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AESTRACT

lecturers in colleges of education were surveyed using semistructured, group (3-5 persons) interviews. Information requirements for lecturers involved in research means the retrieval and use of large numbers of facts or references. Lecturers engaged in teaching only, however, need to know where to find specific pieces of information. The problem for college of education lecturers is that they require a relatively small amount of information from a large body of informatic... The amount nust be small enough to be assimilated in a restricted time, but comprehensive enough to avoid distortion. Lecturers reflect the following attributes in seeking information: (1) restricted time for gathering and use; (2) lack of motivation for information seeking; and (3) limited informal contacts with colleagues. School teachers were also interviewed in groups, using an exploratory approach so that rather subjective impressions resulted. Because only a small number were interviewed, the results are presented here more to provoke further study than to give a representative sample of information needs. For school teachers, irformation gathering must require minimal effort and low motivation, and it must be relevant and show little distortion. (SG)



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Investigation into Information Requirements of the Social Sciences

Research Report no. 3

INFORMATION REQUIREMENTS OF COLLEGE OF EDUCATION LECTURERS AND SCHOOLTEACHERS

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February 1971

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APPENDIX A: Interview check list for use with college c? education lecturers APPENDIX B: Draft questionnaire for schoolteachers (not used)



1. INTRODUCTION

The investigation of information requirements of college of education lecturers and schoolteachers represents a very small part of the Investigation into the Information Requirements of the Social Sciences (INFROSS), which concentrated upon researchers. The results of this main part of the Investigation are reported in Research Report no. 1.

INFROSS attempted to obtain an aerial picture of information requirements in the social sciences. Education was defined as a social science, and it seemed important to include in the picture some idea of the information needs of persons engaged in the practice of education. University lecturers, as lecturers, were covered by he main questionnaire aimed at researchers; since there was no easy means of distinguishing lecturers doing research from those doing non ϵ questionnaire included at the end some questions about inform α ion needs for teaching purposes. This data is analysed together with the rest of the questionnaire data in Research Report no. 1, and this report deals only with college of education lecturers and schoolteachers. To explore the information needs of college of education lecturers and of schoolteachers, a questionnaire was not used; this report is based mainly on a series of interviews. As it happened, the research questionnaire reached 84 college of education lecturers who were believed to be doing research, and material from these questionnaires is inc uded where appropriate in this report.

To some extent it is a matter of convenience to cover in one report the information needs of two groups of teachers; this should not be taken to imply that a priori decisions were reached that their information needs were similar. As will be seen, there are some similarities, but a good many differences. If schoolteachers represent one extreme, and university researchers another, college of education lecturers and researchers fall between them, approximating in some ways to one extreme, in some to the other.

This part of the investigation must be regarded as no more than an exploratory study. No attempt was made to obtain a representative sample of college of education lecturers or schoolteachers, and only very small numbers were used. It proved possible to quantify some of the material gained from interviews with other groups of users, especially university staff and social scientists in government departments; however, the material gained from the interviews with college of education lecturers and schoolteachers was not of a type which could be readily quantified, and the results reported should be regarded in the main as impressionistic rather than based upon solid factual material. It is hoped nevertheless that the results may be useful in guiding future research in this area, and perhaps in helping others to avoid inappropriate approaches to the problem.

A comprehensive and thorough investigation of the information requirements of educational practitioners, along the lines of traditional user studies, would not necessarily be very fruitful. Any investigation that sets out to explore the information requirements of practitioners must take into account the fact that they are not,



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as a rule, in daily contact with, nor do they have physical access to, bibliographical tools and the primary literature of disciplines related to their practice. Hence an investigation designed to look at information requirements in terms of formal communications is unlikely to come up with much of value.

There is little doubt that many of the results of research in the social sciences are eventually disseminated throughout a much larger community than research specialists in academic environments. but it is doubtful whether this dissemination takes place through primary publications. In the case of schoolteachers, such information as does filter down to them cannot arrive mainly through primary publications, because they rarely come into contact with them; sources they do use are such commonplace ones as the Times Educational Supplement, the national and local press, television and radio. case of college of education lecturers is slightly different; some primary publications relating to basic research in the social sciences are available to them in their own libraries, and they do occasionally make use of them, but it is evident from our interviews that this occurs infrequently, and then only amongst relatively small numbers. Because the diffusion process of social science knowledge of information to practitioners is complex, informal and even somewhat nebulous, it cannot easily be investigated by questionnaire or highly structured interviews, which are better equipped to deal with tangible events and actual publications (primary and secondary). Persons who hardly use the formal bibliographical syste can hardly answer sensibly questions about their use of the system, or what use they would make if they knew of it, or what suggestions they have for improvement. Such 'hard' questions are hard to answer, while 'soft' questions about informal transfer are very difficult to ask.

