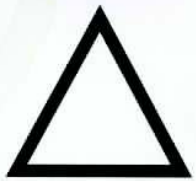
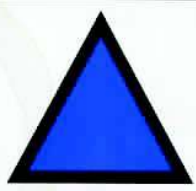




# INFORMAL LEARNING IN THE PROFESSIONS

JANE GEAR  
AILEEN McINTOSH  
GEOFFREY SQUIRES



 THE  
UNIVERSITY  
OF HULL

# INFORMAL LEARNING

in the

# PROFESSIONS

Jane Gear, Aileen McIntosh  
and Geoffrey Squires

Report of a research project funded by the  
Higher Education Funding Council for England

Department of Adult Education  
University of Hull

1994

*The views expressed in this report are those of the project director and researchers. They do not necessarily reflect those of the grant-funding bodies, the grant-holding body or those participating in or assisting with the study. Extracts from the report may be cited or reproduced without permission, as long as the source is acknowledged.*

Further copies of this report (price £5.00, including postage and packing) are available from the following address, as are other Departmental reports and papers on continuing education.

The Publications Officer  
Department of Adult Education  
The University of Hull  
49 Salmon Grove  
Hull  
HU6 7SZ

Tel. (0482) 465415  
Fax. (0482) 475977

© Department of Adult Education  
University of Hull

ISBN 0-85958-073-3

## CONTENTS

I	INTRODUCTION	7
II	PATTERNS OF INFORMAL LEARNING	11
	The Nature of the Project	13
	Factors Affecting Informal Learning	15
III	THE NATURE OF INFORMAL LEARNING	17
	Reasons for Starting	21
	Planning and Evolution	27
	People as a Resource	29
	Other Resources and Materials	33
	The Role of Events	35
	Outcomes and Rewards	35
	Problems of Informal Learning	41
	The Benefits of Hindsight	43
	Passing it on	45
	Summary	47
IV	FACTORS AFFECTING INFORMAL LEARNING	49
	Organisational Factors	49
	People and Relationships	53
	The Profession and Professional Bodies	57
	The Work Itself	59
	Roles	61
	Stages	63
	Personality	65
	Other Factors	69
V	CONCLUSIONS	71
	Continuing Learning and Continuing Education	71
	Three Kinds of Continuing Learning	72
	Some Means of Continuing Learning	73
	Implications for Individuals	74
	Implications for Management	75
	Implications for Professional Bodies	77
	Implications for Higher Education	79
	SELECT BIBLIOGRAPHY	81
	APPENDIX: Methodology	93

### **The Project Director**

Dr Geoffrey Squires is a Senior Lecturer in the Department of Adult Education and the author of numerous publications on post-school education and training including three books: **The Curriculum Beyond School** (Hodder & Stoughton, 1987); **Pathways for Learning** (OECD, 1989) and **First Degree: the undergraduate curriculum** (Open University Press, 1990). He has directed several research projects in the field, and has been a consultant to the OECD, UNHCR, and other national and international bodies.

### **The Researchers**

Dr. Jane Gear is a Fellow of the Department of Adult Education and author of **Perception and the Evolution of Style: a new model of mind** (Routledge, 1989) which reflects her special interest in styles of perception, thinking and behaviour, and with Geoffrey Squires, **The Portable University** (1990). She has wide experience in the field of post-school education and training, and her current research is into communication and development in teams and organisations. She is currently also a consultant to the Institute for Cross-Cultural Communication, Zug, Switzerland.

Aileen McIntosh is a Research Fellow in the Department of Public Health Medicine. Her background is primarily in the area of health policy. She has carried out several projects in the health and social care field. Her current research includes the development and implementation of clinical guidelines and methods of clinical audit.

Dr Patrick Vaughan, who carried out some of the additional interviews with obstetricians and gynaecologists, is the author of a previous Departmental research report on continuing professional development: **Maintaining Professional Competence: a survey of the role of professional bodies in the development of credit-bearing courses** (1991).

### **Transcription and DTP**

Kathryn Austin, Mary Pemberton and Sheila Robinson

## LIST OF FIGURES

1.	Number of Projects	10
2.	Project Time Period	10
3.	Time Spent on Project	10
4.	Reasons for Informal Learning	12
5.	Sources of Informal Learning	12
6.	Factors Affecting Informal Learning	14
7.	Preference for Formal/Informal Learning	14
8.	Types of Continuing Learning	19
9.	Some Means of Continuing Learning	74

## **ACKNOWLEDGEMENTS**

*We would like to record our gratitude to the Higher Education Funding Council for England for funding this study, and to the Royal College of Obstetricians and Gynaecologists for an additional grant; to the relevant professional bodies for their support and assistance with the research; and to all those who agreed to be interviewed, often in the midst of a very busy schedule.*

## I. INTRODUCTION

Europe possesses not one but two great traditions of teaching and learning. The first is the didactic tradition which comes down to us through the monasteries, universities and schools. It involves institutionalised provision, planned curricula and formal methods such as lectures, classes and seminars. It relies heavily on written texts and is typically assessed through set tests and examinations.

The second tradition, by contrast, is located mainly outside educational institutions. It involves learning by doing, typically on the job, and the acquisition of knowledge and skill under the supervision of a more experienced practitioner, of whom one gradually becomes independent. It is often self-directed and relies heavily on oral communication. It is typically assessed in terms of competence or mastery of performance rather than through examinations.

The best known examples of this second tradition are the apprenticeship systems of the medieval trade and craft guilds, but in fact the tradition goes far beyond these, not only embracing many other occupations but continuing well beyond the initial apprentice stage. Indeed, it is difficult to define its limits because whereas the first tradition is formalised and institutionalised, this second one tends, by its very nature, to be informal, individual and often implicit.

The professions inherit both traditions. In previous centuries they relied mainly on the latter, and were often *de facto* apprenticeships, with a strong emphasis on peer culture and interaction as well as on supervised learning. In this century, as the professions have become more closely entwined with higher education, professional education has tended to become more structured and formal, first at the initial and now at the continuing stage.

The purpose of this project was to explore informal learning in the professions: the kind of learning that professional people may undertake, in and through their normal work and practice, at any stage in their careers, intentionally or spontaneously. That does not imply any particular preference for the informal: each mode of learning has its strengths and weaknesses, and the aim must surely be to find the right mix. But the research was motivated partly by a concern that the current growth of continuing professional development - which we welcome - could lead to an over-emphasis on purely overt, formal and apparently accountable activities at the expense of less obvious and public ones.

This aim of exploring informal learning in the professions posed two basic methodological problems. First, people might not understand what we were talking about, since although many might have been involved in such learning, they would not necessarily recognise or label it as such. The concept of 'informal' or 'self-directed' learning is not a familiar or everyday one. Thus it was decided to use interviews as the main research tool (as against, for example,



questionnaires) and to use the beginning of the interview to explain what it was we were trying to get at.

Even then, there was the problem of defining what is by its very nature a rather ill-defined phenomenon. Professionals might be teaching themselves and others all manner of things in their day-to-day work, but how could one begin to delimit this learning? The solution we adopted was to use the notion of an 'adult learning project', as formulated originally by Tough (1971) and refined subsequently by others, as the initial benchmark for our investigations. In order to investigate informal learning in the general population, Tough established two criteria: that people should have spent the equivalent of a working day on each such 'learning project' over a specified period of time; and that they should have learned enough from it to 'teach' someone else something about it if the need or opportunity arose. Paradoxically, it is the very arbitrariness of these criteria which allows one to identify and isolate substantial episodes of informal learning from the continual flow of everyday interaction and experience. The following definition was thus put to each interviewee:

*An informal learning project is defined as the equivalent of one working day (at least) over the last three years spent developing some aspect of your professional knowledge, skills and competence to the point where you could pass some of it on to a colleague.*

The interviews were divided into three stages. The first part was taken up with identifying any projects which met these two criteria, the second with analysing one such project in detail, and the third with exploring the various factors - organisational, professional, social and personal - which might affect the informal learning of that person.

This report describes what came out of the interviews, and discusses some of the main themes and issues. Several points should however be made at the outset. First, although as the Select Bibliography shows there is a sizeable literature which has a bearing on this subject, there has been virtually no previous research in the U.K. on informal learning in the professions. There was therefore no real basis for structuring the sample beyond the basic assumption that it would be useful to look at a range of professions. Six were initially chosen (architecture, mechanical engineering, law, medical general practice, nursing and social work) and an additional request and funding made possible the inclusion of a seventh (obstetrics and gynaecology). As far as was possible, the 20 interviewees in each profession (30 in the last) were selected without any prior criteria being applied. (A fuller description of the methodology used is given in the Appendix.) The general point to be made here is that the research should be regarded as exploratory.

Secondly, the distinction between 'formal' and 'informal' learning was one of angle or perspective rather than demarcation. Those who organise courses and seminars or who devise teaching or training packages tend to see informal learning as a useful background or spin-off from the formal input. In this project, things were the other way round. It was the self-directed, experiential, informal self-teaching process which was the main focus, and any courses attended or packages studied were regarded as inputs to that process. We are ultimately concerned with continuing professional development as a whole, and it is neither possible nor desirable to draw strict distinctions between methods or modes of learning. However, the approach matters. Many professional bodies and employers seem, understandably enough, to approach continuing professional development from the

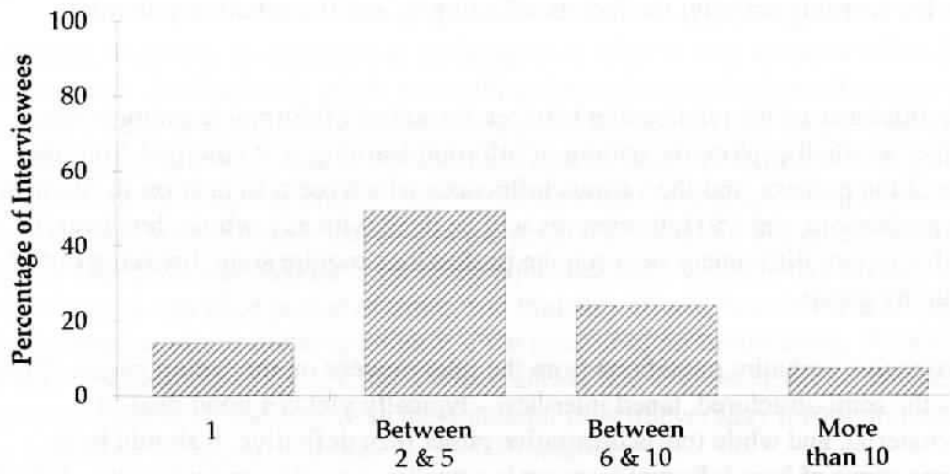
perspective of what is provided and taken up, e.g. courses, conferences, seminars, learning materials. The point of departure in this project was the individual; the amount, nature and sources of his or her learning activity; the factors affecting it; and the actual or potential outcomes.

