework
load.   This may, for example, take the form of a simple group survey
of the teachers' own professional conditions, activities and attitudes.
a group of 15 such teachers normally splits up into 5 or 6 small teams
which tackle separate aspects of the topic - only coming together as a
whole group at certain key stages in the work.   The content and findings

of this work are seen to be of less importance than the research
processes experienced by the teachers. Thus everyone will have had
some experience, and gained some insight into the following aspects
of research:-

    1. defining the problem and searching the literature;
    2. developing and operationalising hypotheses;
    3. designing or selecting measuring instruments;
    4. sampling the subjects or sources;
    5. collecting, recording and analysing the data;
    6. interpreting and communicating the findings.

2.   Specialist research groups - to which the majority of teachers belong.
Each of these consists of from one to six teachers and lasts from one
term to one year or more. With the help of a specialist tutor, these
groups usually plan the shape of their new or on-going research project
at the start of each term, allocate the work to individual members,
and then meet every two or three weeks in order to review progress.
At the end of each term, they join with other specialist groups to
present an account of their work and/or findings to an audience of
newcomers, who will by now have just completed their introductory workshop
term and will now be considering which specialist group (if any) to
join in the next term.

This reporting-back session, which may be spread over two end-of-term
evenings, also serves as an incentive to the specialist group to draw
their work together in a clearly articulated form, persuading them to
clarify aims, methods and findings in order to communicate them to,
and discuss them with, other teachers.

The selection of the specialist research areas and topics for which
tutorial support and encouragement has been provided has been influenced
by the findings of the situational analysis which suggested that
language and mathematics were seen by primary school teachers to be two
of the most important areas in which they felt an interest or need to
research. But primary school science and problems particular to first
schools and teacher education were also judged to be important and,
because there exists in Bristol strong tutorial interests and resources
in these research areas, then they have also been developed. Teachers
can, and sometimes do suggest or initiate new projects within each of
these fields. Groups differ in both their size and degree of cohesion,
of course; thus, there are between one and ten members in each group
and between 25 and 30 teachers involved as a whole.

3.   A design and statistical support service is also provided in the form of
4-6 weekly evening sessions each term and individuals or groups of
teachers involved in the specialist research projects are encouraged to
attend at an appropriate stage in their work. The approach is simple
and - more important - is closely related to the particular planning
and measurement problems facing individual on-going group projects.

C.   Communication and dissemination of the research activities

Part-time, voluntary research group or team projects are particularly
vulnerable to any membership wastage in mid-course (eg: through illness,
promotion, new commitments, fatigue, etc.) The work of all groups,
therefore, has been deliberately segmented into termly periods. Some

projects are completed within a term but others may extend over two
or even three terms. The communication and dissemination of research
activities thus takes three forms:-

    (a) Autumn and Spring end-of-term collections of group findings
        or brief interim progress reports. These are designed to
        provide a record of research activities for other members to
        question and discuss during the presentation evenings.

    (b) An annual journal. For a variety of reasons, the pace of
        research activity appears to be less in the Summer term and
        this is when this more carefully edited and condensed report
        of the whole year's work is produced in journal form for
        outside consumption.

D.   <u>Some current and future issues facing the Teacher Research Groups</u>

    <u>Institutional links with other (eg: awarding) agencies</u>

1.   Many (although not all) group members would welcome the opportunity to
obtain recognition for their research work in the form of, say, a
University Certificate at a level below that of Dip. Ed. It is hoped
that this will shortly prove possible - although some difficulties
(eg: the assessment of team research work) will need to be overcome.
Some members, of course, can make use of their teacher research work
in other, award-bearing, courses which they are following at the same
time (eg: higher degrees). Thus many levels of ability can co-exist
in a research group - but provided that every individual member's
work can be adequately recognised, then these advantages of flexibility
may prove considerable compared to some other forms of in-service training.

2.   The future developments of the research groups are, of course, limited
by the availability of resources; specialist tutorial support is the
most important of these, since, compared to many in-service teaching
courses, throughput of numbers is slow and limited, and some teachers,
after completing a project, will not leave but join a new group. If
work is extended to include, for example, secondary subject-specialist
teachers then the demand upon tutorial resources is likely to become
even heavier, especially if research and development projects are
undertaken.

3.   It is difficult to evaluate the long-term effects of many in-service
training programmes designed to increase the research awareness and
involvement of teachers. We have been aware of the danger of the teachers'
initial enthusiasm encountering an inadequacy of training and support,
quickly resulting in frustration and disillusionment with all research
and planned enquiry in education; and so our approach, although subject
to frequent appraisal, has been a relatively structured one. Many
other approaches are possible, of course, and some of these may be
explored in the future.

The current situation

The preceding account of the reasons for setting up Teacher Research and Development Groups and of the manner in which they are organised was written by John Taylor in 1974, at a time when they had been running very successfully for 4 years.   Topics that have so far been investigated include:

> the development of oral language skills in normal and mentally handicapped children;
>
> the development of reading skills;
>
> first school children's work in mathematics;
>
> recording junior school children's work in science;
>
> West Indian children in school.