The present investigation did not set out to examine information diffusion processes, and the report must therefore be limited to observations made during interviews. However, the diffusion of the results of research in the social sciences to educational practitioners is of some importance, and future studies, using suitable methods, should look at this aspect of information flow.



2. COLLEGE OF EDUCATION LECTURERS

2.1 Method

Lecturers in colleges of education in the south and south-west of England were interviewed between November 1968 and June 1969. In all, 32 lecturers were interviewed, in groups of between 3 and 5; the number of interviews involved was 7. As already mentioned, no attempt was made at random selection; the cooperation of individuals in appropriate departments was sought, and the individuals who actually cooperated must have been self-selected to a certain extent (in one or two cases they were possibly selected by their head of department).

The interviews were semi-structured; that is, a check-list of questions (see Appendix A) was held by the interviewer, who tried to ensure that all the points were covered. Many if not most emerged spontaneously during the interviews, but prompting was used where required. An attempt to quantify material from the interviews produced tables with many empty cells, and these analyses are not therefore reported. There is a good deal of data included in the records of the interviews that is not reported here, but they are maintained intact at Bath University, and are available for consultation or reworking by interested persons. It will be seen from the check-list that the questions asked by interviewers were much the same as those used in the interviews with university teachers and researchers.

There were 84 college of education lecturers in the main INFROSS questionnaire sample, and where a reasonable number of responses was obtained the data is incorporated in this report. It serves in most cases to substantiate impressions gained from the interviews, but in a few cases provides corrective and contrasting material.

2.2 Results

In most cases lecturers were not particularly forthcoming in talking about information problems, and they required a good deal of encouragement to keep the conversation alive. In the event, it proved useful to have group interviews instead of seeing each lecturer on his own, as dialogue between one interviewer and another, involving a comparison of information use and requirements, as well as some disagreement, was useful and informative. Also, often one person would understand more quickly than the others the purpose of our enquiry, and this help to orient the others.

Because lecturers were not on the whole very forthcoming, a superficial impression was gained that they were not very knowledgeable about the literature of their subjects or about bibliographical tools. However, further questioning often showed that the interviewees knew much more about the primary literature, and in some cases the better known bibliographical tools, than appeared from first impressions, even though they used these tools infrequently. The more recently established bibliographical aids (such as Current Contents - Education), and abstracting or indexing periodicals that were not directly concerned with education, were more often than not unknown to them. SDI services and computer-based retrieval systems were quite outside their knowledge,



not surprisingly, since no such services were at that time available at a national level in education. Efforts were made during interviews not to appear to be instructing the interviewees, since it was felt that they would resent any feeling that we regarded them as crude or inefficient in their information-seeking activities.

2.2.1 Lecturers engaged in teaching only

There was a marked difference in information requirements between lecturers involved in research and those involved in teaching only. Where the work involved teaching only it was usually more important to know where to find specific pieces of information (such as an historical fact) or general information on a question (e.g. new developments in language teaching, methods of speech therapy, or remedial reading) than to retrieve and use a large number of facts or references; extensive coverage of a topic or subject was not usually required. Sometimes the stimulus to find information came from the lecturers' own interest in a given topic, and sometimes from students, especially from those engaged in B.Ed. projects; lecturers felt some obligation to know more about the special topic of a student's thesis they were supervising than the student himself. Again, where work was restricted to teaching, there was little general effort (that is, unprompted by a specific need or demand) to keep abreast of new developments in their subjects, or in educational practice (including educational technology).

It was apparent that there was little day-to-day contact with the primary and secondary literature of their subjects, or with information services. Lecturers engaged in teaching only did a certain amount of reading, but the selection of material appeared to be distinctly hap-hazard; it depended largely upon what was available rather than what would ideally serve their purposes, and in many cases lecturers, exposed as they were to a limited range of materials, were not in a position to know what there might be of value to them. Lecturers were surprisingly ignorant of the inter-library loan facilities now available to college libraries.

Participation even in informal channels of communication was severely restricted in comparison with teachers in universities. The location of colleges, often at some distance from other teaching establishments, and indeed from towns, and restrictions upon travelling expenses, combined with a lack of motivation to participate in a wide range of contacts reduced the informal network to negligible proportions. Even within colleges, although of course discussion with colleagues frequently took place, the fact that colleges are much smaller than universities inevitably reduced the scope of possible confacts.