We will return to this issue of the relationship between formal and informal learning in the Conclusions. First, we shall explore the pattern of informal learning as it emerged from the study, the nature of the process, and the various influences which seem to bear on it. In most cases, the seven professions and 150 interviewees will be dealt with as a whole; however, in certain parts of this report, differences between the professions require some breaking out of the analysis group by group.

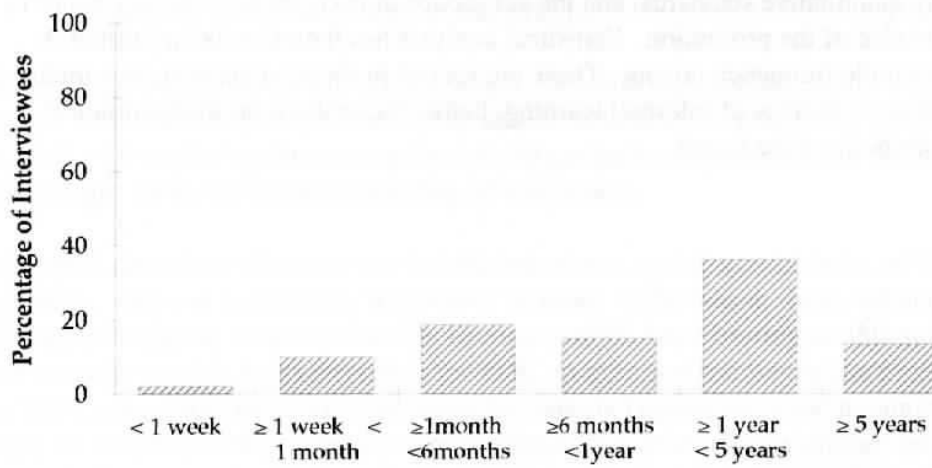
There are also extensive verbatim quotations from the interviewees on the facing pages. This kind of method - the semi-structured, taped interview - typically yields a good deal of interesting case-material, and while this is illustrative rather than definitive, it should help readers to get some sense of how informal learning is actually viewed by practitioners. Editing of the extracts has been kept to the minimum necessary for written comprehension.

Although the numbers involved in the research were relatively large for a qualitative study, they were small by quantitative standards, and the subgroups in each profession very small in relation to the total size of the profession. Statistical analysis has therefore been limited in most instances to simple frequency counts. These are set out in the next section, as a means of establishing the general outlines of informal learning, before we embark on the qualitative analysis in the main body of the report.

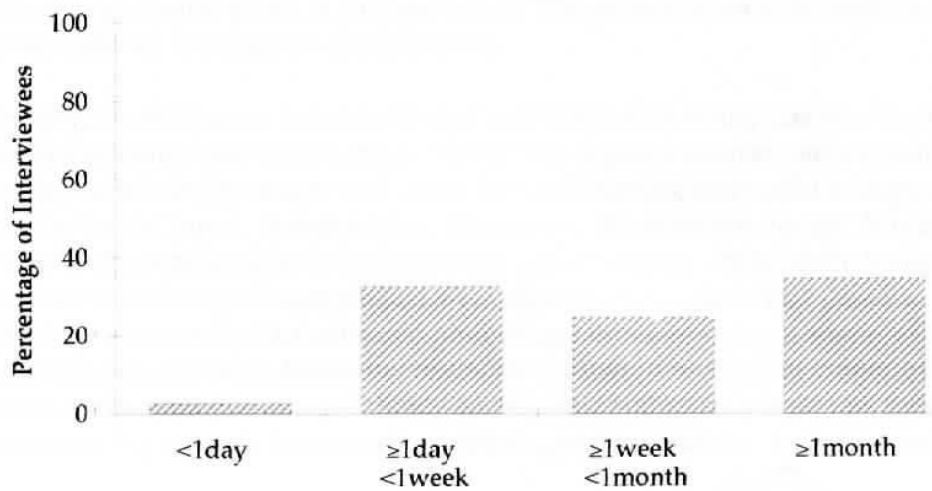
**Figure 1 - Number of Projects**



**Figure 2 - Project Time Period**



**Figure 3 - Time Spent on Projects**



## II. PATTERNS OF INFORMAL LEARNING

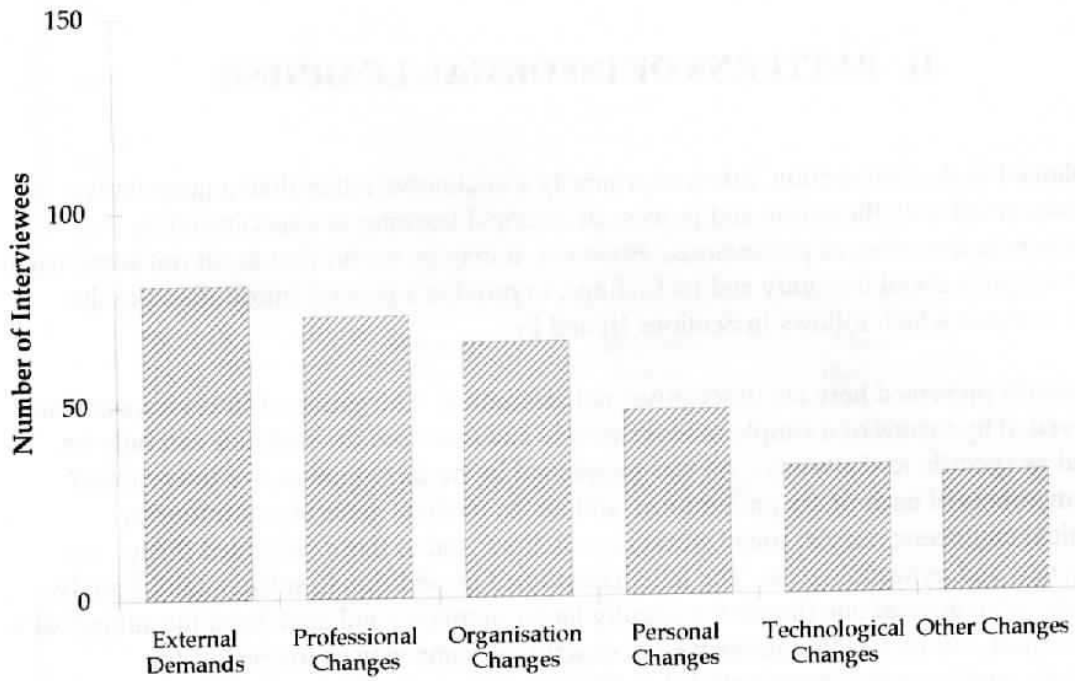
As explained in the first section, this was primarily a qualitative rather than a quantitative study, concerned with the nature and process of informal learning as experienced by practitioners in a number of professions. However, it may be useful first to set out some basic facts and figures about the study and its findings, to provide a general introduction to the detailed analysis which follows in Sections III and IV.

The statistics presented here are descriptive, not inferential. Our group of interviewees was not arrived at by means of a simple random sample and therefore the statistics can only be regarded as specific to this study. As was mentioned in the Introduction, we interviewed twenty members of each of six professions: architects; medical general practitioners; mechanical engineers; nurses; social workers; solicitors; and to these we added thirty obstetricians and gynaecologists. The latter constituted an additional, self-contained study within the more general one (hence the slightly larger numbers) and have been the subject of a specific report, but they were interviewed in exactly the same way as the rest of the participants, and have thus been included in this general report. Further details of the study population can be found in the Appendix on Methodology, as can the list of the main interview questions. Unless otherwise stated, percentages are of the total 150 interviews; some of the main findings have been set out opposite in diagrammatic form for ease of reference.

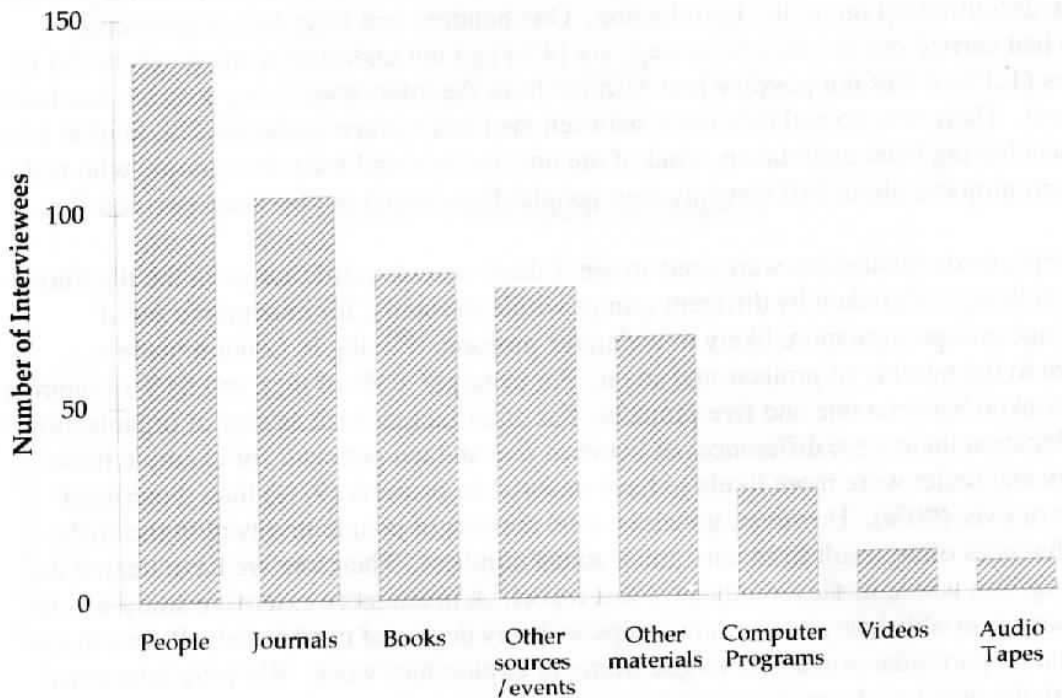
The vast majority of people interviewed had undertaken at least one informal learning project, using the definition set out in the Introduction. One hundred and forty-two respondents (94.7%) had carried out at least one project, six (4%) had not undertaken any projects and in two cases (1.3%) it was not possible to determine from the interviews if any projects had been undertaken. There was no real difference between men and women in the likelihood of at least one project having been undertaken. And of the one hundred and forty-two people who had undertaken projects, about half (seventy-four people) had carried out between two and five.

