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ABSTRACT

The first paper in this collection summarizes 21 years of research into reading and presents a list of developments in the field and their implications for practice. The developments include: (1) reading is a process influenced by the text and the purpose; (2) the developmental context in which literacy is acquired is important, as is the complexity of the relationship between spoken and written language; and (3) in a literate society, the foundations for many children are laid well before entry to school. The second paper calls for research concerning questions as to whether the expansion of higher education is contributing to the advancement of learning and whether new entrants to higher education are receiving an education worthy of the name. The paper argues that such research can contribute to the advancement of learning for all. (Thirty-six references are attache to the first paper, and 28 references are attached to the second paper.) (RS)

Reading Revisited: 21 Years of Reading Research

MARGARET M. CLARK

Higher Education and the Advancement of Learning

MARGARET B. SUTHERLAND

Papers presented on the occasion of the award of the SCRE Fellowship for Outstanding Contribution to Educational Research

23rd June 1988

The Scottish Council for Research in Education

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for Research in Education

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With Compliments

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READING REVISITED: TWENTY-ONE YEARS OF READING RESEARCH

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Background

This is a *written version* of the message in my *oral presentation* on the same theme delivered on 23rd June 1988, when I was awarded a Fellowship by SCRE for outstanding research. The reason for stressing the distinction between spoken and written communication should become clear as the paper develops. The choice of title 'Reading Revisited' was a deliberate selection of something which out of context was open to alternative interpretations. The ambiguity which was removed by the subtitle 'Twenty-one years of Reading Research' would have remained had the subtitle been 'A Sentimental Journey' and clarified with different expectations had the subtitle been 'Dramatic Changes in Housing in 21 years'! The word *Reading* has two very different meanings, that used in this paper and the name of a town in England; furthermore the pronunciation is different for each. The existence in Reading of a Reading Centre can lead to an interesting play on words; the phrase The Reading Reading Centre requires some comprehension of its meaning if it is to be read orally without error! These examples perhaps illustrate the complexity of the relationship between accuracy and comprehension and the influence of expectancy on what is read.

For many years emphasis was on the similarities between spoken and written language, almost as if printed language was merely a visual representation of spoken language rather than a language communication in a different medium. Detailed analyses of a range of texts is leading to a greater appreciation of the cognitive processing involved in comprehension of written language and the 'disembedded' nature of written language, where connections may be implict rather than explicit. Thus, it is not sufficient to regard 'teaching young children to read' in the early stages, followed thereafter only by repeated practice, as adequate for the acquisition of literacy by most children. Children attempting to read for different purposes, to comprehend narrative text, and to extract information from textbooks, are faced with a highly complex task of language processing. Appreciation of this leads to the realisation that there must be a 'whole school' policy for reading.

An analysis of the written products of children who are poor readers, or who have had limited experience of written language, shows how difficult they find it to produce writing which is a real written communication, and not at best 'speech written down'. There is a growing sensitivity to the reciprocity, yet complexity, of the relationship between reading and writing. This reveals the need to ensure that teachers, in secondary as well as in primary schools, encourage reading and writing for a variety of purposes seen to be meaningful by the pupils, as a planned part of the curriculum across the disciplines.

Although the message of this written address is that of the oral presentation, effective communication in the two media requires very different language strategies. Not only did I use a selection of visual aids to accompany my talk, I also varied my pace of presentation as I thought necessary, based on my

interpretation of the response of my audience; extended points if I noted apparent interest; elaborated in response to puzzlement; moved on more quickly when sufficient members of the audience were clearly familiar with the points I was making. I personally adopt an informal style of delivery, with few notes, even on such a prestiguous occasion; others are more formal in their choice of language when giving a public address. That the language of speech is nonetheless far removed from that of writing is soon brought home by a study of a transcript of an oral presentation. Effective written communication with an absent and unknown readership has many features which go well beyond the insertion of punctuation to reflect pauses, and the adoption of a less colloquial vocabulary and idiom.

There are many of us who have wide experience as writers, and who succeed eventually in producing written language which is a meaningful communication with a relatively wide readership. To do that, I for one, still require to draft and redraft frequently to achieve clarity and precision, need time and peace, luxuries we seldom allow children even when learning Some children are expected to produce writing even on relatively complex topics, within time constraints, with little opportunity to modify, rewrite or collaborate, and with little diagnostic feedback or guidance. For other children of more limited competence their diet of reading may be limited, and their writing in school may consist mainly of response to multiple choice questions, or short answers, with virtually no extended writing. Few authors of distinction could produce creative works of fiction, few authors of technical articles could achieve the necessary precision of language, within the straitjacket into which we place many children. New insights into ways of helping more children to write with enjoyment, both creatively and with precision, are available; not least among these are the possibilities of drafting and redrafting, collaborative writing, and the utilisation of technological aids such as word processors. Strategies are available to encourage many more children to become effective communicators in writing as well as in speaking.

In view of the occasion for this publication it will I hope be appreciated why I have placed the main emphasis on my personal researches in the field of literacy and related topics. I have acknowledged a number of publications which have proved influential in the development of my thinking; these I have discussed in more detail in other publications. I have also noted a number of publications of research on reading undertaken in Scotland, some of which do not get the recognition they deserve 'outwith' the Scottish community! The choice of the word 'outwith' is deliberate; to my Scottish readers I apologise for placing it in quotes; to any readers from 'furth of Scotland' I hope its meaning will at least be understood from the context in which it is presented!

Twenty-one years of personal research

Reading and learning to read has interested me since my early days as a primary school teacher in the West of Scotland. Immediately upon my appointment to the staff of Strathclyde University in 1966 I put forward a proposal to the Scottish Education Department for a community study of children with reading difficulties. The mid-sixties was a time when there was a great deal of controversy about 'dyslexia', its incidence, its characteristics, and appropriate treatment. There were those in the '60s who believed that dyslexia, or specific reading difficulty, was widespread among children of average intelligence, with clearly identifiable features somewhat in the terms of a medical disorder, and that only one or a few specialised approaches were appropriate for its 'treatment'. There were others who regarded the whole notion as suspect, would not use the term 'dyslexia' and were inclined to dismiss

the whole concept of such severe disability in children of average intelligence, regarding it as a 'middle-class' term for backwardness in reading. Whether or not a child was diagnosed as dyslexic depended not so much on the nature of the child's difficulties, as on the clinician to whom he (usually a boy) was referred. Claims were made about the high incidence of left-handedness in such children, crossed laterality (of hand and eye) lack of ability to discriminate left and right. Rather than a possible feature of the difficulty, these seemed to have become symptoms which led to referral of certain children to particular clinics. The high incidence of such features in turn reinforced the beliefs of those working in these specialised units on a causal relationship between some of those features and severe reading difficulties.