Many lecturers, those who were involved in teaching only as well as those conducting research, mentioned the importance of the stimulus value of information for teaching; information was used to stimulate thought in the preparation of lectures, and in turn to stimulate students. This stimulus function appeared to have at least equal importance with a purely informative function; this would help to explain why the information retrieved and covered for teaching is far less comprehensive and organised compared with research. If this is correct, the demands on an information service are of a somewhat



peculiar nature; one piece of information may be as good as another for purposes of stimulus, so long as they all stimulate. Such demands would be extremely difficult to formulate in terms which could be used for searching. Bibliographical searches are not geared to indicate whether an item has stimulus value or not. In any case, what may be a stimulus to one may be a sedative to another.

However, to the extent that an information service for lecturers has also to fill an informative role, the information requirements of users are relatively easy to state, and probably to fulfil. It is necessary only to supply representative selections of up-to-date information available on a given topic, although the amount supplied must fall within critical limits. Too much information, beyond the threshold of assimilation, would almost certainly be disruptive rather than helpful (even if it were read at all), while on the other hand an inadequate supply could lead to a distorted picture.

In many ways the information habits of the less active college lecturer are rather similar to those of social workers, in spite of the fact that college of education lecturers have usually had the opportunity of acquiring some knowledge of library use and bibliographic tools during previous academic training. However, the function of a college lecturer is much more closely akin to university teaching than to social work. Even if one assumes that the information habits of university teachers are appropriate to teaching in higher education generally - a low-level conterion, since many university teachers are not very efficient as information-seekers - the current information activities of college lecturers must be regarded as very inadequate for the job they have to undertake. It is doubtful if such meagre contact with literature and infrequent participation in formal communication are sufficient to meet the requirements of persons training future generations of teachers.

It would appear that what college of education lecturers would find most useful is a certain type of secondary literature; not in the form of bibliographic tools, but in the form of reviews. Frequent mention was made in interviews of the usefulness of review articles (e.g. on recent developments in remedial reading); mention was also often made of Times Educational Supplement, New Society, and the national newspapers. The primary literature stemming from original research in psychology, sociology, and even in education seems to be little used. The value of this work was not questioned - indeed, the lecturers were in no position to evaluate it - but the direct relevance of it to educational practice was questioned. Many lecturers expressed the desire to keep informed of developments, even when they were of marginal relevance to their own subject, but they did not have either the time or the information resources to do so. A more adequate review literature, and more adequate means of access to it, might do a great deal to help college of education lecturers with their main information problems.

An example of the selective and undemanding nature of information requirements of lecturers involved only in teaching was given by lecturers who required statistical data for illustrative purposes. The up-to-dateness of figures was not crucial; statistics three or four years out of date were acceptable. This contrasts markedly with the



requirements of some of the economists working in government departments, where delays of up to six months were judged to be disruptive to research programmes, and made the publication of papers based upon these statistics at best less useful than they might otherwise have been, and in some instances completely irrelevant and useless. It is worth bearing in mind that much of the specific factual information required by lecturers is of this kind, namely illustrative rather than directly informative.

Finally, some special information requirements of certain lecturers should be recorded. This was most obvious in the case of lecturers in geography, who required maps and miscellaneous local material.

2.2.2 Lecturers engaged in teaching and research

Some of the college of education lecturers we interviewed were engaged in research, and in most cases the research was related to a specific goal such as a higher degree. The information requirements of these individuals are much more demanding than of lecturers engaged only in teaching. The pattern of demand for information approximates to the pattern of information requirements of university researchers. They need, for example, to be able to conduct retrospective searches on specific topics, to retrieve specific pieces of data, and to scan journals and books to keep themselves aware of recent developments in research. Some college of education libraries, which are mainly aimed at the lecturer and the student, can meet only a proportion of these needs; however, none of our interviewees went out of his way to seek much information from elsewhere, whether by visit or on inter-library loan, or even to make extensive use of bibliographical tools available in the college library, although a reasonable range of these was usually provided. Researchers in colleges of education were therefore at a double disadvantage, the limited size of their own libraries, and the very limited use they made of other resources, this latter disadvantage being one imposed largely by themselves.

Most of the responses to the INFROSS research questionnaire showed that college staff relied much more heavily on libraries and librarians than did the sample as a whole. As can be seen from Table 1, college of education staff used library catalogues, scanning library shelves, and consultations with library staff much more than did university researchers and teachers. Their use of other methods of locating references did not however deviate from the average to any great extent, and it is therefore not reported here in detail (see INFROSS Research Report no. 1). This comparatively heavy use of libraries and librarians is probably due largely to two factors: an environment where there is much less familiarity with the routine processes of academic research; and the small size of the institutions, which meant that the library was both closer and more easily used than in most universities, and that the librarian was personally known to all. It is a familiar phenomenon that librarians tend to be far more heavily used in smaller institutions, of whatever kind, than in large ones.