Some simple cross-tabulations were done to see if there were any differences in the likelihood of projects being undertaken by different groups within the study, for example to see if different age groups were more likely to undertake projects, if living in London made a difference to the number of projects and so on. For example, 63% of men and 64% of women had undertaken between one and five projects. For other factors such as size of organisation, age and location there were differences of between five and ten per cent; for example those aged forty and under were more likely to have undertaken projects (97%) than those aged forty-one or over (90%). However, given the total number of people involved in the study these differences often result from very small actual numbers. Therefore we have treated the study group as a whole in the remainder of this report. A much more extensive study would be necessary to establish any such relationships with any degree of confidence; all we can say here is that no particular pointers emerged from our exploratory work. We were concerned rather with the detail of the projects and the context in which they took place.

**Figure 4 - Reasons for Informal Learning**



**Figure 5 - Sources of Informal Learning**



## The Nature of the Projects

As noted above many people had undertaken a number of projects. However, since previous North American research had already established the broad features of 'adult learning projects', we decided to look at one project in a considerable degree of depth, and to refer to the others only insofar as they differed from it. The discussion in this section thus refers only to the one project analysed in detail.

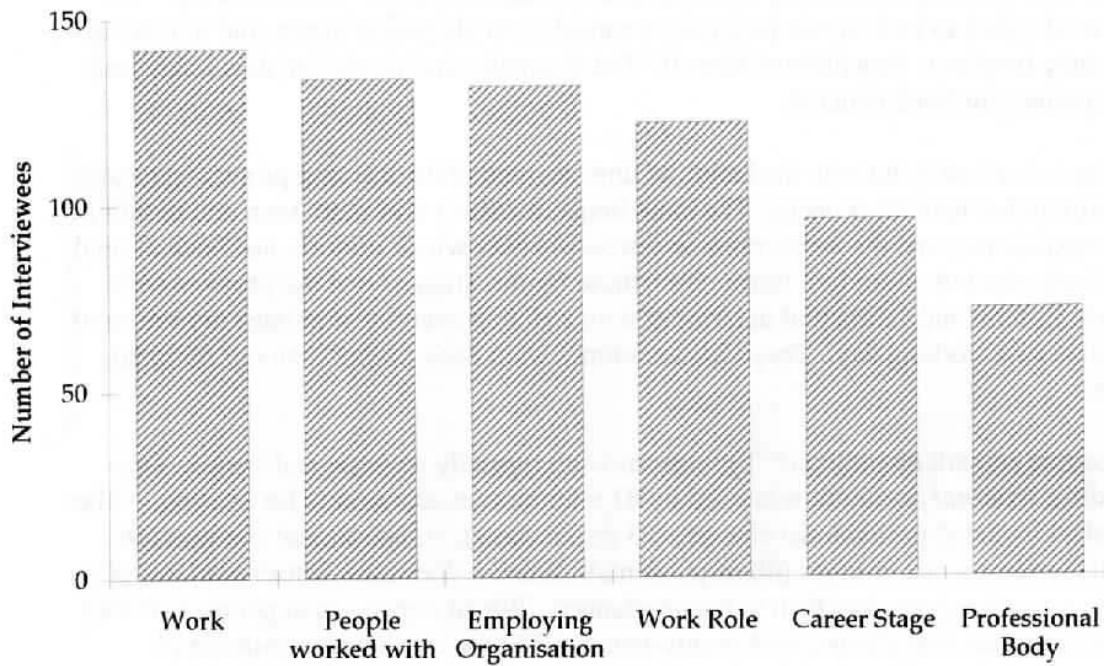
One early question had to do with the length of time devoted to the learning project (typically intermittently rather than all at once). The most frequent answer was more than one month in total (52 respondents), and the most common time-scale over which projects had been carried out was at least one but under five years. Both these figures suggest that the projects were often both long-term and substantial in terms of time and well over our stipulated minimum of the equivalent of a working day. They also sometimes went back further than our notional three years.

Why did people embark on projects? The reasons were typically multiple and varied. One broad heading, *external demands*, was cited by 81 interviewees as a reason for starting. Other headings cited included professional changes (73 respondents), organisational changes (66 respondents) and personal changes (48 respondents). When it does start, informal learning is more likely to evolve or emerge than to be pre-planned. Whilst twenty-eight people (18.7%) said that their project was planned and twenty-two (14.7%) said there was a mixture of planning and evolution, the majority, ninety-two people (61.3%) said that the project had evolved. This was generally seen as a positive feature. The evolution of the projects was often affected by the resources drawn upon during the project and sometimes influenced by chance meetings or events. In almost all cases, however, the major resource was other people.

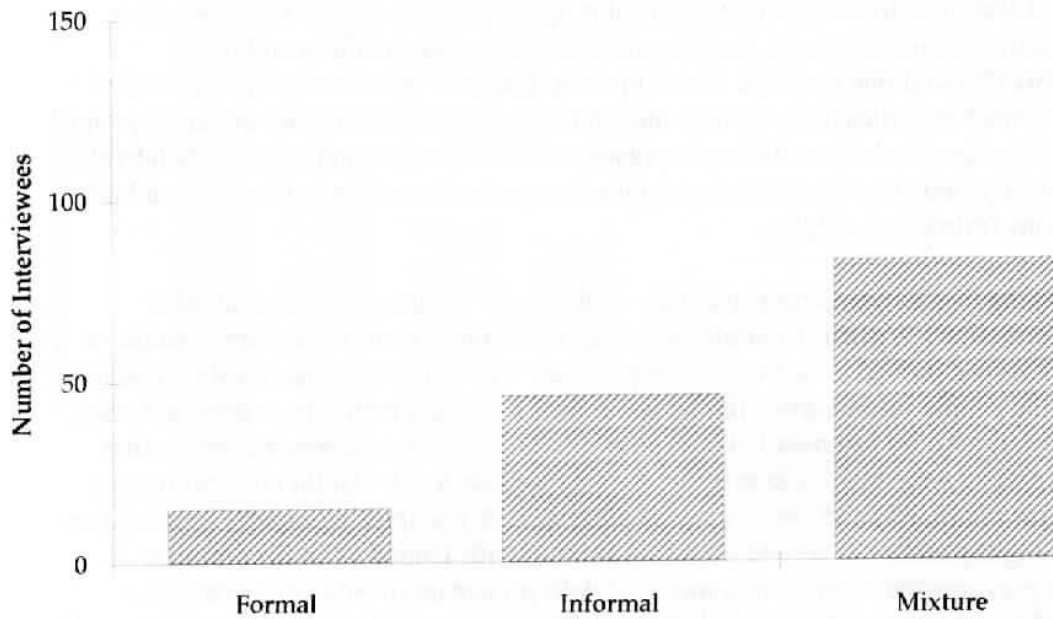
The overwhelming importance of other people as resources in informal learning became apparent as the research progressed. Almost all the interviewees, one hundred and thirty-eight (92%) said that they had drawn on other people during the project. There was however a tendency for some people to be used much more than others: one hundred and thirty respondents (86.7%) said that they had drawn upon colleagues. No other group was called upon nearly as much as colleagues, the next most popular category being that of 'other people' which included professionals from different spheres and in different organisations. Relatively few people, twenty-two (14.7%) had drawn on teachers or instructors, even fewer than had drawn on friends (thirty-two = 22%).

Those undertaking learning projects sometimes made use of written materials and other sources of information. Written materials were used much more than, for example, audio or video tapes. Journals proved to be the most popular sort of written material, used by just over two-thirds of the people interviewed (102 people = 68%). Books, including reference books, were also popular, used by just over half (80 people = 53.3%). As mentioned above, other forms of information were much less popular than the written word. Audio tapes were used by only eight people (5.3%) and video tapes by eleven (7.3%) people. Computer programmes were used by slightly more (25 people = 16.7%) although this tended to be in computer tutorials, or in playing around with programmes if their project involved learning to use a computer and/or programme. The general category of 'other material' yielded a positive response from almost half of those interviewed (71 people = 47.3%). These materials ranged

**Figure 6 - Factors Affecting Informal Learning**



**Figure 7 - Preference for Formal/Informal Learning**



from labels (in the food industry) and 'grey material' such as internal reports and memoranda, to policy documents and pieces of legislation. In some instances the material used was chosen because it was thought likely to provide the information required; in other cases serendipity played a greater part.

Although as we noted above, projects were more likely to have evolved than to be systematically pre-planned, one hundred and nineteen (79.3%) of those interviewed said that they had an idea of the outcomes that they wanted, and of those the great majority (101 people) said that their intentions had been met. Thus, 84.9% of those who said they had an idea of the outcomes they wanted to achieve, felt that they had achieved them. Some of the remaining thirteen said that their intentions had not yet been fulfilled, and most of those expected that they would be.

As mentioned earlier, people loomed large in informal projects as resources for learning. It was not surprising therefore to discover that the great majority of those who had undertaken learning projects had passed on what they had learned to others. Of the one hundred and forty two people who had undertaken such projects, one hundred and seventeen (82.4%) said that they had already passed on what they had learnt to someone else. Of those who had not done so, some cited a lack of opportunity rather than any reluctance on their part. We also asked if, with hindsight, they would go about the project differently if they were to do it now. Eighty four (56%) stated that they would not and many said that they did not see how they could have done it differently.

### **Factors Affecting Informal Learning**

After analysing one informal learning project in detail, we moved on in the last stage of the interview to explore factors which may affect informal learning: other people; the work one does; career stage; the organisation one works in; and other general issues.

Once again the significance of people became apparent. One hundred and thirty-four interviewees (89.3%) said that the people they worked with had an effect on their informal learning. The effects were varied and included general discussions and 'soundings', passing on of materials, support and encouragement. In general, the effect of people on informal learning was thought to be very positive.

Almost everyone, one hundred and forty two people (94.7%) said that the actual work that they did had an effect on their informal learning. This effect could be positive in terms of having to acquire new expertise, or negative in terms of not having enough time to pursue such learning. Fewer people, ninety-six (64%) thought that their informal learning was related to the particular stage that they had reached in their career, and many seemed to think it would go on no matter what stage they were at, although the content of the learning might change over time.