It was for that reason that I felt the time was opportune for a community study of a large sample of seven-year-olds, selected only on the basis of age. The aim within this population was to identify the number of children who at seven years of age were backward in reading, to obtain community incidence figures for the whole population for various features which had been associated with severe reading difficulty and to study in depth the children who were of average intelligence and who continued to have severe difficulties with reading and related tasks. In the first phase which involved individual testing of all 1544 children in Dunbartonshire within a given age group, I was assisted by over 80 people who were then students in university or college of education. Not only was this a great help in the investigation, but it did, I hope give those involved some insight into educational research 'from the inside'. Few children of average intelligence were found with severe and continuing difficulties in reading, most were boys, and they were a very diverse group rather than homogenous as some had suggested. Important also were the incidence figures it was possible to provide for that age group with regard to left-handedness (about 9 percent at that time) and left-eyedness (about 35 percent) and thus inevitably crossed-laterality was common (in at least 39 percent, increasing the greater the number of tests used). Furthermore in this large community study there was no relationship between reading difficulty and any aspect of laterality, or mixed dominance. The report of that community research was published in 1970 as *Reading Difficulties in Schools*, and reprinted in 1979 as a companion volume to my next research.

It is important that I set the record straight that I have never claimed that there are no children of average intelligence who suffer from severe and prolonged reading, spelling and associated difficulties. I have myself seen some such highly intelligent children and adults, I have talked with them and their parents. I have been disturbed when I have seen the legitimate concern of some of the parents dismissed as 'middle-class' overanxiousness, and where they and their children have had little support. On the other hand over the years I have seen instances where the label dyslexia has opened doors to individual help and treatment which sadly has been denied to other children with as severe and comparable difficulties, or even more severe problems.

The second major study I undertook on reading, which was also funded by the Scottish Education Department, was a detailed case study of 32 children who could read fluently and with understanding on entry to school at five years of age. It seemed important to consider not only the strengths of these 'young fluent readers' and their homes, but also weaknesses in spite of which they were already well on the way to literacy on entry to school (Clark, 1976). It proved valuable to compare the performance of these children on a number of key measures with that of older children with reading difficulties. Any theory of reading, or assumptions about the requisites for progress towards literacy, must take account of the development of such children. Likewise, there

must be no risk that any tests of reading readiness in use would be failed by children such as these, as has been reported on occasion! There is a danger that we may erroneously assume a causal relationship between certain weaknesses and lack of progress in learning to read if we study only children who learn to read in school in what is a group situation. Higher levels of visual and auditory acuity, for example, may be necessary in such a group situation, merely to follow the instruction, than are dictated by tne actual reading task itself.

These 32 children were studied during their first few years in school. The children's strengths appeared to lie in language processing rather than in visual and motor skills in isolation. They were already sensitive at a very early age to the sequential probabilities in spelling in the English language, and knew what they did not know. Their written language soon began to show their awareness of the characteristics of print. The stimulating interaction with an adult they had experienced seemed an important feature in their development, with their interest aroused by the print in the environment around them, as well as books. Even at this early age these children showed interest in a wide variety of print in the environment, newspapers and books of fiction; non-fiction, or as one called them 'brain books', appealed to some. The children came from much more varied backgrounds than had been anticipated; and some had characteristics which might have led to a prediction of reading failure! I felt concern that so many of the parents were embarrassed at their children's 'precocious' development. We perhaps expect children to come to school ready to learn to read — but not too ready. How prepared are we for the child who can already read with understanding on entry to school? We as teachers seemed all too ready to blame parents for their children's failures, and perhaps to take all the credit for children's success.

A comparison of the children with reading difficulties and these 'young fluent readers' raises important issues with regard to the teaching of reading and related skills; these I highlighted in the reports. It is gratifying that the published versions of these two studies are still so widely read, and by an international readership. I took up the challenge of presenting the research in such a way that the full reports could be published commercially and be accessible to a wide spectrum of parents and professionals interested in education. This challenge I met again recently in my critical evaluation of research of relevance to the education of children under five (Clark, 1988).

After the completion of these two researches on reading an evaluation of the school-based remedial service in Dunbartonshire was undertaken at the request of the authority. Unfortunately, before the findings could influence practice in the County it had become part of a much larger Region and with a different administrative structure. More recently, and from a base in Birmingham, my interest in children with learning difficulties in secondary schools led me to seek a further grant from the Scottish Education Department to undertake a study of the progress and problems in developing a 'whole school' policy for children with learning difficulties in the secondary schools in Strathclyde Region. Difficulties in providing a co-ordinated policy across the curriculum were identified, based on observational studies in the classrooms and interviews with promoted staff and pupils. The importance of providing meaningful tasks which extend the pupils' ability to read and write effectively for a variety of purposes became clear, and of assessing and monitoring their progress across the disciplines. How fragile such developments are initially, and how dependent on specific members of staff, was clear. Within the report (Clark, Barr *and* McKee, 1982), which is now distributed by SCRE, a number of practical suggestions are

made, and examples are provided of written work in different contexts by children of a wide range of ability.

Although the funded research I have undertaken recently has had as its main focus children under five, my interest in reading has continued. This new direction in research was stimulated by an invitation from an administrator in Dunbartonshire to return to the County where I had undertaken my research on reading and make a study of the development of their first nursery schools. One of the projects within that research concerned 'interest in books and stories' shown by preschool children during their time in the nursery school, and the relationship of that to their home experiences and the setting provided in the preschool unit (Lomax, 1979). My studies of early education begun in Scotland have continued in the West Midlands, where there are in some schools large numbers of children from ethnic minorities from whom English is a second language, who may therefore have additional difficulties in the early stages in learning to read. Many of these children, although born in Britain, enter school with limited understanding of English, and may be helped towards a feel for the language of books by experience in school of orally presented written language, in the form of stories read and reread, shared and retold. From such experiences they may become better able to separate theme from minor detail, and to develop the ability to make predictions of the likely next words and phrases in sentences in written English.