Data from the questionnaire backs up subjective impressions from the interviews. Some lecturers could formulate the steps required for the retrieval of a specific piece of information quite precisely (for example, leads gained through browsing, leads gained through abstracts),



but they rarely if ever took these steps. The only regular use made of indexing and abstracting journals in college libraries was by librarians, for compiling monthly circulars containing selections of current references on various areas of education.

The information problem of college of education researchers is therefore twofold: physical access to material, and identification of material required which may be elsewhere. Clearly; college of education libraries cannot hope to acquire collections of a similar scale and nature to university libraries; in view of the small proportion of individuals in colleges who are conducting research, this would be uneconomical, and could well take away resources from the materials required for teaching and students. A limited range of material for research must therefore be accepted as a fact of life. However, this does not preclude use of libraries in universities with which colleges are associated. Distance is probably one factor in the relatively small use made of university libraries; it is much easler for a university lecturer to fill in the odd hour or so between teaching duties by visiting the university library than it is for a college lecturer, who would normally have to make a special visit in an dvening or on a Saturday morning. School of Education libraries probably have a crucial part to play here in increasing the awareness of college lecturers of university library resources available; on their part, university libraries could help by making themselves more available to such users (in some cases, unnecessary restrictions seen to be imposed).

What is rather surprising is the very low use of inter-library loan services. All college librarians knew of this, and had at one time or another informed lecturers of it, but the information had clearly not stayed with them. It is interesting and paradoxical that a university researcher, with far better resources immediately at hand, makes far heavier proportionate use of inter-library loan services than his colleague in a college of education, with limited resources at hand. This may be partly a matter of custom and familiarity; inter-library loan service in universities is now so generally used and a cepted that no one can be unaware of its existence.

To demand an item requires that first the information requirement should be precisely formulated. In cases where an exact reference is obtained from another book or periodical, this presen's no problem; where the request is a subject one, however, use of bibliographical tools is imperative. It was not entirely clear from bur interviews whether the almost total non-use of bibliographical tools by researchers meant that they were not used at all, or that college librarians used them on behalf of researchers; in view of the fairly deavy use of librarians, one would hope that the latter was the case, in which case there is perhaps little room for improvement. This is not the place to consider the role of college of education librarians, but there must be at least a suspicion that in some cases librarians have adopted a passive rather than an active role in helping the researcher; they are there if wanted, but they do not always go out of their way to make clear to researchers the services available to them. The issue of regular bulletins or newsletters is not a substitute for a regular positive personalised service.



2.3 Respondents to the questionnaire

Additional material about the information requirements of college staff engaged in research is available from the questionnaire data.

For the serious researcher, the college of education does not seem to be the ideal environment. Mention has been made of their reliance on libraries and librarians, but college of education staff are not well provided with other services. As can be seen from Table 2, their use of photocopying services was lower than average for the social scientists replying to the questionnaire. This may be caused by a lack of desire to build up a personal research collection (see below); it may on the other hand be a result of poor photocopying services. Delegation of searching on a systematic basis is almost unheard of in colleges of education (Table 3), again presumably because of lack of assistance; college staff showed no more reluctance to use an information officer if available than did other social scientists (Table 4), though the ready availability of librarians would be expected to meet some of this need.

As already pointed out, college staff engaged in research relied more heavily than others on libraries, catalogues and library staff as sources of references. On the other hand, while they were no more dissatisfied with their libraries as teaching collections than were respondents generally (Table 5), they were much more unhappy about the research facilities offered by the local bookstock (Table 6). 44 per cent of college lecturers who answered the questionnaire felt that their local library satisfied few of their research needs or none at all, as against 27 per cent of the total response. But it was interesting to see that they did not attempt to compensate for this situation by building up large personal collections. As can be seen from Table 7, more than half the college staff owned fewer than 10 volumes connected with their research.

Although those respondents to the Juestionnaire who came from colleges of education represented by far the most demanding group of college of education lecturers in terms of information needs — they were all registered for higher degrees (M.Ed. or Ph.D.) — they still seemed to have more in common with their immediate colleagues than with university teachers. They faced grave difficulties with inadequate research resources, but seemed to do little by way of compensation. As can be seen from Tables 8 and 9, far fewer of the college staff felt that they had any problems than was the case with respondents as a whole, and they were also much more likely to claim that they had never come across information too late for it to be of use. It is suggested that their judgment on these matters reflected a lack of rigour and persistence in information—seeking, rather than an objective assessment of their situation.