Annual reports of their activities have been produced, copies of which are held in the School of Education Library.

Sadly, John Taylor died in 1974 and as the post of Area Research Fellow has remained unfilled, the enthusiasm and expertise he brought to the organisation of the Teacher Research and Development Groups has not been replaced.   In addition, the A.T.O. came to the end of its existence in 1975, and the patterns of organisation that will characterise its successor have not yet emerged, though there is no reason to suppose that there will be a diminution in the need for the sort of opportunity for teachers to carry out their own small-scale projects that the T.R.D.G. provide.

As an interim measure the scale of the T.R.D.G. operation has been considerably reduced, with groups being led by members of the Research Unit staff, who are able to take full responsibility for the activities of their own specialist group.   When conditions permit, it is hoped to return to a larger-scale activity along essentially the same lines as described above.

> 'Tutor in charge: C.G. Wells
>
> Administrator: Eileen Nash.

COMPUTING ACTIVITIES

Computing in the School of Education began as an extension of statistical work arising from research. The processing of large volumes of data has, however, become so specialised that it now involves both special programmes and equipment. This has led to the establishment of a computer facility which, apart from acting as a service, has its own programme of research and teaching activities.

Much of the work on computing arises directly from projects such as the Language Development Project and the Coleman Replication Study. Although the aim is always to create programmes and conditions which permit projects to carry out their own data analysis it is found expedient to accept and run small jobs as a service to other projects.

In addition to the University Computer which is used extensively for batch processing of data, the Research Unit has its own mini-computer which has three special functions.

1. It is used in conjunction with the mark-sense card reader for checking, reformatting and storing large quantities of primary data. By far the greatest use of this feature is by the Language Development Project.

2. It is used for various special programming applications where interaction with the machine is essential.

    Various minor investigations are in process to use the equipment interactively for teaching purposes. One of these applications is in presenting simulations of the behaviour of individuals or institutions and to demonstrate that certain situations are unstable. Another area of investigation involves the teaching of statistical concepts by presenting distribution and transformations graphically.

3. Equipment is being built to interface the computer with experimental apparatus in order to investigate children's writing skills. Not only will it be possible to follow in detail the pencil movements of children during drawing and writing but there will be facilities to signal to the children, either audibly or visually the results of their attempts to trace simple figures.

Staff involved: B.L.M. Chapman, Research Fellow
                    C. Amos, Research Assistant.

The undermentioned reports are available upon request from the Research Unit Secretary, University of Bristol School of Education, 19 Berkeley Square, Bristol BS8 1HF. (Cost of postage within the U.K. is included in the price.)

BOLAM, R., 1973. Induction Programmes for Probationary Teachers. (£3.25)

BOLAM, R., 1974. Planned Educational Change : Theory and Practice. (£1.50)

BOLAM, R. and BAKER. K. (Eds.) 1975. Teacher Induction Pilot Schemes (T.I.P.S.)Project National Conference Report. (£2.50)

BOLAM, R., SMITH, G. and CANTER, H. (forthcoming). The L.E.A. Adviser and Educational Innovation. (price not yet fixed)

COPE, E., 1971. School Experience in Teacher Education. (£1.50)

COPE, E., 1971. A Study of a School Supervised Practice. (£2.00)

LEWIS, I., 1974. Supervision and Student Learning in Relation to School Experience. Summary report of an Action Research Study. (£2.00)

LYONS, G., 1974. The Administrative Tasks of Head and Senior Teachers in Large Secondary Schools. (£4.00)

TAYLOR, J.K. and DALE, I.R., 1971. A Survey of Teachers in Their First Year of Service. (£3.25)

HUGHES, G.B., 1975. The Target Population of the Avon Resources for Learning Project. (£1.00)

HUGHES, G.B. and ALSTON, R., 1975. An Anthology of Children's Responses to Resource-Based Learning.
(Also available from Resources for Learning Development Unit, Redcross Street, Bristol.) (£0.50)

WELLS, C.G., 1975. Language development transcripts. 16 Units of children's recorded speech. Details on request. (£17.00)

WELLS, C.G., 1975. Coding Manual for the Description of Child Speech. (£3.00)

The following papers are also available from the Research Unit for the cost of postage only.

WALKERDINE, V., 1974. West Indian Children in School

BRIMER, M.A., 1973. Theories of Learning and Teacher Education.

BOLAM, R. and TAYLOR, J.K. 1972. The Induction and Guidance of Beginning Teachers. British Association for the Advancement of Science, Annual Meeting Leicester.

CHAPMAN, B.L.M., 1975. A Clustering Technique for Eliciting Patterns of Co-occurrence in Qualitative Data.

Primary Teachers Maths Research Group Report. June 1973.