Many more thought that organisational factors had an effect. Whilst one hundred and twenty two (81.3%) thought that their role in the organisation affected their informal learning, even more, one hundred and thirty two (88%) stated that their employing organisation had an effect. These figures were much higher than the numbers who thought that their professional bodies had an effect: only about half (48%). Almost all (93.3%) thought that personality



played a part in informal learning, in terms of a willingness to undertake projects, motivation, methods and styles of working and so on.

A major question late in the interview asked people which kind of continuing education, formal or informal, they found more valuable. The responses to this were complex and will be discussed later in the report, but the raw figures indicate that informal learning is highly valued. The preferences were as follows:

Formal	15 people (10%)
Informal	46 people (30.7%)
Mixture of formal and informal	83 people (55.3%)
N/A	6 people (4%)

The interviews ended with a number of general questions about other possible influences on informal learning, including those outside work (see Appendix). While these yielded some interesting comments which are reported later, they did not result in any particular patterns or features which we could quantify, and the impression is that the main influences on informal learning are from within the world of work.

We have now set out the basic statistics that emerged from our research. As explained in the Introduction, this was primarily an intensive, qualitative study, so there were sharp limits to its statistical scope and sophistication. This section will have given a general indication of the main findings, but it is the interpretation and discussion of those findings which are the main business of the report. We will turn now to the nature of those informal learning projects which were chosen for detailed analysis from among the list initially identified by the interviewee.

### III. THE NATURE OF INFORMAL LEARNING

What is informal learning in the professions like? Why do 'learning projects' start? How do they develop? What sources or resources do people draw on? What problems do they encounter? What do they get out of such projects? And do they share or pass on what they have learned? Once it was established that an interviewee had undertaken one or more projects (according to our definition) he or she was asked to choose one project so that we could explore these and other questions in more detail.

Before we describe their responses, however, we should point out that not all informal learning takes the form of a 'project' as defined here. As we shall see, some learning is so incremental, specific or episodic that it is not really substantial enough to call a 'project'. The fact that it is not substantial does not mean that it is not important; such learning is part and parcel of normal work which often throws up new questions or opportunities related to particular cases, problems or decisions. It is typically a response to everyday professional needs as they arise, and may involve consulting reference material, checking regulations or procedures, ferreting out bits of information, or discussing a particular case or decision with a colleague. Most of this activity is 'in-house', though occasionally people have to contact sources further afield to find what they need. Much of this kind of learning appears relatively transient, and is thus virtually impossible to track, monitor or record (except perhaps in a detailed, personal diary) but no doubt over time it gradually extends and deepens the practitioner's professional competence or expertise. We shall label this kind of informal learning 'specific'; practitioners would typically refer to it as 'bread and butter stuff', 'normal working practice' or simply 'experience'.

Another kind of informal learning falls outside our definition of a learning project not because it is too specific but because it is too general. Such learning is not related to a particular problem or case. People typically described it in terms of 'keeping in touch' and trying to stay abreast of new trends and developments. In negative terms they talked about 'avoiding falling behind', 'becoming isolated' or 'getting into a rut'. They would try to do this by scanning the literature they received (often too much rather than too little) attending regular meetings or conferences and keeping in contact with colleagues who would know what was going on in a particular field or aspect of the work. Interesting information from any of these sources might be filed away, mentally or physically, for possible future use.

Such 'inputs' may thus fulfill an important current awareness or scanning function in continuing professional learning, particularly for those who might otherwise become isolated socially or geographically. Such learning is again difficult to monitor or record, and many professionals regard it as a normal part of their professional work. It may be rather general and unfocussed, but it may also feed into identifiable 'learning projects' at some stage.

ARCHITECTURE	RELATED
Airport Planning Buildings for blind/deaf Church architecture Church bells Clean room technology Computer-aided design Design technology Energy use/conservation Football stadia Free-hand drawing skills Guided buses Harbour development Housing Legal requirements Medical centres Modelling in 3D National Building Specifications Photography School design Sick building syndrome Solar power Special education needs Stonework restoration Timber-framed buildings Underground stations Urban development Water treatment	Computer graphics Computing (general) Conducting meetings Continuing professional development Contract law Contract management Cost management systems Desk-top publishing EEC directives Environmental issues Financial management Health and safety legislation Identifying staff abilities/styles Management (general) Office systems/administration Planning law Preparation for retirement Presentation skills Quality assurance Setting up databases Setting up practice Setting up specialist network Working as a team

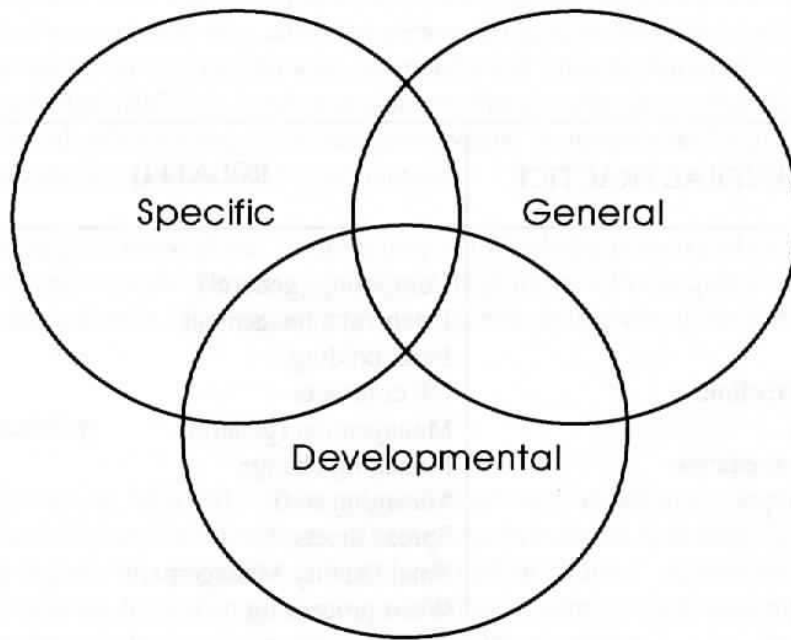


Fig. 8 Types of Continuing Learning

The prime characteristics of the kind of professional learning projects listed opposite are that they are identifiable, substantial and developmental. One can distinguish or isolate them from the everyday, run-of-the-mill, experiential learning that goes on in all professions because they have a particular focus or theme; they are substantial enough in time and effort to be comparable to many formal continuing education activities, such as courses or study packages; and they are developmental in that they lead to an extension (and sometimes transformation) of existing knowledge, skills, procedures or approaches.

Such projects begin when a professional finds for some reason (and usually several) that he or she wants or needs to pursue, explore, develop or accomplish something further. That decision may not be wholly conscious at the time, and as we shall see does not necessarily imply a detailed plan: such learning typically evolves at least in part. But it is purposive and intentional; it does progress towards something. And in doing so it may draw on the entire gamut of available resources - people, materials, events - ranging from the most informal chat through to the most structured course. It is this kind of learning which we have labelled 'projects' although the boundaries between it and the general and specific learning described above is of course not clear-cut. As the diagram above suggests, all three kinds of learning overlap and feed one another; but our focus for the moment is on the third. 'Informal learning projects' imply, above all, a degree of continuing professional *development*.

MEDICAL GENERAL PRACTICE	RELATED
<p> <b>AIDS</b>  <b>Allergies</b>  <b>Asthma clinic</b>  <b>Child surveillance clinic</b>  <b>Clinic protocols</b>  <b>Clinical forensic medicine</b>  <b>Cryo therapy</b>  <b>Diabetes</b>  <b>Drug Abuse</b>  <b>Family planning</b>  <b>Health promotion</b>  <b>Health promotion protocols</b>  <b>Heart disease</b>  <b>Homeopathy</b>  <b>Hypertension</b>  <b>Infertility</b>  <b>Joint Infections</b>  <b>Mental Illness</b>  <b>Minor Surgery</b>  <b>Pain Clinics</b>  <b>Police surgeon work</b>  <b>Psycho geriatric medicine</b>  <b>Psychotherapy</b>  <b>Techniques of consultation</b>  <b>Travel medicine</b> </p>	<p> <b>Computing (general)</b>  <b>Financial management</b>  <b>Fund-holding</b>  <b>GP contracts</b>  <b>Management (general)</b>  <b>Managing change</b>  <b>Managing staff</b>  <b>Spreadsheets</b>  <b>Total Quality Management</b>  <b>Word processing</b> </p>

As the lists of projects on the opposite pages show, that development may be in the specialist field itself (left hand column) or related to it (right hand column). Some projects are clearly to do with the unique content and expertise of that particular profession but others are enabling or contextual in the sense that they allow the person to exercise his or her specialist expertise better. Such projects, typically to do with computing and information-processing, management and administration, legal or regulatory frameworks, communication and teaching skills, contracts and publications, cut across professional boundaries and represent common ground in contemporary professional development.

Once we had identified some of the learning projects which the person had carried out in recent years, we selected one for detailed analysis, beginning with the question of why the person had embarked on it. (The list of interview questions is given at the end of the Appendix.)

### **Reasons for starting**

The reasons for starting informal learning projects were very varied and complex, but they fell broadly under one of four main headings: (i) response to external demands; (ii) professional pressures; (iii) organisational needs; and (iv) personal motivation. Across six of the seven professions the reasons for informal learning related most commonly to 'external demands' of one kind or another; obstetrics and gynaecology was the exception.

As one architect put it, it was very often a case of 'sheer necessity', and although the kinds of demands placed on the members of different professions varied greatly, a shared concern was the need to respond to changes in legislation. This was an obvious external demand for solicitors, but changes in the law affected others to a quite surprising extent too; obstetricians and gynaecologists were again the exception in this respect. They seemed relatively less susceptible to external demands in general, being more subject to peer stimuli and professional pressures than to direct organisational, commercial or legislative changes.