2.4 Conclusions

The information problem for college of education lecturers is relatively easy to define. From a large quantity of information a relatively small amount is required: small enough to be assimilated in a restricted time, but comprehensive enough to avoid distortion of the field. Comprehensive bibliographies and retrieval services are



not required: and very often one set of references or a given amount of information, so long as it is representative of the topic or the field, is required and preferred to exhaustive retrieval. An exception is found in the case of lecturers actively engaged in research, whose information requirements approximate to those of university researchers.

Although only a relatively small number of college of education lecturers was interviewed, the pattern of information usage from one college to another, and from one lecturer to another, appeared similar. Because of this it is doubted if extensive additional enquiries into information requirements of college of education lecturers are required; . Least, using conventional methods of user studies. Once a repetitive pattern has been established investigations along these lines can cease. This is in marked contrast to the information requirements of most university researchers and teachers, where differences exist between disciplines and particularly between individuals, and where both extensive and intensive user studies are profitable and necessary to establish the best system to meet these requirements.

Further investigations into the information problems of college of education lecturers could proceed by providing information services and evaluating them. By providing users with more exposure to information and by facilitating physical access to material, it is quite probable that their information seeking and using activities would change, as well as their requirements and demands. A trial information system could be built around the attributes that characterise the behaviour of college of education lecturers. These attributes include: (1) a relatively restricted amount of time for information gathering and using activities; (2) a general lack of motivation to seek information; (3) limited opportunity for informal contacts due to the scattering of colleagues. The fact that colleges of education are relatively small and physically dispersed is likely always to limit the extent and usefulness of an informal network of communication.

It was not the purpose of our enquiry to explore information needs in non-social science subjects; for example, the need of a lecturer in physics for information about physics was beyond our scope. It does however appear that college of education lecturers keep up with their 'own' subjects on the whole rather better than they do with educational theory and practice. Certainly they appeared to have little contact with basic research in psychology, sociology or even in education. This appears to be rather surprising, since colleges of education are intended to train future teachers; it would be interesting to explore further whether it is generally true that college of education lecturers feel a stronger loyalty to their 'own' subjects than to education.



RESEARCHERS IN COLLEGES OF EDUCATION COMPARED WITH OTHER RESEARCHERS

These tables are produced from the responses to the INFROSS research questionnaire.

TABLE 1
USE MADE OF LIBRARIES AND LIBRARIANS
AS METHODS OF LOCATING REFERENCES

		COL EDUC	WHOLE SAMPLE
Met	hod	100 (37)	100 (920)
LIB CAT	- not used - rarely - sometimes - often	8 16 35 41	22 28 28 22
LIB (OWN)	- not used - rarely - sometimes - often	11 38 35 16	23 32 27 18
LIB (OTHER)	not usedrarelysometimesoften	8 27 41 24	34 31 19 16
LIBRARIAN	not usedrarelysometimesoften	24 30 30 16	48 30 14 8

TABLE 2
USE MADE OF PHOTOCOPIES

Frequency	COL EDUC	WHOLE SAMPLE
of use	100 (37)	100 (912)
often sometimes rarely	22 54 24	39 48 13



TABLE 3
DELEGATION OF SEARCHING

Degree of delegation	COL EDUC	WHOLE SAMPLE
extensive partial none	(37) O 8 92	(912) 7 21 72

TABLE 4
WILLINGNESS TO USE INFORMATION OFFICER

Potential	COI, EDUC	WHOLE SAMPLE
use	100 (38)	100 (838)
extensive partial none	42 42 16	42 45 13



TABLE 5

ADEQUACY OF LOCAL LIBRARY FOR TEACHING

Satisfaction	COL EDUC	WHOLE SAMPLE
of demands	100 (39)	100 (779)
all	10	10
most	56	56
some	2 6	28
few	5	6
none	3	1

TABLE 6

ADEQUACY OF LOCAL LIBRARY FOR RESEARCH

Degree of	COL EDUC	WHOLE SAMPLE
satisfaction	100 (37)	100 (906)
all	5	4
most	19	33
some	32	36
few	41	24
none	3	3



TABLE 7

VOLUMES OWNED

No.of	COL EDUC	WHOLE SAMPLE
volumes	100 (36)	100 (895)
under 10	53	37
11 - 25	28	32
26 - 50	14	16
51 - 100	3	7
100+	3	8

TABLE 8

AWARENESS OF INFORMATION PROBLEMS

	COL EDUC	WHOLE SAMPLE
Problems	100 (38)	100 (912)
Yes No	31 69	53 47

TABLE 9

INSTANCES OF LATE DETECTION OF INFORMATION

Late	COL EDUC	WHOLE SAMPLE
detection	100 (38)	100 (868)
never	47	25
sometimes	53	68
often	O '	7



3. SCHOOLTEACHERS

3.1 Method

Schoolteachers were interviewed in groups. It was believed that a group of four or five teachers would be easier to handle than if each teacher were interviewed separately. Teachers as a class are not very information-conscious; when interviewed in groups they tended to spark ideas off each other, while singly they would probably not have found it so easy to communicate.