An appreci ion of the important contribution stories can make in laying the foundations of literacy, together with the feeling that this is an under-used medium in schools, was the rationale for the approach I adopted as consultant to the television series *Time for a Story,* 28 programmes for young children aged 4—6 years produced by Granada Television. Original short stories, written specially for the series by well-known children's authors, provide the basis foi the ten-minute programmes which are transmitted weekly in schools' television on all independent channels. The programmes, teachers' booklet, and supporting audio tapes and story books, illustrate in a practical way how written language presented in an oral medium, coupled with a variety of activities related to the themes of the stories, can sensitise children to important features of print and at the same time extend their vocabulary in stimulating ways (Clark *and* Dewhirst, 1985). In some settings at school as well as at home, television is used as a time-filler rather than a learning experience. Such a series, used by skilful teachers in association with the follow-up ideas in the teachers' booklet, can provide children with enjoyable experiences of literacy in context. Children in turn enjoy retelling the stories to a receptive audience and have shown themselves capable of capturing much of the language of the original; many can also write their own stories stimulated by the range of ideas and language of these they have heard. Indeed some of the stories and programmes have proved effective with much older children with reading difficulties who have subsequently produced something more nearly resembling a real communication in written language for perhaps the first time.

At Strathclyde University, and more recently at Birmingham University, I have encouraged students, many of them experienced teachers, as part of their assignments to undertake practical work in schools with children from preschool age to secondary. In that way they have been challenged during their studies to assess the extent to which the books and articles they have studied can provide new insights of relevance to practice. Some of these assignments have led to publication, a few are to be found together with reprints of a selection of articles which stimulated their thinking in *New Directions in the Study of Reading* (Clark *ed,* 1985, see also Payton, 1984).

In this section of the article a very personal approach to research over twenty-one years has so far been taken. In the following section brief reference will be made to changing perspectives on literacy and its development; specific researches which have influenced me personally will be identified.

Changing perspectives

Over the years the teaching of reading as a basic skill has been as affected by swings of fashion as any aspect of the curriculum, stimulated on occasion by isolated pieces of research, or by publishers' extravagant claims for their scheme or materials. Whatever approach has been used to teach reading some children have emerged from the education system as 'adult illiterates' who either cannot read with sufficient competence to meet their needs in modern society, or do not display any interest in reading for enjoyment or information. In the 1960s there was concern at the numbers of adult illiterates; a concern expressed again recently leading to renewed funding for courses for adult illiterates and further BBC programmes. Current focus on a National Curriculum and externally moderated assessment of progress at given ages is coupled with demands for accountability and a move 'Back to the Basics'. It is as important in the teaching of reading as in other aspects of education not to 'throw out the baby with the bath-water'. However, there have been important insights from a number of disciplines in recent years which could lead to improved understanding of the development of literacy and the relationship between speaking, reading and writing. Furthermore these have implications, not only for those responsible for children during their first few years in school, but also for those teaching at all levels in the education system, from preschool to secondary.

Textbooks on reading and research reports published before 1970 tended to have the following emphasis:

- on the teacher of young or backward children
- on the method to be adopted in the initial stages
- on the product measured in terms of test performance
- on the strengths of good readers
- on the deficits of poor readers and of their homes.

(1) *Reading was seen as something taught in school* (and learnt in school), as a 'skill' learnt by most children in the first few years of school, then practised. Subsequent experience of books tended to be regarded as providing information or practice in the skill of reading which had by then been learnt. That the experience of a wide variety of texts contributes to the further development of literacy was less appreciated. The textbooks were thus addressed to those teaching children in the infant department, or older backward children, 'remedial readers' or 'slow learners'. The relative merits of different approaches to the initial teaching of reading were assessed, whether phonics, whole word, sentence (and in the mid sixties particularly the initial teaching alphabet 'ita'). Thus teachers in training would learn little about the teaching of reading unless they were anticipating teaching such groups of children.

(2) *Measurement of reading progress was seen as something absolute* which could be assessed by standardised tests of words, sentences or paragraphs (yielding reading ages or quotients for example) or diagnostic tests. Incidence of backwardness, levels of literacy, trends in reading standards were all matters of concern, and were often related to tests of reading out of extended context, in either individual or group tests, of silent or oral

reading, assessed for accuracy or comprehension. Comparisons were made between groups of good and backward readers; the deficits of the backward readers and their homes tended to be emphasised. Eye movements during reading were also studied, but features which differentiated good and poor readers tended to be reported in absolute terms, rather than related to the text involved. Concern was expressed at the number of adult illiterates, with help becoming available from non-professionals; there was controversy on the existence of dyslexia, its characteristics, whether rare or common, and whether the concern of teachers or doctors.

3. *Measurement of reading readiness was in terms of IQ or mental age, visual or auditory acuity* or other perceptual tasks. Many tests of reading readiness were developed with the hope of identifying children at risk of failure; these, however, were mainly on tasks isolated from the reading process itself.

Textbooks on reading and research published since 1970 show changes:

(1) *Reading is considered as a process* influenced by the text and the purpose, with implications for (a) the materials provided for learning to read, (b) the necessary strategies for assessing reading progress (c) the involvement of teachers of older children who must also be competent in teaching reading.

(2) *Reading is viewed in a developmental context,* as a language skill related to oral language and to writing, with implications for helping children who have failed, as well as beginning readers.

(3) *Foundations for literacy are already laid for many preschool children* in a literate society, before the teaching of reading commences. Thus even in a group of children entering school none of whom can yet read, there are wide differences in their understanding of 'concepts of print'.

Changes in emphasis were already apparent in the late sixties. One example is the small, but frequently quoted study by Reid in 1966, in which she identified confusion among many young children concerning features of print and terms used in reading instruction. A second important small study was that by Clay in 1969 in which she contrasted the errors and attempts at self-correction in oral reading made by young children who were making more or less progress in the early stages of learning to read.

Changes were to be seen in different editions of the same book. For example, *Backwardness in Reading* by Vernon published in 1957 became *Reading and its Difficulties* (Vernon, 1971), with a very different emphasis. There are striking differences in content in the two editions of *Reading Problems and Practices* (Reid *and* Donaldson, 1972 and 1977); emphasis on methods for the initial teaching of reading is less, and 'reading considered in a language context' gains greater attention (including the insertion of the introductory chapter with that title from *Young Fluent Readers* by the present author). There were changes also in the titles and contents of the proceedings of the annual conferences of the United Kingdom Reading Assocation. *The First International Reading Symposium* held in Oxford in 1964 had as its focus reading readiness, approaches to reading (the initial teaching), reading failure and developments in teaching reading (Downing *ed,* 1966). A selection of papers from the early conferences published under the title *The First R* reveals the introduction of new aspects, including, for example, 'The intermediate skills' and uses of television (Morris *ed,* 1972). The UKRA conference held in that year in Scotland under my presidency included, for example, a report by Hendry on a newly established Reading Centre at Craigie College of Education, and papers on 'Language Prerequisites for Reading' (McInnes, reprinted 1985), and on 'Extending Reading Efficiences'. In the latter paper, Gatherer was

already stressing a number of the points that are being made here including the contribution of linguistic maturity to progress in reading; the danger that an excessive concern for correctness in the early stages will increase a pupil's lack of confidence; that the literate reader samples the text by 'sampling the features' along the whole line of text (Gatherer, 1973). The 1984 UKRA conference, also held in Scotland, and devoted to technology and the teaching of reading, was very different both in content and in the range of teachers to whom it would appeal from that in Oxford twenty years earlier (Ewing *ed*, 1985). The 1987 conference in Edinburgh *Reading: the abc and beyond* was wide ranging in its theme, with sections on the place of linguistics, children's writing, assessment in the secondary school, and preschool children's views of reading and writing (Anderson *ed*, 1988).