By contrast, the informal learning of the other two health professions was very often stimulated by legislative changes and the need to implement what was referred to by many as the 'upheaval' of restructuring of the NHS. The phrase 'government changes' was a common response from general practitioners to the question about reasons for starting projects. The pressure on nurses was no less severe than that on doctors, but they tended to refer mostly to the consequences of policy changes such as their new 'codes of practice', or new concepts or models of nursing embodying the changes, rather than to government policy *per se*. Some learning projects were, however, the direct outcome of political and legislative changes, such as those of practice nurses and doctors informing themselves and one another of the implications of the new GP contract, or those of hospital nurses writing protocols. Others were stimulated indirectly by the need to set up clinics, or as in the cases of some qualified hospital nurses, equipping themselves to train staff working under them to guard against what they perceived as risks to patients from the government's skill-mix policy of employing fewer 'qualified' staff.

The informal learning of social workers was often stimulated by the same changes in the law as those that affected nurses, doctors or solicitors. For example, while several of the solicitors were learning how to interpret the 1989 Children Act, social workers were learning how to

MECHANICAL ENGINEERING	RELATED
<p>Acoustics            Computer aided design            Drainage            Engineering materials            Fire fighting equipment            Global climate            Heat and power project            Hygiene/food technology            Jacketed pipework            Legionnaire's disease            Magnetic levitation            Maintenance            Material stress analysis            Noise assessment            Railway signalling            Redesigning maintenance facilities            Solid modelling software            Telescopic cranes</p>	<p>Assessing capital investment projects            Budget prediction software            Conversational French            Desk top publishing            Effectiveness of supervisors            Energy and environment            Financial management            Health and safety            How to manage people            Industrial relations            Learning German            Management/employee buy-out            Managing change            Managing meetings            Managing redundancies            NVQs            Personal Computing            Project management            Public speaking            Safety policy/training            Sales and Marketing            Spreadsheets            Time management            Total Quality Management            Typing            Word processing            Writing contracts</p>

implement it, deal with its implications, or relate it to other areas of interest. The other major act which stimulated learning for doctors, social workers and solicitors was the 1990 National Health Service and Community Care Act. Social workers were also learning ways of responding to legislation which required organisational changes in social services departments.

A significant amount of the informal learning described by the mechanical engineers (many of whom had moved into managerial positions) was about changes in European as well as British legislation on health and safety. Several interviewees were also in management in industries which had either been, or were about to be, privatised. This had led to extensive changes in practice which, in turn, also prompted a lot of self-teaching. For architects legislation was one, but in their case not the most significant external demand for learning; such changes as the new national building specification (NBS), EC directives, and changes to planning legislation and contract law did however account for nearly a third of their learning projects.

For many, the responses to external demands went beyond changes in national and EC legislation. For example, the learning of one solicitor was in response to the effects of the single European market on industry and commerce, and for another, an immigration specialist, it was in response to political events in other parts of the world. Other solicitors found themselves involved in informal learning to cope with increases in certain areas of work as a result of the impact of economic changes on clients, while others were actively seeking ways of making their own practices more cost-effective. Indeed, economic factors prompted informal learning across the professions, and many projects were about administrative and organisational issues likely to improve efficiency. This was true of architects in particular. Many had been involved in projects stimulated by the need to attract more clients, adapt to being a smaller practice, or simply to cut costs.

'Client needs' were also an important form of external demand. Across all seven professions interviewees mentioned wanting to give as good a service as possible to clients as a reason for starting projects, and even if this was not the immediate trigger, it was often seen as the ultimate benefit of learning. Usually this meant acquiring specific areas of professional knowledge or skill to answer clients' questions, improve confidence, or perform more effectively.

Sometimes meeting client needs combined with other professional pressures to fill gaps in knowledge, 'top up', keep abreast or ahead of the field, or otherwise raise the profile of a department or practice. In other cases the need to learn was more urgent, as in the necessity for architects or engineers to have up-to-date information in order to tender for contracts, or to tackle technical or other current problems. Medical practitioners and consultants also needed to learn about new techniques, new equipment, and new drugs; and young nurses frequently changing wards had the added pressure of needing to learn about different specialisms. Social workers in particular were aware of the need to compensate for the fact that their initial training could not cover everything, and they and others with a responsibility for teaching, training or supervision talked of the spur of being 'expected to know'. Technological changes also created new demands and opportunities in obstetrics and gynaecology.

Organisational reasons for starting projects were common to all of the professions studied. Often learning was stimulated by a change in the nature of the organisation. In some cases it was a knock-on effect of the kinds of external demand mentioned above, but in others direct



NURSING	RELATED
<p> AIDS  Asthma  Bereavement/grief counselling  Breast screening  Cervical cytology  Child surveillance  Delivery of care  Diabetes  Diet  Drug abuse  Epilepsy  Essential oils and massage  Family planning  Health promotion/education  Heart disease  Hormone Replacement Therapy  Intravenous drugs  Mental illness  New drugs  Nursing models  Patient care planning  Post-operative care  Pre-operative testing  Skeletal pins  Skin conditions  Smoking  Travel vaccinations  Women's mental health  Wound care </p>	<p> Appraisal systems  Assertiveness  Communication skills  Computing (general)  GP contracts  Implementing change  Increasing self-confidence  Learning environments  Management (general)  Mentorship skills  Preparation for job interview  Staff nurse development  Standard setting  Standard setting (communications)  Teaching  Training needs analysis  Trust status </p>

responses were made to a great variety of other, internal factors. Examples included the need for a group of architects who left one practice to set up another, to find out how to go about it; others needing to learn how best to offer induction to new staff; and many more wanting more efficient databases and knowledge of computer skills.

Many of the interviewees had acquired management skills. The reasons varied: an obstetrician and gynaecologist talked of being 'thrown into management'; a mechanical engineer wanted to be able to 'get people working better', while a GP learned about total quality management (TQM) in order to make his practice 'proactive rather than reactive'.

Some of the factors already mentioned were sometimes either combined with or reinforced by more personal reasons. Incentives and potential rewards could play a part as in the case of a financial reward offered to an engineer for learning to use a specific computer package. Members of different professions also developed specialisms in order to extend their client base or have a higher profile in a practice, department, company, hospital, region, or even nationally in some cases.

The motive of career advancement itself took many different forms within and across professions. As well as developing areas of specific expertise, recognition was being achieved in other ways, such as producing a professional information bulletin, setting up extensive 'networks' in particular areas of work, and devising a new course to be published and recognised regionally.

However, just as the learning of architects and engineers was often needed to tender for jobs and to survive in the market place, for nurses in particular learning was less often about career advancement than simply remaining in work. Many nurses felt more vulnerable in the face of a policy to employ more 'unqualified' staff; and for some, even at a very early stage (as for one of the engineers and two of the solicitors) it was already about a potential career move out of the profession.

In some cases the informal learning was said to be an expression of 'general interest', 'curiosity', needing to 'work out something in my own mind' or having 'identified a need'. A few of the interviewees also talked about enjoying the problem-solving and research in their work 'for its own sake'. Some interests developed in this way led to much larger scale research projects; and sometimes these, in turn, spawned other projects. A few interviewees in different professions were involved in developing existing work, some were pursuing higher degrees in related areas, and two or three had already published extensively. Projects 'on the backs' of other projects ranged from learning computer skills in order to process or present research findings, to preparing publications and making various forms of presentation to colleagues locally and nationally.

Occasionally, however, the learning (and sometimes the way in which it was done) arose from quite deep personal motivations and values such as those of the architect whose project reflected a commitment to green values and 'safe design', or the Catholic solicitor with socialist principles whose project on management arose from her commitment to recognising the value of every person in the organisation. Others talked about more immediate personal feelings and issues which had sparked off their learning: examples included wanting to improve one's personal standing in the office; learning about management out of frustration and anger at the

OBSTETRICS AND GYNAECOLOGY	RELATED
<ul style="list-style-type: none"> <li>Blood pressure monitoring</li> <li>Catastrophic thrombosis</li> <li>Colposcopy</li> <li>Cone biopsy</li> <li>Dermatology</li> <li>Endocrinology</li> <li>Endometrial ablation</li> <li>Endometrial resection</li> <li>Endoscopy</li> <li>Foetal blood sampling</li> <li>Foetal weight</li> <li>Heparin</li> <li>HRT/Osteoporosis</li> <li>Laser surgery</li> <li>Mifepristone</li> <li>Minimally invasive surgery</li> <li>Oncology</li> <li>Outpatient surgery</li> <li>Reconstructive surgery</li> <li>Renal stones</li> <li>Thyroid problems</li> <li>Vaginal ultrasound</li> </ul>	<ul style="list-style-type: none"> <li>Budgeting</li> <li>Chairing committees</li> <li>Communication skills</li> <li>Computer graphics</li> <li>Computing</li> <li>Curriculum development</li> <li>Data processing</li> <li>Delivery suite protocols</li> <li>Editing a journal</li> <li>Legal aspects</li> <li>Management</li> <li>Medical ethics</li> <li>Organising examinations</li> <li>Patient counselling</li> <li>Psychological aspects</li> <li>Setting up a new unit</li> <li>Statistics</li> <li>Teaching/presentation</li> <li>Time management</li> <li>Word processing</li> </ul>

kind of management being experienced; and needing to rebuild one's own self-confidence after a traumatic experience.

Others again started projects because of feelings of responsibility towards colleagues and clients, perception of peer-group pressure, the feeling that it was possible to give better service or advice to clients, or quite simply as an expression of personal high standards.

### **Planning and Evolution**

There was quite a high degree of consistency across the professions in answer to the question about whether the learning project was planned, or developed in a more evolutionary and less predictable way.

The majority of the projects were described as having evolved. Less than a fifth were described unequivocally as having followed through a pre-determined plan. The learning process proved not to be the kind of linear, step-by-step process conventionally associated with formal education and training.

People talked about 'coming across' articles and 'gleaning information' which led them along new paths. One spoke of 'keeping his eyes open' and 'becoming aware of possibilities', while others described 'just following leads' or a project 'having a life of its own'; sometimes people were conscious of being pointed in another direction by a colleague or specialist. Books, official documents, reports or other materials played a role. Being on a mailing list, what cropped up in journals, or whom one talked to could all influence subsequent stages.

A lot of the learning evolved because it depended on things which were outside the person's control: sometimes it was necessary to be pragmatic. But it also seemed to be the natural, exploratory way of doing things in many cases. Learners sometimes worked through books, which led to other books, but not in any particular order, and even when using a manual to learn computing for instance, 'playing' or 'fiddling' was still seen to be an important part of the process.