Five groups were interviewed - three in Bath and two in Bristol-during the autumn of 1969. 24 teachers in all were questioned in this way: 13 from secondary schools and 11 from primary schools. The interviews themselves were of an exploratory nature, and the data collected was completely unquantifiable. What follows, therefore, is the subjective impressions gained from the interviews.

The reason for using interviews is the same as in the case of social workers (see Research Report no. 4). A questionnaire was drafted (see Appendix B), but, as with the questionnaire drafted for use with social workers, it proved unusable: the questions needed so much explanation that lengthy notes would have been required.

The geographical area covered by our interviews, as well as the number of interviews, was very small, and our findings may well not be representative of schoolteachers generally. They are reported because they may provoke further study, which would confirm, contradict or supplement our findings.

3.2 Types of information need

Several types of information need were hypothesised:

- (i) Day-to-day information (e.g. concerning the school, pupils etc.).
- (ii) Specific factual information, required occasionally (e.g. the address of another school),
- (iii) Information on the subject taught.
- (iv) Information on educational trends and developments (e.g. innovations in teaching methods, advances in educational technology).
 - (v) Information on the findings of research (e.g. the influence of social class on educability, open-ended intelligence tests).

3.2.1 Day-to-day information

This is mostly acquired informally, and within the school. Access to school or local authority records was occasionally a problem.



3.2.2 Specific factual information

This was either found or not found, usually by asking colleagues or using the school library or the public library.

3.2.3 Information on the subject taught

Unless the subject taught was a social science, this was outside our terms of reference. Social sciences as such, apart from economics at A-level, are little taught yet in schools. Professional associations (such as the National Association for the Teaching of English) and new textbooks appeared to serve this type of need adequately.

3.2.4 Information on educational trends and developments

It was clear from our interviews that, while schoolteachers recognised the need to know something about recent trends and developments in educational practice, they have little positive motivation to find out. Information either came their way or it did not. When it did come, it was through colleagues and teachers in other schools, and through journals such as Times Educational Supplement and The Teacher. More 'academic' journals, and books on educational practice, are hardly ever read. Older colleagues can guide a new teacher in existing methods, but probably more important is the contribution new teachers can make to their older colleagues, since they have had much more recent contact with new trends and thinking. Subject-based professional associations, and occasional conferences, help to bring together teachers from different schools, and a certain amount of relevant information is transferred at these meetings. The educational press is regarded with rather more suspicion, perhaps understandably, as fashions in teaching methods and, especially, in educational technology are known to change frequently; whereas new ideas teachers pick up from other teachers are likely to have been tried or assessed in some way. Suggestions from university teachers or researchers were also received cautiously, as they sometimes demanded more equipment and money than was available. Schoolteachers see themselves as living in a very real and practical world, where the problems of teaching John and Mary predominate, and where ideas from outside can often seem unrealistic.

3.2.5 Information on research findings

Educational research was regarded with almost total indifference and a fair amount of fundamental suspicion, as being conducted in isolation from the 'real world' of teaching, and as being of little potential relevance. 'Common sense' was thought of as a better guide than research. This is not the place to discuss the relevance of educational research to educational practice; some of the findings at least are of proved relevance, such as the linguistic impoverishment of workingclass children and the consequent reduced ability to learn through verbal communication. However, it is arguable that most of the major advances in education would have come about anyway, as a result largely of subtle changes in social attitudes, combined with experiments by innovating teachers such as A.S. Neill (how much were his innovations influenced by educational research?). Some changes can be supported by research - such as the dying of the eleven-plus - but are rarely due to it. If research was really effective in bringing about change,



the research evidence for mixed (boys and girls) schools is quite sufficient, and has been for some years, to have affected practice to a far greater extent than has actually happened.

If research findings do percolate through to teachers, they do so very indirectly and after a long period, when they have usually been fully established. Certainly schoolteachers make no effoit at all to read the primary literature reporting research, in journal or even monograph form.

Educational theory is not the same as educational research, but it may be mentioned briefly here. It is seen as of even less use and relevance, if possible, than educational research. Apart from new teachers, schoolteachers are largely unfamiliar with it, and have little motivation to be otherwise.