The oral language competence already possessed by the learner is an important facilitator aiding prediction and understanding of language through the medium of print. Furthermore, the relationship of such reading experiences to the development of competence as a writer is becoming clearer. More attention is being paid now to the relationship between reading and writing, and a number of those who previously wrote on reading are now considering the related development of writing.

Two influential publications in the early seventies were those of Smith (1971) and Clay (1972), the former in the States, the latter in New Zealand. Clay's book *Reading: the patterning of complex behaviour*, became a recommended text for Open University courses, and more recently her reading programmes have been implemented in many parts of the world including Australia and parts of the United States as well as New Zealand. The time was ripe for the challenges made by Smith in *Understanding Reading*, which quickly became a required reference in any publication on reading. Its influence was already apparent in several contributions to the UKRA conference in 1972 (Clark *and* Milne *eds*, 1973). He stressed among other things the important skills brought by the young child to the reading situation and how little credit we give for these and the need to relate what we as skilled adult readers do to what the young child is trying to do. *Psycholinguistics and Reading*, (Smith *ed*, 1973) contains a chart (on page 185) of 'Twelve easy ways to make learning to read difficult' in which he challenges much of the then accepted wisdom on the teaching of reading. On page 8 he stresses the importance of appreciating that 'only a small part of the information necessary for reading comprehension comes from the printed page' that 'comprehension must precede the identification of individual words (reading is not primarily visual),' and that 'reading is not decoding to sound'.

There are chapters on a similar theme by, for example Goodman, who stresses the need to view reading as a 'pycholinguistic guessing game' and to analyse the nature of the child's errors, or as he would prefer to call them 'miscues'. There are many who would challenge the more extreme of the comments made by Smith in his argument that learning to read is 'natural'; nevertheless, his attempt to broaden our horizons was opportune and his contributions to our thinking about literacy are important ones. A complementary approach is taken in a recent publication by Kennedy who, in *The Psychology of Reading*, traces the origins of our present writing system and considers the cognitive processes which underly reading with understanding (Kennedy 1984). The approaches of cognitive psychologists such as Kennedy, and those of psycholinguists such as Smith, are important in furthering our understanding of the development of literacy for a variety of purposes.

In Scotland, a series of Edinburgh Reading Tests was developed as a collaborative venture for use by class teachers in the assessment of

children's progress in different aspects of reading in primary and secondary schools. Projects were beginning to analyse the development of children's reading as they passed through primary and into secondary school and to relate to that the reading materials and experiences they were offered in school. An example of such a research in Scotland was *Reading Progress from 8 to 15* (Maxwell, 1977). The processing of continuous narrative involves higher level cognitive skills as does the efficient extraction of meaning from a range of textbooks. The language in which specific sentences are embedded is important to a person's understanding of the written word in narrative text; the layout and relative size and style of print are only some of the clues to which the reader of textbooks should be sensitive. This was analysed with pupils in secondary schools who were faced with tasks relevant to their everyday needs in *Reading Strategies and their Assessment* (Fyfe *and* Mitchell, 1985).

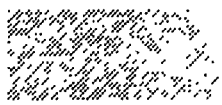
The extent to which children enter school with very different levels of awareness of print, its features and functions, and the language in which these are discussed, has been a topic of increasing interest to researchers in recent years. That young children should be seen as rule users, and as hypothesis testers, and their active search for meaning in their print-filled environment encouraged and stimulated is stressed by Donaldson (Donaldson, 1978; Donaldson *and* Reid, 1985) and by Ferreiro, based on her experimental studies with pre-school children (Ferreiro *and* Teberosky ,1982). A symposium was convened in Canada by Smith on the theme *Awakening to Literacy* (Goelman, Oberg *and* Smith *eds*, 1984), in which he brought together a small group of researchers from a number of disciplines, including psychology, sociology and anthropology. As someone privileged to attend, it seemed that the horizons of those attending, all of whom had already published extensively in some aspect related to literacy, were being broadened by the challenges of those with different perspectives. The proceedings are a valuable sourcebook for others, providing samples of the writings of a number of those working on the origins of literacy, and extensive reference lists. Developing literacy in preschool children in communities with already a high level of literacy presents very different challenges from the introduction of literacy into communities where few of the adults are literate, and where attempts to increase the level of literacy may have adverse effects on an existing strong oral tradition.

Developments and their implications for practice

(1) It is important to consider reading as a process influenced by the text and the purpose

- The reading materials selected for the child learning to read, and the child with reading difficulties are important, not only with regard to the choice of vocabulary, but also the syntax in which it is embedded and the background knowledge required for its understanding, when read to, as well as by the child. Materials for beginning readers are coming to reflect these influences.

- Teachers of older children require an understanding of new developments if they are to provide contexts which extend the knowledge of the most able and support the learning of those with as yet limited competence in reading and/or writing, whatever their age. Otherwise, the predominantly written medium through which so much of learning in upper primary and secondary schools is presented debars many of those with limited reading skills from access to much of the curriculum. It also prevents those with limited competence in writing from showing the extent of their grasp of what has been taught or the precise gaps in their understanding to which diagnostic teaching could be directed.



• Much more sophisticated techniques are required for the assessment of reading progress than tests of accuracy or comprehension based only on measurement from words or sentences presented in isolation. The latter could underestimate the competence of some children, and the difficulties of others in comprehension of extended narrative or of textbooks.

(2) The developmental context in which literacy is acquired is important, and the complexity of the relationship between spoken and written language

• Stories read, and repeatedly reread, to children provide not only enjoyment and extension of vocabulary in meaningful contexts, they also assist the child in developing a sensitivity to the characteristics of written language, which differs in so many ways from 'speech written down'. This is particularly important for children for whom English is a second language, children with hearing impairment, and for older children whose lack of reading competence would otherwise deprive them of a breadth of learning experiences. This could also provide for them a continuing exposure to the language of print. So often the focus for this latter group is on improving their reading as a skill in isolation (in terms, for example, only of phonics or word recognition), with too limited attention to what they are missing in broader educational experiences because of the combination of this focus and their limited competence in reading throughout most of their educational career. It would be salutory for those of us who teach to consider what the school day would have been like for us if year after year we had been the subject of such a narrow focus!