Serendipity was clearly a significant factor. Often, a little was done, after which questions were asked, or some other piece of information came to light which changed the direction of the quest; sometimes even the knowledge itself provided a new stimulus. One person talked about 'informed trial and error', another described 'a time-consuming process of begging, borrowing and stealing appropriate documents', while yet another said, '...the more you find out about it, the more questions you ask. You start off with a little core of knowledge and then you keep on. You just keep on adding layers.' Nurses in particular - for whom 'reflective practice' had typically been a theme in initial training - also recognised the important role played by conscious and structured reflection, especially in projects about implementing change, interpersonal skills and patient care planning.

Planning was thus an important aspect of the learning process for relatively few of the interviewees. None of the architects' learning projects could be said unequivocally to have been planned, although learning sometimes started with a 'basic structure' or a 'structured approach' in that a goal was set and some decisions made about which issues to tackle. The group who did most planning were the obstetricians and gynaecologists of whom nearly a third described research-orientated projects, in which systematic planning often followed the

SOCIAL WORK	RELATED
<p> AIDS  Alcohol and drugs (community care)  Assessment procedures  Cancer patients  Changes in benefits  Child protection  Children Act  Community care  Counselling  Dementia  Family therapy  Fostering and adoption  Group work  Housing policy  Informal carers  Learning difficulties  Memory impairment  Mental Health Act  Mental illness  Pornography  Relaxation therapy  Sexuality  Therapy </p>	<p> Consultancy abroad  Credit accumulation and transfer  Financial management  Management (general)  Management training  Multidisciplinary work  NVQs  Practice Placement Initiative  Professions and bureaucracies  Reorganisation of social services  Supervision of colleagues  Systems analysis  Word processing  Work and gender </p>

normal protocols. This reflected the importance of research (and teaching) in their work, an emphasis which to some extent differentiated them as a group from the other professions.

In those relatively few cases in which plans were followed through, the process was often fairly discrete and incremental, as in the case of the general practitioner who arranged to shadow hospital specialists for a day and was taught by them to perform certain procedures, or the social worker who used a policy document as a starting point for planning topics. In other cases plans were carried through, but interviewees also admitted to having sometimes learned more from talking to people informally than from the formal arrangements.

### **People as a Resource**

Whether learning was described as planned or evolved, there was no doubt that people were the most important resource for it. Regardless of which of the rich variety of other resources were also used, nearly all of the interviewees (92%) drew on the help of other people at some stage. Sometimes the learning actually arose from discussions with others.

In the main, other people were approached at an early stage in the project in order to get background information, check out approaches, bounce ideas off, or locate other contacts and resources. Interviewees talked about 'sounding people out', 'picking brains' or 'networking' with others in the field, community, profession, or allied professions.

A range of words and phrases was used to describe the value at all stages of drawing directly on others' expertise or simply chatting to colleagues about the subject in question. People talked variously about the usefulness of 'different angles', 'different slants', 'alternative perspectives', and 'seeing other ways of doing things'. One also said, pertinently, that people are important in checking out the *realities* of situations.

At later stages in the project people were seen to be useful as sounding boards, for brainstorming exercises, or for reassurance of being on track with either specific information or a general approach. Sometimes talking to others would have different uses which related to the other's style of thinking, so that one person might help to provide a 'framework', or even the 'vision', whereas another might 'fill in the detail'. Interviewees also talked about the usefulness of being able to keep on going back to colleagues and getting 'instant answers'; and members of different professions talked about it being a 'two-way process', an 'exchange of information and ideas', or simply referred to the 'exchange network'.

As well as being regarded the most useful resource in the learning process, working with and through other people was seen to have added benefits in terms of building relationships, trust, and new networks. In fact sometimes these aspects of working with others were crucial. In one instance the project was actually about building confidence, while the substance of another was building an inter-agency network, and in another case the project was to relate management theory to practice. Sometimes talking to others was the only way of getting feedback or checking things out, because the learner was opening up a new area of knowledge in which there were no publications so far.

Some of the one hundred and fifty interviewees, particularly obstetricians and gynaecologists, general practitioners, and social workers did however express caution about the possibility of

LAW	RELATED
Advertising law Alternative dispute resolution Care proceedings Charity law Child abuse Children Act Criminal Justice Act Environmental Protection Act EU competition law European law on VAT Food law/regulations Immigration law Insurance law Intellectual property Landlord and tenant law Libel law Matrimonial insolvency Non-payment of parking charges Railways Bill Redundancy law Rent arrears Time shares Tracing proceeds of fraud	Building up library Computing (general) Editing series of books Giving talks Induction of assistants Inter-agency group on domestic violence Management (general) Production of bulletin Public speaking Re-structuring of organisation Setting up property database Shorthand Training methods Typing Word processing

learning skills from just one other person. It was pointed out that it could be unhelpful, even dangerous, if bad habits or practices were picked up. This consideration, important in itself, becomes even more so in view of the increase in litigation related the medical and caring professions.

The range of people whom interviewees used as resources - more or less deliberately - was extremely wide, and sometimes quite surprisingly inclusive, both inside and outside a company, practice, hospital or social services department. Contacts were made via both formal and informal roles, sometimes with individuals and sometimes with more or less formal groups or associations. Hospital nurses in particular were also apt to set up discussion or other kinds of informal learning groups on particular topics. One sole-practitioner architect had also tried to set up a learning group with fellow architects, but without success. Obviously the scale and dynamics of hospital life lend themselves more easily to bringing together different groups for different topics, whereas 'learning groups' set up in other professions possibly need an independent life of their own. Some nurses also took advantage of Royal College of Nursing 'special interest groups' to supplement their learning.

The architect mentioned above who attempted to set up the learning group did manage to bring together a multidisciplinary group to study a particular topic as did members of other professions in different ways. However, in the many projects across the professions people tended to consult and talk to specialists in existing formal associations and organisations established around particular topics and issues.

In all seven professions informal learners reported talking to colleagues, and people in other professions, either inside or outside the organisation; and some projects in all of the professions involved talking to practice partners or management at some stage. Mostly consultations with management happened when the projects in question were about management or materials or contracts. Very occasionally it was because of some implication either of the learning process (e.g. a need to reschedule work) or the learning outcome (in terms of the possible implications for policy).

People whose work involved special materials, plant, equipment or substances - architects, engineers, and the medical professions - also drew on manufacturers and their suppliers for information. Mostly this was done by talking to company representatives, but sometimes people approached companies themselves. Those learning computer skills were also helped out by employees of manufacturers and suppliers; they did this mainly via 'help-lines' or short training packages offered as part of the deal.

Contacts were very diverse. Some drew on friends and friends of friends, qualified in similar ways or not, and others drew either on the personal (sometimes very personal) experiences or special knowledge of neighbours, family, and secretaries. An architect needing special knowledge about churches drew on the expertise of a priest as well as a stonemason; a general practitioner learned from police officers; practitioners in three or four of the other professions drew on the expertise of solicitors and barristers in projects; and solicitors talked of tapping the knowledge of 'friendly competitors'. In one case even lobbyists about rail privatisation became a valuable resource. The knowledge, experience and reactions of clients, patients and carers were sometimes drawn on, and many tapped the expertise of librarians, outside consultants, ex- or current tutors and other academics as more obvious sources. Whereas in



*"The more you find out about it the more questions you ask, the more you're capable of asking questions. So right at the outset we know very little, the question is will it be suitable for this practice, is it the right price or the right sort of kit, and that's a simple question. But in fact it's an extremely difficult question to answer. It's only by finding out more about it you find out more things to find out about."*

(Architecture)

*"If I'm being truthful, I don't get time to sit back and think what do I want to learn about next. You're driven by whatever problem or whatever situation arises, and if something comes up and you think 'I'm vulnerable in that area', I'll try and develop the skills to answer it."*

(Mechanical Engineering)

*"Initially I bought a computer before my final obstetrics exams in order to write up the book we had to do and so on. That was purely as a word processor. More recently I've bought more sophisticated computers and had to learn how to use spread sheets, data analysis, slide production for presentations and all these things, and that was very much teach yourself. I was fortunate in that one of my brothers is in the computer business and so I run round to him and say how do I do this, how do I do that? And buy some books, look through them, this sort of thing. And also just speak to other colleagues who've got computers and learn what they are doing and how they're using them."*

(Obstetrics & Gynaecology)

*"I never really think about it as being learning. You just go along and do it."*

(Nursing)

*"I think that one of the aspects of life in the legal profession which is quite striking is the fact that one never reaches the situation where you can know all there is to know about a particular field, no matter how expert you may be, because the law changes so frequently there's a continual need."*

(Law)

some cases the way in which people were used as a resource was highly deliberate and planned, in others it was very much part of the evolutionary nature of most projects. Chance meetings could be fruitful because they, in turn, led to other resources.

### **Other Resources and Materials**

The next most popular resource across the professions was written materials. Of these, not surprisingly, books and journals were used most. Journals were preferred in those cases or professions - particularly medicine - where recent, up-to-date or state-of-the-art information was crucial.

Many solicitors in particular seemed to have good library facilities in their practices, and in one city council department where that was not the case one of the interviewees was actively putting one together. Most practices and departments across the professions had libraries of journals at least; in only one case (in which management was thought to be generally poor) was access to journals said to be a problem.

Other written materials used in the projects were immensely varied. They included academic abstracts, summaries and updates, notes and handouts from courses (sometimes from colleagues and friends) government reports and other publications and pamphlets (in at least one case 'purloined') official circulars and letters, law reports, forensic reports, police and other reports, policy documents, internal memos and other office documents, minutes of meetings, case-notes, trade journals, manufacturers and suppliers packs and leaflets, computer manuals and guides, newspapers and women's magazines. The latter were found to be particularly useful to doctors and nurses, especially in the light of new responsibilities for health promotion, and the need to assess what kinds of information people have available to them or are exposed to.

Books and journals were regarded as the most useful written sources because they were seen to offer a range of perspectives and access to divergent points of view, or a means of clarification. They also constituted alternatives to other people as starting places for learning, and in offering wider perspectives, a way of avoiding the danger of parochialism.

Other materials used by the interviewees varied from high technology to product labels and TV advertising. In fact, technology served surprisingly few as a resource. Several accessed information via professional databases and some of the more research-oriented workers used computers for literature searches. The only other use made of computer programmes was when the learning had been about computing and word-processing and when tutorial discs or help menus were found by some to be a lot more accessible than manuals.