3.3 Sources of information

The foregoing paragraphs should not be taken to mean that school-teachers do not read. School libraries are too small, and too much oriented towards the children, to be of much use, but public libraries are used quite heavily, for reading of various levels. What is interesting is that while this reading may be 'educational' in a broad sense, it is not usually concerned with educational research, theory or practice. One or two interviewees had access to a university library; these were more highly motivated than the others, and valued this access. As already mentioned, the primary literature on education is hardly touched, and the only formal sources regularly used were 'popular' journals such as Times Educational Supplement.

Informal communication is far the most important means of obtaining information, of all kinds: colleagues, new and established, teachers in other schools, conferences and meetings of various kinds. Professional associations fill a minor but useful role, and local teachers' centres, where they exist, are seen to have a high potential.

3.4 Conclusions

As with college of education lecturers, schoolteachers, at least at grammar school level, appeared to be more involved with their 'own' subjects than with educational theory and practice: educational practice is something they all do anyway, and they do not see any particular information need. Indeed, our most striking impression was of unawareness of information problems or even needs on the part of schoolteachers. It is impossible for us to attempt an answer to the question "Would more information make X a better teacher?"; but it is reasonable to state that the lines of communication to teachers appear inadequate even if they did wish for information, and to suggest that more adequate lines might stimulate demand and unleash needs at present unarticulated.

Barriers to communication include:

(i) Shortage of time for reading. Allowing for lower motivation, it is probably true that schoolteachers have on the whole less time for reading and private study than, say, university teachers.



- (ii) Inadequate library facilities. School libraries can hardly be the answer, and public libraries are not always strong in educational material. University School of Education libraries, and perhaps college of education libraries, could perhaps do more to help; Schools of Education already do a good deal, however, and lack of motivation and time on the part of teachers are propably more important than lack of facilities.
- (iii) Insufficient opportunity for informal exchange of information, particularly between academics and teachers. Meetings between academics and teachers could do much to communicate relevant research findings and practical trends, to reduce suspicion on the part of teachers, and perhaps to make academics more aware of the 'real world' of teaching. This would probably be far more effective than the production of another journal or newsletter: the small extent to which existing journals are read does not suggest that a new one would command a wide readership.

The information needs of schoolteachers are relatively easy to identify, but much less easy to solve. Fortunately they appear not to be very severe, but some effort towards their solution would nevertheless be desirable. Any solution must require minimal effort, and low motivation; it must seem as well as be relevant; it must process and package the findings of research into usable forms without distortion. Much experiment will be required before adequate methods are developed to meet these criteria, and further research should take the form of evaluated experiment rather than simple user studies.



APPENDIX A Interview check list for use with college of education lecturers INTERVIEWS - COLLEGE OF EDUCATION LECTURERS

NA ME:
AGE:
QUALIFICATIONS:
STATUS:
YEAR APPOINTED TO PRESENT POSITION:
ENGAGED IN RESEARCH: YES/NO
PRESENT RESEARCH (if any)
during the last seven days?
How do you obtain the information you require for your research/teaching? A documentary source, informal such as consulting a colleague, or by generating your own data?
SOURCES
•••••••••••••••••••••••••••••••••••••••

discussions with colleagues
references
correspondence
sociodental
letters received
telephone calls
readings (what?)
browsing



ENLARGE ON SOURCES FOR IDEAS AND MOTIVATIONS	
A SPECIFIC EXAMPLE OF A PROBLEM IN YOUR RESEARCH (if a	ıy)
	• • • • • • • • • • • • • • • • • • • •
deliberate search abstracts or indexes or bibliographies	
systematic?	
KEEPING INFORMED	
period searches journals	
abstracts	
indexes bibliographies	
del eveke	
delegate relevance to research	
evaluation of material received	
accidental pick-up when looking for something else	
ABSTRACTS AND INDEXES	
use with difficulty or reluctance?	
usability arrangement (alpha v. class)	
terminology	ĺ
coverage	
воок	
when	
how come across	



ARTICLE
when how come across
CONSTRAINTS TO INFORMATION SEEKING
library volume of information languages
ADDITIONAL COMMENTS
IMPRESSIONS
IMPRESSIONS
systematic
persistence
breadth
informal v. formal ratio