• The interrelatedness of the development of reading and writing reinforces the need for a breadth of experience of written language, either from their own reading or reading by others, if children are to develop the ability to communicate effectively in writing for a variety of purposes. There is disturbingly little evidence of this extended reading for pleasure and information within the school day or indeed of writing for a variety of real communicative purposes. Both tend to be curtailed if there is lack of time, particularly for those with limited competence, to be undertaken at home, or regarded as expendable, as a 'frill'.

(3) The foundations for many children are laid in a literate society well before entry to school. For such children this must be extended within the school; for the others the school must ensure these foundations are laid.

• Even in a group of children none of whom can read on entry to school there are already wide differences in the children's understanding of the purposes of reading.

• Some children already have a good grasp of concepts of print, can recognise common words in a familiar context, know many letters of the alphabet, can write their own names and are familiar with the language used for reading instruction.

There is much in the modern print-filled environment to stimulate such learning, at home, in preschool and primary school and beyond. Children should be encouraged from an early age to observe, to frame and test hypotheses, to ask questions about the print around them and to relate their experiences at home and school to each other. The print and advertisements on television linked to the labels on the goods in the supermarket, or in the store cupboard, the road signs, the number plates and names on cars and buses, telephone directories, these show words and letters in different styles, in capital letters and in lower case—all valuable source material from which to identify the critical features which distinguish one word or letter from another.

• Readings, and often repeated readings, of well-loved stories have given many children

experiences of a variety of themes set in complex extended narrative, a characteristic of the writings of many modern authors of children's books. These give children a preparation for reading through a cultivation of a love of books, and introduce the children to a much extended vocabulary met in context. Through repeated readings of stories which appeal to them even some very young children learn also to predict the immediately following words and phrases, the structure of story, even the style of their favourite authors. This learning they may later demonstrate in their own compositions.

- There are also children who enter school at four or five years of age already reading fluently and with understanding, even silently. They also require to have access to experiences which extend their knowledge of literacy, with access to information texts as well as storybooks. Their early start may stimulate them to develop a competence also in writing for a variety of purposes. Strategies need to be planned which make this possible hampered as little as possible by the as yet limited motor co-ordination which could frustrate their attempts. They may be sensitive to the sequential probabilities for spelling in the English language, and able to spell with accuracy the simpler regular words. They may wish to use, and be able to use effectively, words which they could not be expected to spell correctly at that stage. Skill is required by the teacher to encourage these and other children to express themselves creatively and effectively and also to learn gradually to introduce the conventions of printed language in terms of spelling and punctuation, without negative effects on the productive side of composition.

The way ahead?

Already by 1975 in The Bullock Report *A Language for Life* (DES 1975), official recognition was given to the importance of a 'whole school policy' for the teaching of reading and related skills throughout primary schools and across disciplines in the secondary schools. Indeed a number of points listed above were beginning to receive official recognition in this report, which contained many important recommendations. The Committee of Inquiry was set up by Mrs Thatcher as a consequence of public concern about standards of literacy and whether these were either falling, or at least failing to continue their rise. Its remit was to enquire into the teaching in the schools of reading and the other uses of language. Mrs Thatcher's successor as Secretary of State, Reg Prentice, in his Foreword to the report commended it to the attention of all those concerned with education, as many recommendations were addressed to teachers calling for a redirection of effort. As so often happens with reports from official inquiries there was the following unfortunate caveat which must inevitably have restricted the possible developments —

> As the Committee acknowledges, recommendations with financial implications must be subject to current constraints; for the time being action on those which involve additional resources must be postponed. Within this limitation I hope that local authorities and teachers at all levels will look carefully at the recommendations which concern them
>
> (DES, 1975 p. iii)

In 1987 a Committee of Inquiry into the Teaching of English Language was established under the chairmanship of Sir John Kingman. In his letter presenting the report to the Secretary of State, Kingman states:

> It must be a primary objective of the educational system to enable and encourage every child to use the English language to the fullest effect in speaking, writing, listening and reading...We argue that it is possible to give a sound and accessible description of the

structure and uses of the English language, and that all teachers should have an appropriate familiarity with the description. They will then be able to use their professional judgement about the extent to which the description should be made explicit to their pupils at different stages of their education.

(DES, 1988 p. iii)

It is to be hoped that on this occasion resources are made available to encourage the introduction into practice at all levels of the educational system of the recommendations in this and the previous report, which stress the language context within which the teaching and learning of reading and related skills should be developed. An appreciation of the development of literacy is important for all teachers, whatever their subject or the age group they teach; indeed from preschool onwards. The printed materials selected and the contexts in which they are presented are then more likely to be both stimulating and challenging, providing information and enjoyment, and facilitating the further development of literacy. It is also important that we in the teaching profession recognise, and acknowledge the contribution that parents are making to their children's developing literacy and that we support and encourage them to extend this still further.

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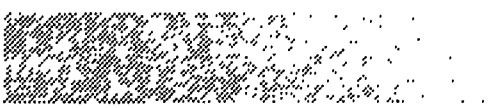

HIGHER EDUCATION AND THE ADVANCEMENT OF LEARNING

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Francis Bacon, writing nearly four centuries ago, was concerned to point out how, despite various difficulties and complications, the dignity and 'excellency of knowledge and learning' could be promoted. Today, when democracy demands greater access to higher education, when many new institutions of higher education are developing but the structure of British universities is being shaken and changed, it seems appropriate for us to re-consider how higher education may contribute to the advancement of learning by teaching and research.

Thinking about this topic was encouraged by a discussion which I had the pleasure of hearing at a meeting of the Academic Board of an Australian university. Stimulated by a Government Green Paper — we all know how stimulating such documents can be — the Board had allocated time to a strangely unexpected matter, *viz* a consideration of the purpose of the university. An interesting formal characteristic of this meeting was the use of modern technology, for as a member of the Board signified the intention to speak, his/her name was added to a list shown by an overhead projector: and as each contributor began to speak, the time of beginning was added, thus providing objective evidence as to whether reputations for being long-winded — or admirably succinct — were justified. It occurred to me then, as on other similar occasions, that higher education has till now had at least one common effect: it has conditioned us to sit quietly for long periods of time, listening to someone else talking. It has also — fortunately more rarely — conditioned some of us to talking uninterruptedly for a long time. with the expectation that others will sit quietly and listen to us. Whether this has greatly advanced learning is an interesting question — on which some research has been done.