Very little use was made of video tapes either. Where they did play a role it was mostly in the medical professions and social work. Engineers and architects used them, but relatively infrequently. Even less use was made of audio tapes. More use was made across the professions of TV and radio documentaries and current affairs programmes, and some nurses made use of Royal College of Nursing distance-learning materials which were supplemented by both. A self-instructional package entitled LOGIC was also used by some obstetricians and gynaecologists, although opinions about it were mixed. Two people also made use of drama

*"All projects evolve, because they evolve out of necessity, and then you plan what you want to do. So evolution first and then planning afterwards."*

(Mechanical Engineering)

*"It developed from one happy chance to another. I mean it was literally about maintaining open channels of communication between colleagues and friends and it's ... I mean I know it's silly, but I always reckon that most work is done at the end of the meeting when you're in the lift going out of the building."*

(Social Work)

*"The amount of stuff we get through the mail - I mean look at it! I mean we get some four or five journals every week, unsolicited, which I sort of flip through. Drug company literature and that sort of stuff is continually pouring through, we get visited by drug reps at the surgery. I mean it's just a continual process really."*

(General Practice)

*"Usually it's when things go very wrong, rather than very right. When it's very right, you seem to continually do it, you do the same process. When you do something very wrong, that's when you actually look back. But there's also a subconscious reflective learning that happens all the time. I suddenly find that I'm doing things a certain way and then I think, why am I doing it this way, and then I think, I know why I'm doing it this way, because that's the way it worked the time before."*

(Nursing)

*"It was very difficult. I'd been in London for three years and I'd got completely used to housing work down there and you come here and you effectively start from scratch. The law's the same but that's about it. Procedures are different. People are different."*

(Law)

programmes and the theatre, in projects about interpersonal relationships and improving English as a foreign language.

We were struck by the diversity of materials which people used. Some of the more unusual included the anatomical models and forensic photographs used by general practitioners - who also tended to be swamped by manufacturers' information and 'freebies' - and the food tin labels and TV advertisements studied by a solicitor in the food industry who was intent on guiding his employers through a legal minefield. However, it gradually became clear to us that informal learning actually draws on whatever resources are to hand, and these may also include both formal and informal events of various kinds.

### **The Role of Events**

The extent to which events were used as part of the projects varied across the professions, as did the kind of event learners were most apt to mention. Some people in each professional group included some kind of formal input in their learning projects. This usually took the form of a short in-house or external course or study-day. Sometimes it was a conference or colloquium, or event organised by a professional body. For the medical professions this sometimes met the need for demonstration or 'hands on' experience, whereas for the mechanical engineers the formal input often led to certification with reference to a particular requirement (such as health and safety). However, even at formal events interviewees often found the informal contacts and chat with colleagues during breaks and meal-times just as valuable as the event itself.

Sometimes such events happened at the end of a learning project and were related to the goals of the learning. Examples of this included presenting a talk, devising a course, or in one case, preparing for a job interview; whereas for others a conference, visit to a workshop, or even a traumatic event played a part at the beginning, as an initial stimulus to the learning.

Very often informal visits played an important role. Engineers visited other companies and suppliers. Obstetricians and gynaecologists talked about the part played by private visits to other centres, and the importance of travel (and other) clubs in maintaining contact with professional networks; and people in other professions made visits of various kinds as part of their informal learning. However, of all those interviewed, architects made by far the most varied use of visits.

Learning projects by architects included visits to various professional institutions and events. And as well as specialist association meetings, projects included visits to many different kinds of external agency including conservation organisations, exhibitions, craft workshops, museums, and a government department. For architects visits to exhibitions or existing buildings - or in better times the practice architectural tour - here or abroad are fairly routine means of informal learning in themselves.

### **Outcomes and Rewards**

Having explored the reasons for starting projects, how they evolved, and what resources learners drew on, the next few questions in the interview schedule addressed outcomes.

*"I think there are some things that if you sat down and thought strategically about you'd just never embark on."*

(Social Work)

*"It gives me an increased confidence and that increased confidence gives an increased enjoyment in my work. It also diminishes my stress. Although actually I'm not an academic doctor, I do not enjoy learning, but I find that I'm very stressed if I feel I'm at the limits of my knowledge or beyond the limits of my knowledge and therefore I try to get to grips with things...."*

(General Practice)

*"It's little teams, it's little teams within teams, you know, and it's working with people and making it happen."*

(Mechanical Engineering)

*"The thing that we did fastest and had to learn very quickly was when we decided to set up. We actually left to set up a new company, had it all in place within six days and we were actually operating out of here within six days of deciding to do it. That was quite interesting. That was more of a question of drawing on other people, going out and talking to lawyers and finding out the best way of doing it and then deciding whether that's for us."*

(Architecture)

*"Yes, well you start and then you see what you get and then you follow it where it takes you. You certainly don't plan, because you are not sure what you are going to find."*

(Law)

*"You bump into a problem and you look in the tool box."*

(Mechanical Engineering)

Although many interviewees described the experience of their informal learning in terms of personal satisfaction and enjoyment, the range of outcomes and experience of rewards was actually quite complex. Part of the complication arose from the fact that, just as sometimes achieving the original goal was reward in itself, often there were quite unforeseen but very rewarding incidental outcomes.

Almost all of the interviewees had some idea of the outcomes they wanted from the projects when they began, and these were mostly intrinsic to the reasons they gave for starting. Most thought the outcomes they wanted had been achieved. Others said 'not yet', or that the aims had been partially met. However, as is so often the case, actual outcomes turned out to be less predictable and rather more complicated; although one learner did learn 'a lot about high tech possibilities, only to use a low tech solution'.

Across the professions, there seemed to be a number of different kinds of outcomes and rewards. At the simplest level there were benefits to self, the client, and the organisation. No doubt sometimes there were benefits to the wider profession and beyond too, but they were typically not mentioned except in a very few cases with reference to incidental environmental implications. Sometimes a single outcome served all three parties: the learner, client(s), and organisation.

These three broad types of outcomes and rewards contained very many others, but most responses seemed to be about one of the following: (i) some feeling about the experience itself; (ii) affirmed or changed views of self; (iii) improved competence; (iv) improved career prospects; (v) improved communication and/or relationships; (vi) impact on the work itself; (vii) benefits to clients; (viii) benefits to the organisation; and (ix) some material benefit. Interestingly, although most of the reasons for starting projects tended to be external, in talking about outcomes and rewards there was generally more emphasis on personal feelings and reactions.

People spoke about the project itself as rewarding in terms of the sheer experience of learning, or it being inherently satisfying, or a complete experience. Many said it was challenging, stimulating or interesting, while others talked about such things as the pleasures of problem-solving and the feeling of renewing and extending one's field. Sometimes, however, the feelings seemed to be more of relief, in phrases like 'seeing it through smoothly', 'getting it finished' and 'getting it over with'.

Across the professions interviewees talked about growth in, or renewed, confidence; and this almost always came as a surprise to themselves. Many people expressed it directly: one saw it as 'a boost to self confidence', while others said things like 'I recognised some untapped potential, personally and for the company'. Some talked in terms of personal growth, while others talked more in terms of self-affirmation, for example, of the learning having 'reinforced my view of myself as a practical person' or in the learning offering 'confirmation and stimulation.'

Some referred to improved competence and better career prospects. Sometimes the latter were deliberately sought but they could also come as a welcome incidental effect. As well as saying in general terms that they felt more competent, people referred to 'knowing that I was presenting something better than I would have done', or 'pulling something ragged back into shape'.

*"Over the last two years I've spent a prodigious amount of time picking the brains around the organisation and outside the organisation on exactly what are the critical elements that make up a project like that and how such a project should be configured and indeed how we should run a project like that, and that's the information that I have in fact been collating so that we can pass that on to other people in the organisation and I would suggest that that is a combination of formal and informal learning."*

(Mechanical Engineering)

*"One of the best jobs I did was when I was in a district general hospital with one consultant, I saw him every day, and I was very much learning my trade then. I had a whole year with him, he went through all the operations and I got better and better and better and I felt that that was the time I was really learning my craft."*

(Obstetrics & Gynaecology)

*"I mean I learn through talking to people more than from reading, for example, so I'd far rather spend half an hour talking to somebody who knows about things than to spend an hour reading a document or something. You can ask questions and find out what you want to know, rather than having to read through reams of stuff."*

(Social Work)

*"There are a few specialists in the field who have a respect for one another, if you know what I mean, and we will, from time to time, although we may be rivals, we will talk to them on the telephone, pick their brains. For instance, I am meeting two of my colleagues who are competitors of mine for lunch on Thursday, where I have no doubt we will discuss all sorts of things. I am getting their views and they are getting mine. That sort of thing happens all the time."*

(Law)

Achieving understanding was also an important reward for many. Typical comments were in terms of 'getting it straightened out in my mind' and 'knowing what I was talking about'.

Examples of rewards in terms of careers and career prospects included the case of the solicitor whose learning project had become so large that he could now call himself a specialist; and others in different professions who, sometimes deliberately and sometimes incidentally, had given themselves (and their practices) higher profiles in their localities or regions. Others saw publications as rewards; and nurses in particular had often sought improved career prospects which they achieved. In fact some of those wanting to leave the profession felt rewarded by the possibility that new skills could lead either to free-lance work or even new careers.

For some, their informal learning led to the rewards of improved working (and sometimes social) relationships. People who had learned better communication skills in particular talked about 'feeling more approachable', 'being able to express more, and know the value of listening'; and an architect who had developed his interest in church architecture was pleased about 'being able to share knowledge at appropriate times', when 'appropriate times' included social as well as professional opportunities.

Many were pleased to find that their learning was useful in practical ways. Sometimes this pleasure was rooted in the fact that others had found it useful too. Many mechanical engineers, in particular, talked about the rewards of 'applying the knowledge'; one commented that maybe that was why he was an engineer and not a scientist. However, learners across the professions identified 'being able to do the job better', and pride in 'having use made of the work by others', or better still, 'having other staff and management draw on the experience' as important rewards.

Rewards seen in terms of benefits to clients were described in many different ways. Obstetricians and gynaecologists spoke of reducing the length of hospital stays, and a nurse talked about 'getting feedback and knowing people benefit', while another talked rather more specifically about the rewards of feeling that patients were in safer hands. A solicitor found it 'rewarding to know the answers in court and with clients, despite training not having been given initially'; and another, who strove to understand more about the social conditions associated with particular problems said that it made a 'huge difference to have a much better understanding of the problems of clients'.