Investigation into Information Requirements of the Social Sciences

QUESTIONNAIRE

		Mr./Mrs./Miss
Age group:	21 - 30	
Academic & profes	sional or subject qualifications:	***
Degree or qualification	Date Subject(s)	
College or school	where currently employed:	
If a school, plea	se state what type:	
	Public	
	Grammar Secondary modern	\vdash
	Secondary technica	ı 📙
	Primary (junior &	infant)
	Misc. private Other	H
	please specify:	لــا
Date you joined to	he college or school:	**************************************
Date you joined to		
	position:	
Present status or Year you first to	position: ok up teaching: iefly the nature of your present	
Present status or Year you first to Please outline br	position: ok up teaching: iefly the nature of your present pils)	
Present status or Year you first to Please outline br age level of pu	position: ok up teaching: iefly the nature of your present pils)	job (subjects taug
Present status or Year you first to Please outline br age level of pu	position: ok up teaching: iefly the nature of your present pils)	job (subjects taug
Present status or Year you first to Please outline br age level of pu	position: ok up teaching: iefly the nature of your present pils)	job (subjects taug
Present status or Year you first to Please outline br age level of pu	position: ok up teaching: iefly the nature of your present pils)	job (subjects taug

23

For the purpose of this questionnaire, information is defined as all knowledge you obtain or wish to obtain, whether or not it is published. Information can be divided into four broad categories:

- A. Routine information you need to carry out your ordinary work.
- B. Specific facts or information, wanted occasionally and having no direct bearing on day-to-day work.
- C. Information about current practical developments in your profession.
- D. Information about recent research or discoveries relevant to your work.
- A. Probably most of the day-to-day information you require in connection with your work is obtained informally through personal channels, e.g. asking a colleague or ringing up the local authority. (An example would be information about the home background of a difficult child). For the present purposes we are not interested in this kind of information.
- B. In addition to these day-to-day needs, you may have occasional needs for rather less routine information: e.g. the number of candidates for C.S.E. in different subjects.

10.	Please give, if you can, the of information need:	three most	recent e	xamples of	this sort
	1.				
	2.				
	3.				

11. Please mark in the table below, for each of the above examples, the sources you tried, with a $\sqrt{}$ for those that worked, a X for those that failed.

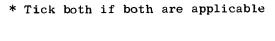
	1	Example number		
		1	2	3
Colleagues in own institution				
Colleagues elsewhere				
Local authority				
Professional body or society: national				
regional or local				
Public library				
Other (specify):				



	m.	urces in the order you
		
		
The other two broad cate	gories of information	on are really "keeping
with developments" - the		
methods of teaching Frem findings (e.g. the abili		
abstract terms). The		
o you attempt to keep u	p with practical dev	velopments in education
		Yes
		No
		To some extent
If so, how do you go abo	ut it?	
iz boy now do you go dat		
·		
_	uch with research fi	indings of general inte
Oo you try to keep in to to education?	uch with research fi	
Do you try to keep in to to education?	uch with research fi	indings of general inte



17.	If you wanted to find a few recent periodicals) on the influence of where would you turn?					
	Again, please list the sources you try them.	would try	in the or	der you wou	ıld	
		<u> </u>			- ⇒	
		_				
					al mags	
18.	Do you feel able to keep as much i and research as you would like?	in touch wit	h relevan	t developme	nts	
				Yes []	
19.	If "No", is this because of:					
	informa	f time? re where to ation not re ner reason?	-	ilable?		
	speci	fy:			-	
		all reason				
	(max r	t all leason	s apprica	Die,		
2 0.	What journals (including weeklies) do you read or scan?					
		Read or		Useful		
	Title	Regularly	Occas- ionally	Practical trends*		





21. What newspapers that you see regularly do you find of use for "keeping up"?

	Useful	
Title	Practical	Research
	trends	findings
		
	l	

Conferences and courses:

for present purposes, these may be considered in four categories:

- 1. Series of lectures or classes
- 2. Short local (or regional) course (two days or less)
- 3. Conference or residential course
- 4. Occasional individual lecture or class
- 22. Would you please say, for each category, how many you have attended in the last 12 months, and the name of the most recent one you have attended (whether in the last 12 months or not).

Category	No. attended in last year	Most recent one attended
l. Series		
2. Short course		
3. Conference		
4. Occasional lecture		

23. Which category of course or conference do you consider most useful for:

keeping up with practical trends? 1 2 3 4

keeping up with research? 1 2 3 4

(ring no. applicable)

24. For conferences in general, which part do you find most useful?

	Useful Practical trends	
Actual papers or lectures		
Discussion on papers or lectures		
Informal conversation with others attending		



25.	What libraries do you use?		
	149	Regularly	Occasionally
٠			
26.	Can you give any recent example of information which you tried and failed to obtain?	on, of whatever	kind,
27.	Please name any other source of information been mentioned during the course of this qu		
	answers:		
	Date Completed:		