More seriously, it occurred to me also that the lines followed in such discussions of the purpose of higher education are remarkably predictable. (I am using the term 'higher education' rather than 'university education' in this discussion because in the modern world universities exist in so many forms and so many other institutions co-exist at the same level that it would be difficult to discriminate consistently between university education and higher education — the more so as universities, in the sense given to that word during the last hundred years, may well be obsolescent.) What we almost invariably find in analyses of these aims or purposes are references to 'culture', or to 'the two cultures': contemporary debates may even refer — as the Australian did — to ethnic cultures, or community culture. We find the conventional arts-science dichotomy, the teaching-research dichotomy, the vocational-liberal dichotomy. We find dichotomies of specialism versus all-round education. And these familiar themes and dichotomies tend to lock discussions into complex and frustrating loops.

Yet so much has already been written about higher education that we should have advanced beyond this stage of reaffirming familiar positions. We have, for example, the works of Francis Bacon (1605), Newman (1852), Benda (1929), Flexner (1930), Rashdall (1936), Moberly (1949), Hutchins (1953), George Davie (1961), The Robbins Committee (1963), Eric Ashby (1970), Barbara Solomon (1985), Peter Scott (1984), William Taylor (1986, 1987), Silver and Brennan (1988), Patrick

Nuttgens (1988) which, in various ways, deal with the issues in question. (That list may serve as a brief — and incomplete — review of literature, the conventional preface to academic discussions.) How can we avoid repetitions, however well expressed, and order and co-ordinate the main themes in such a way as to define the purposes of higher education and perceive how research is associated with it?

We must, I think, concentrate on higher education as being devoted, not to various dichotomous or conflicting objectives, but simply to the advancement of learning. Here I take advantage of the blessed flexibility of the English language which enables us to use the word 'learning' in general, comprehensive senses. (I must admit that my choice of word would not translate happily into French, which might offer the narrower 'apprentissage' or German which could hesitate between 'Lernen' and 'Wissenschaft' — and in Russian we might have that interesting question of whether learning is a reflexive verb.) What I propose for our attention is that advancement of learning which is (1) for the benefit of the individual and (2) for the benefit of the human race — or of a human society. How do these interact in higher education and where does research come into it?

The advancement of individual learning

Higher education may be seen as advancing the learning of the individual in various respects — in the learning of knowledge, of social skills, of ways of thinking, of commitment to values. Let us consider these briefly.

Specialist knowledge

In higher education the individual acquires specialist knowledge which, while good in itself, can normally be used in the exercise of a profession or in high-level employment. This is something clearly expected of higher education and on the whole higher education seems to do this fairly well, despite complaints in some areas and despite some questions as to the connections between the subject matter studied and the subsequent employment of the learner. There are of course also questions as to whether a common curriculum is or would be a good thing for specialists within a discipline. This kind of learning has rightly attracted a great deal of research, during the last few decades especially. Such research has tried to improve methods of teaching and the construction of courses to make this advancement of learning more effective: it has also considered the effects of various aspects of student life, introduction to study within departments, induction into universities and other academic institutions. We note here the work of the Society for Research into Higher Education (SRHE), of the Higher Education Research and Development Society of Australasia (HERDSA) and of Professor Ruth Beard (1984) and her colleagues. We have also Donald Bligh's (1972) work on the use of lectures: that 'not proven' verdict has perhaps had less effect than one would have hoped on the improvement of this art form. These research efforts to discover how individuals learn in higher education and how more sophisticated teaching skills might enhance their progress are well worth while. What is worrying is that emphasis on short-term contracts to teach in higher education, or — perversely — prevailing demands for a good research record by academics are likely to diminish attention to this particular field. Research on teaching methods in higher education scarcely ranks in academic circles as 'good' research, if indeed it ranks at all.

(In thinking about students acquiring knowledge we might also have expected that in higher education they would advance in their ability to communicate through the effective use of language: but this, alas, seems a dubious assumption nowadays when numbers of school and university tutors have apparently not

thought it important to correct students' errors of spelling and syntax (and some tutors are uncertain of their own ability to distinguish what is correct). Similarly, one might have expected students to develop skill in expressing their ideas in, as scholarly exercises used to specify, their 'own words': but making essays so popular a base of assessment has apparently brought into fashion a style of writing which is not pure plagiarism but consists of amalgamating scraps of phrases and sentences 'borrowed' from the books or articles consulted by the student.)

Social skills

Advancement in learning social skills has also been expected as a characteristic of higher education. Newman painted an exhilarating picture of the ability of the university graduate to interact with people of all kinds acceptably and effectively. In the heady expansionism of the 1960s stress was laid on the development of social qualities which would result from living in university halls and residences, living away from home and mixing with other students.

Closer experience of conditions of such living has rather diminished that optimism. Certainly this kind of learning has received little attention in more recent times but, oddly enough, interest may now be revived by the current enthusiasm for business studies — employers have commented (Hansen, 1986) on the extent to which graduates from different faculties seem to come equipped, or otherwise, with the social skills which some professions (eg business management, banking) especially require. This is not an area in which much research has been done. Possibly an attempt to teach social skills would not add to the academic reputation of hard-pressed higher education departments of social and economic sciences, (or others): and selective interviewing at the point of entering higher education could, of course, bias the outcomes.

But another form of social skill has to be considered. Advice given to students entering higher education in the DDR (Autorenkollektiv, 1977) has indicated that they should now develop not only independent and responsible study habits but also the capacity to work co-operatively with other people. Is this a relevant kind of learning to be fostered in higher education? To what extent do joint projects in some British university departments already foster it? Or do we leave it mainly to the informal working groups which some students create for themselves? Do we consider such an advancement irrelevant to the higher education we provide, since we have the traditional ideal of the solitary scholar (even if much contemporary research demands team work)? New research is needed to answer such questions about social skills, as well as further thought as to which skills seem desirable. It might well be argued that such learning, like skills in verbal communication, is something to be advanced at earlier levels of education and should be well developed before the individual leaves secondary school: yet maintenance and reinforcement probably remain desirable.

Ways of thinking

One could, of course, also suggest that if there is advancement of social skills as the individual proceeds through higher education, this is a case of maturation rather than of learning. But there is another important question of maturation or growth, the question whether, in higher education, the individual reaches new levels of thinking, forming new concepts of what knowledge and learning are. Piagetian and psychological theories generally have tended to make us accept the view that after adolescence there is no further development in thinking ability: the ceiling is reached at this early stage of life. Have we accepted this view too readily — or misinterpreted it — perhaps being over-influenced by the practical problems of testing and assessment? Do individuals simply advance in knowledge and

practical skills as they experience higher education, or is their whole way of thinking affected? If the latter were the case, we would have a characteristic found in all graduates. (Many people, Moberly (1949) for instance, have lamented the apparent absence of a distinctive general effect of higher learning.) Graduates of higher education would then have, whatever their special field of study, a common style of thinking, a common epistemology perhaps. We have deplorably little research on this point. Some fascinating work has been carried out in the United States by Perry (1970) and by Clinchy and Zimmerman (1982). They did indeed claim to find a progression by undergraduates (admittedly, in high-ranking institutions of higher education) from initially naive suppositions about authority and acceptance of absolute rightness or wrongness of 'answers', to a 'contextualising' frame of reference in thinking and an acceptance of the view that they were not passively accepting but were sharing with others in the pursuit of learning: students also moved to committing themselves to chosen values. While such research cannot be regarded as conclusive — and while one might feel that the initial positions of these young people did not say much for their earlier secondary education — it is certainly important to ask whether in higher education any change in higher level thought processes is stimulated.

We already have some other interesting research findings (Entwistle *et al*, 1984) concerning student styles of learning and reconstruction of ideas. We need to investigate further whether styles of learning and thinking generally become different. Are changes perceptible only in students of some (few?) academic departments? Is there also a shift in perception of the purpose of their higher education itself? Barbara Solomon (1985) has indicated the changes in women's perceptions of the purpose of acquiring higher education, from the early decades when they expected to became thereby better wives and mothers to the later times when the concept of value for individual development and for career purposes become dominant. Do such changes take place also within the individual's own span of higher education? Or do initial expectations of a 'meal ticket' remain unchanged?

Commitment to values

Associated with such change is commitment to certain values. Benda (1929) defined the values of scholarship as justice, truth, reason — yet one would hope that these are not exclusively the values only of the highly educated: one would again expect earlier education to have provided a general introduction to them. But there are some values or applications of values peculiar to the advancement of learning. These are, firstly, to be found in attitudes towards learning itself — enthusiasm for it, the desire to learn more. But equally important is the recognition that learning is not advanced by dishonesty, by avoiding unpalatable facts, by interpreting situations in order to please or placate current fashionable opinions. There are dangers today that these scholarly values may be eroded. When assessment of student work occurs in a face-to-face situation, there is a temptation to be 'kind', not to make too many criticisms, to give a rather higher grade than is strictly appropriate. An 'upward drift' is often clearly perceptible in grades awarded for course work. Similarly when — as is desirable — teachers know students as individuals, it can be tempting to 'make allowances' for the difficult circumstances in which a student is working and so fudge academic judgement of the quality of the work by giving a bonus which raises the assessment of unsatisfactory work to pass level. There is also the hazard that academic assessments may be attributed by the ill-informed to racism, sexism, the personal bias of the assessor (such bias does exist — guarding against it is an important function of higher education). Foreseeing such reactions may again lead to discretionary adjustments of

marks. But assessment contaminated by such extraneous considerations does not give students the feed-back necessary to form clear judgements and standards: it must lead to erosion of true standards and create generations of students — and, alas, teachers — who cannot discriminate between good and bad learning.

To take another instance, how effectively are interests in increasing learning being developed in those who are now offered higher education as a series of modules to be mastered? Which values develop in assessment systems where students seem to make an implicit or explicit contract with the tutor merely to deliver two or three essays as required by course regulations? Provided the essays are duly submitted, the student does not expect to be troubled further: a continuing learning interest, and wider reading in the other parts of the course or the subject as a whole, are scarcely indicated or called for, though — mercifully — such interest is present in some cases. (The 'bad' old unseen examination at the end of a course admittedly allowed some students to 'spot' questions and concentrate as narrowly on these as the modern student does on two or three essay topics: but possibly the former system did convey more of the belief that a fairly comprehensive knowledge of the subject, rather than some patchy swotting, is a good thing.) Some research work on attitudes developed by the modular approach would be immensely valuable, even if finding control groups might be tricky.

There is too the popular opinion that knowledge of facts is somehow discreditable or, at best, unnecessary. Again, while senseless memorising does not contribute to learning, some ability to recall relevant data at the right moment is important. How enviable is the instant retrieval power of some Mastermind contestants! Are too many students today affected by the stereotyped opinion that to learn and to know relevant facts is an inferior activity? The study of such value judgements is also worth attention.

Our review thus far has indicated a variety of ways in which higher education may affect the individual's advancement in learning. We are not always sufficiently clear as to the kinds of advancement we want nor are we clear as to the learning which higher education is in fact producing. If higher education is to succeed in advancing individual knowledge, social skills, thinking and commitment to values, much more research on its nature and impact is needed. Research on values especially is necessary, even if research in this area is difficult and is complicated by the danger that enquiry may affect what is enquired into: yet we must know, by whatever method seems reasonable, which values are present and are being learned by individuals.

The advancement of learning by research

But research is commonly understood to be for the benefit of society or the human race as a whole: and a characteristic scholarly value of the individual is expressed in asking questions, in critical scrutiny of existing theories, techniques, situations, procedures, in order to learn more and understand better. So we now turn attention to this wider advancement of learning through research.

Centuries ago, Francis Bacon pointed out the defects of human learning — those Idols of the Tribe, the Cave, the Market Place and the Theatre, which mean that inadequacies of the human intellect in general, bias due to personal characteristics, the careless and misleading use of words, erroneous theories, all act to prevent the correct understanding of the world. Today the advancement of learning by research would seem confronted by two main dangers, stereotyped thinking about what is research and difficulties set in the way of those wishing to engage in research.

Definitions of research

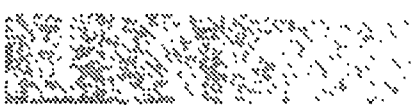
Definitions of research are too often narrow. Many statements and discussions seem to be

limited to thinking about empirical research, especially in the physical sciences. There is a common assumption that research should have immediate practical consequences, though there is usually a grudging recognition that some research may have long-term practical consequences. There is little recognition of research which has no perceptible consequences except that it increases understanding of people and events (which may indeed have considerable, if indirect, consequences).

Then too research is often thought of as consisting in discrete projects. Yet already Francis Bacon, planning in *The New Atlantis* for the ideal research institute, pointed out the need for some workers who would study and draw conclusions from the collected pieces of research carried out by others. This is an extremely demanding form of research, especially when results found in more than one country are included, so it is likely to be neglected in favour of the short-term, individual project report. Even more probable is it that what research has shown in related disciplines will be overlooked. One must welcome the development of meta-analyses in recent times, though they do not eliminate the need for discriminating judgement in collation: but to carry out such analyses, or to produce overviews of relevant work in different countries or areas, needs time and an assurance of continuity: the researcher must have reasonable security of tenure (as well as recognition of the value of this kind of work). Such research has a slim chance in present-day conditions.

Another currently unpopular form of research is that once known as scholarship. It requires the study of many writings and opinions on the chosen topic to arrive at a knowledgeable understanding, taking into account the complexities of the theme and possible differences of interpretation. For really good teaching in higher education we need people who have this kind of scholarship. But such scholarship does not necessarily express itself in publications. Its practical results may be simply in the transmission of sound knowledge, understanding of the subject and, possibly, enthusiasm for it. This may at times look like selfish, individual research (and indeed delight in the subject matter may be the main motivation of the scholar). But if this kind of scholarly research is neglected, the level of teaching must fall: enthusiasm for what is studied will diminish. Short-term contracts and insecurity of tenure are not the appropriate conditions for scholarship.

As distinct from these kinds of research, what is advocated publicly at present does seem to be the short-term applied empirical study. The UGC (1984), writing about its policy for higher education in the 1990s, referred to shifts of research towards the sciences and especially to engineering as meeting a 'national need', though it did try to make some sort of a case for the protection and continuance of 'basic research' which might not have immediate applications (but would be comparatively low in costs). But one suspects that governmental policy in the United Kingdom would accept with some enthusiasm the statement of the Australian Green Paper of December 1987: 'Basic research, with outcomes that are long-range and often unpredictable, continues to be an important activity of our higher education institutions. The Government considers, however, that a greater proportion of such research should be in fields that have the potential to improve the nation's competitive position. Efforts must also be made to increase the interaction between research agencies and with industry.' This certainly sounds familiar. We might indeed consider that whereas for Francis Bacon the Idol of the Market Place was the misleading use of words, we have now a new Idol of the Market Place which decrees that only research producing visible capital gains is worthy of support.



Such concentration on certain kinds of research would run counter to another recommendation made by Francis Bacon, that in research it is highly important to be aware where there are deficits or gaps in our knowledge. In present conditions such deficits seem likely to receive attention only if 'relevant' to industrial or similar progress. Research funding policies today will certainly provide — to some extent — for the approved and popular fields: so some researchers are constrained not to follow their perception of what is needed for the true advancement of learning but to engage their efforts in the limited domains, with firm boundaries, where the funding is available.

Research and teaching

From some of the foregoing consideratio s we must argue that to separate research act ity from teaching activity in higher education is folly. There would be deplorable social consequences in creating a hierarchy of institutions in which the top-rankers were allowed to do research, the middles might do a little, but the bottom stream must confine itself to teaching. (Prevailing popular opinion, alas, does not award to the teaching function the prestige and status it rightly deserves: the order of ranking is all too predictable). Such a division would, just possibly, be a self-fulfilling prophecy so far as the abilities of people in the institutions were concerned. But the major point of objection is that those who teach in higher education should be interested in what they are teaching: and such interest leads to research, possibly in the form of scholarship, or of synthesising results obtained by others, or possibly in seeking out new knowledge by empirical work. Many able graduates have found secondary school teaching frustrating simply because they were not able to advance their own learning in the subject. Higher education must surely not inhibit such interests also.

It is also too easy to assume that one can classify people as satisfied to concentrate on teaching alone or on research alone. Popular stereotyping, for example, would have it that women in higher education prefer teaching to research: but my own research on women who teach in universities (Sutherland, 1985) offered convincing evidence that such generalisation is false. Very many women are highly enthusiastic about their research. Indeed what one finds in such enquiry, (and others will be aware of this by simple observation), is that in higher education some people (men and women alike) enjoy the activities of teaching and research equally: some enjoy research more; some enjoy teaching more; but only a small minority in existing institutions of higher education would like to drop entirely one of these activities. The point is that while adjustments can be made — to some extent — within institutions to let individuals follow their preferences, arbitrary division between teaching and research in whole institutions of higher education would be irrational. This being said, there could well develop within such institutions arrangements to give individuals periods of time to concentrate more on research or more on teaching. The system in Finland, of appointing individuals from universities to work for a period in a purely research institution, seems to be an admirable device which we might, with advantage, copy.

(The foregoing argument concerning one kind of institution where research is carried out is of course not intended to detract from the value of other institutions which specialise in research. They can and do co-exist happily with the teaching-and-researching institutions of higher education. Both kinds of provision for the advancement of learning may gain by interaction and by the other's work.)

Conditions of research workers and provision for research

In looking at definitions of research we have already noted some of the problems facing research workers and the circumstances which may frustrate their efforts today. We can perhaps most usefully at this point summaris-

such problems and the conditions to be satisfied if research is to advance human learning:

(1) Research needs resources of time, money, personnel. Those who are engaged in research need security over a reasonable period of time; the work cannot advance if those engaged in it lack the material resources, or travel facilities, necessary to carry it out; or if they are worrying about what they will find as employment next year; or if they are having to attend frustrating and frequent meetings to discuss the future of their institution; or if they are repeatedly engaged in concocting statements of new courses to gain the approval of those in power or, in competition with the Mickey Mouse courses being offered by neighbouring institutions, to attract the student numbers necessary for the survival of their own department or institution; or if they and their colleagues are being invited to consider the charms of early retirement.

(2) If research policy is to be more comprehensive and rational, there must also be employment of people who can co-ordinate results obtained in their chosen area (internationally as well as nationally) and who can, in a well-informed way, indicate the areas where further research is needed.

(3) Higher education, while fostering individual learning and wider research, must itself be the subject of research studies. Thoughtful monitoring by research is necessary so that we may know whether higher education is indeed contributing to any advancement of knowledge and thought, for individuals or for society.

Conclusion

Throughout the world more and more is being spent on higher education: it is, for both developing and developed countries, the most expensive level of education (Coombs, 1985). Third World countries especially debate how much of it, and what kind of it, they can afford, though uncertainty as to how much of the national income can be devoted to higher education is by no means a characteristic only of developing countries. More and more people are entering higher education, more and more people are involved in work in higher education institutions. Is this expansion really contributing to the advancement of learning? Are the new entrants receiving an education worthy of the name? To answer these questions and discover the effects of our actions and of the values we transmit there is, as this survey has suggested, a great deal of highly interesting research to be done. Such research can both advance our own learning and contribute to the advancement of learning for all. I commend it to the attention of colleagues and of the Scottish Council for Research in Education.

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