Different sorts of benefit to the organisation were also seen as rewards. Some mentioned concrete pay-offs for the practice. Another, whose learning was about the implications for her company of legislation on environmental issues ultimately felt the 'reward of wide involvement across the company', and more than one mechanical engineer saw rewards in terms of the factory running smoothly.

Material rewards were seen in both organisational and personal terms, and of course sometimes these were intimately linked. The 'pay-off' for a partner in one practice was literal when learning more about cost-management led to the realisation that clients had been undercharged on their hourly rate. And in several professions, rewards included greater efficiency and profitability of practices as a result of either learning about some form of computerisation, or better administrative techniques. In other cases the rewards included sponsorship for learning to be developed further.



*"Everyone has an open door policy and you go in and ask anybody what their opinion is or advice, and that goes for the most junior to the most senior people and it's a two-way thing. The managing partner will quite often ask me for an opinion on something, even though I'm nowhere near as experienced, and vice versa."*

(Law)

*"You can go and listen to a lecture, you can go and read a book or you can go and ask somebody. The nice thing about going to ask somebody, you can ask a specific question and get a specific answer. You go to a book and you have to wade through a chapter and a half and you may get an idea of the answer to the question that you asked. You can go and listen to a lecture for a day and they may sort of pass over the topic for half an hour, a quarter of an hour or just a sentence. So if you've got a specific question, go and ask somebody for a specific answer."*

(Obstetrics & Gynaecology)

*"When I started social work after doing my training, somehow I just sort of imagined that there'd be much closer supervision than there was. That somebody would be with me on every single case and share with me all the ins and outs. It wasn't like that at all. Straightaway I had had to deal with families and when supervision came up I could pick three or four cases I wanted to talk about and I guess you pretend that you are having difficulty with, but they're probably those you're doing best on, because you're trying to convince your employer that you can do the work. And so slowly you build your confidence up."*

(Social Work)

*"And from the company point of view and my outside associations with people from the university that I still mix with, you know, 'if I don't know, I know a man who does'."*

(Mechanical Engineering)

*"It was almost accidental, to be honest, because it was talking to someone at training section who happened to have a couple of really relevant documents which she suggested I might like to look at, and they were very useful, but that's really just chance. And starting from there and working outwards and, if you like, backwards to more of the original documents."*

(Social Work)

## Problems of Informal Learning

Professions differ quite widely in terms of the intensities of different kinds of problem encountered in informal learning. There were, nevertheless, many similarities across all seven, and in general terms they seemed to fall under some rather predictable headings, such as (i) time; (ii) energy; (iii) resources; (iv) the learning process; (v) other people; and (vi) organisational factors. Inevitably, sometimes two or more of these factors would be linked.

The factor most likely to be related to others was time. On the one hand people talked about lack of time and energy, too much to do, and the lack of 'margin' to do as much as they wanted, or to get some formal input; and on the other, time and money were of course also often linked. Some found it tedious to have to justify time spent on the learning when the pay-off might be felt only indirectly and in the long term; and more than one person expressed dissatisfaction with the necessarily *ad hoc* nature of the learning and the fact that it always had to be reactive, there never being enough time to follow up areas of interest further. Others expressed their frustration sometimes with not having time to put the learning into practice. Time was also seen as a cost to personal life.

More general lack of resources were also seen as a problem for some. This was far more of a problem for social workers and nurses than any of the others, and it was felt indirectly as well as directly. Some talked about feeling under pressure so that it was very difficult to get a 'global view' of what they were doing, or felt concerned about 'missing things'. Access to study days and other forms of in-service training had also become extremely difficult, so that supplementing informal learning with formal input was just not possible for most. Social workers in particular also referred to a shortage of materials. Some of the obstetricians and gynaecologists also found themselves held up because of equipment delays, or found their learning projects complicated by difficulties in finding and training technicians.

'Process' problems were also referred to. Many of these were about the material to be learned, and others were about the stage, skills, attitudes, and level of emotional involvement of the learner. People talked about difficulties of coping with the sheer bulk of material, or coming across hidden problems so that 'interest had to be re-focused', and it taking time to pick up the jargon. In one case virtually the only sources were manufacturer's representatives, so that the interviewee was very conscious of bias. For him 'trying to get to the bottom of it all was extremely difficult'.

The other kind of problem was expressed in comments like 'a frustrating element was being behind the technology - not to have time to update the skills', or 'the process became boring, a nit-picking exercise'. Others felt the pressures of needing to get it right, being seen to get it right, or actually not getting it right. In fact people across the professions expressed anxiety about their own performance in a number of different ways.

Dealing with the attitudes of other people presented another kind of difficulty. This took a number of different forms. One learning project in particular was described as being seriously obstructed by the unhelpful attitudes of management (in this case the partners in a practice) and two female architects spoke of being hampered by gender issues. Some met with hostility from colleagues resistant to change, while others came up against 'people problems' as diverse as the 'isolation of autonomy' (suffered by a health visitor); being stuck because of a lack of

*"Yes, I would have done it differently. I would have organised my learning as opposed to blundering on and stumbling over bits and pieces."*

(Architecture)

*"Actually undertaking it was rewarding in itself. I enjoyed the reading, researching things anyway. Producing something that could be used by others in the form of a booklet was satisfying and also taking the workshops and seeing people develop their own skills within the techniques. On-going satisfaction in that respect."*

(Social Work)

*"Working together is far more difficult than just producing the wretched thing. I'm decidedly greyer at the end of this project than I was at the beginning and I've learned a great deal about that."*

(Social Work)

*"That is also a very enjoyable part of this informal learning process, if you like. You grow together with someone and you end up finding you've got a lot in common and they become a good friend, and I think that that is an important part of the recognition of what you do. I think also the other thing is that life can become fairly tedious if you're not always trying to find new ways of doing things or new things or new opportunities. And that's what I like about this. Every time you do a building it's good."*

(Architecture)

*"I suppose the sense of learning something new, the sense of my own development going off in a new direction. So a sense of sort of lots of potential for the future."*

(Social Work)

local contacts in the field; and the universal problem of achieving consensus in a committee.

The organisational and other problems people met are largely dealt with elsewhere. In fact, many of the resource and 'people problems' mentioned above were inherently also part of wider organisational and policy issues. The latter had more 'knock on' effects for the informal learning of health professionals and social workers than for interviewees in other fields. It has to be stressed again that other people were generally found to be extremely helpful as resources. However, for one interviewee (not in the public sector) the outcome of his learning about management - stimulated by experiencing bad management - led to 'even greater anger and frustration'.

### **The Benefits of Hindsight**

When we asked people if they would have gone about their learning differently with the benefit of hindsight most said that they would not. Many said that they would not have known how to, or that they had no real option. At least half of the interviewees in each of the seven professions responded unequivocally, but even when people did waver it was often along the lines of possibly using certain other books, making particular visits, talking to a particular person, or using some other resource sooner or to greater effect. The overall process would have remained essentially the same.

Members of most of the professions talked about their use of time: a GP would simply have liked more of it, several obstetricians and gynaecologists would have liked to speed up the learning, and one engineer said that he would have employed someone else to do the project for which the learning was necessary, since it had been time-consuming and his own time was very expensive. An architect would have liked to have had 'better communication and information-gathering techniques'. In his case this would have meant 'starting with the visits... personal contact can help avoiding going over things now out of date'. Others too talked about realising the value of making good personal contacts at an early stage.

Two other architects said that they might have structured their learning differently: 'gone for more structure at the beginning' or 'started with a good structured day-course', because it might have 'opened up a bibliography'. A few nurses and architects saw their problems with time as their own responsibility; again, this was as much about structure (such as doing things in a different order) as time-management. However, one did regret an 'organisational failing', that there was no record of the learning of the others in his large practice. He felt sure that his own learning was replicating other people's. One or two engineers said they would rather have attended a course than organise their own learning, a solicitor said that maybe he would have included some formal input at some point, and three (of thirty) obstetricians would have either brought in a specialist or other professional, or gone on a course. But in general, hindsight largely confirmed the approach that had been taken, and there seemed to be few regrets.

*"I think you become less tolerant of sitting in rooms listening to stuff that isn't relevant any longer."*

(General Practice)

*"Much of my clinical work reflects a desire to bring in a new type of drug, or clinical procedure, or operation, or way of managing something in particular. So much of my learning, or at least what we might call project learning, goes through a phase of trying to gather information about the particular procedure or the advantages and disadvantages, whether it's appropriate within this particular centre or the centre wherever I'm working. And then moving through the planning and implementation phases. In addition to that, there are other types of learning that have to go on and in many ways they're not necessarily project learning, but there might be a particular case where a patient has a particular problem, where I have to at high speed update myself on the management of it. In some ways that's a sort of 'me' project thing, but often relates to only one patient rather than a service that might be applied to many hundreds or thousands of patients. And there's the final thing, which is the generally trying to keep up with the volume of literature that goes through and, basically, much of that is serendipitous, so if I see an interesting article I will read it, and chop it out and stick it in the filing cabinet for future notice."*

(Obstetrics & Gynaecology)

*"In school, college, a lot of the information is passed to us and then we work in the clinical area. As soon as you qualify that stops. It's up to you. There's a limit set by the professional body to learn. It's very small really. The motivation is all yours. If you don't, as I said before, if you don't push for a learning contract and push to learn, then you can quite easily stagnate. You can quite easily just do the job every day with no learning at all."*

(Nursing)

## Passing it on

Very few of the one hundred and fifty interviewees had not already passed on their learning to others in one form or another. The means by which this was done ranged from informal discussions with fellow professionals at social events and chatting to colleagues at work, to more structured and deliberate sharing and use of informal networks. The formal means ranged from leading organised groups and workshops and giving talks, sometimes as part of a deliberate policy of 'cascading', particularly in hospitals and social services departments where few now have access to in-service training, to giving external seminars and lectures.

Learning was also passed on in written form in various ways: internal memos, reports, a chapter in an office manual and various other kinds of publication. One engineer passed on learning recorded in a log book, and practitioners in different professions gave papers at conferences. A nurse prepared a booklet for distribution in a hospital ward, and another wrote one for distribution throughout a region; while publications by solicitors included a regular newspaper column and answering readers' letters on one specialism, and a very long list of publications on another. Members of three professions passed on their learning via video tapes. In some cases this was for the benefit of colleagues (social workers and obstetricians and gynaecologists); in another it was for the benefit of an architect's clients.

Many interviewees had formal mentorship, supervision, training or teaching roles of one kind or another, either as part of their day-to-day responsibilities or as occasional or part-time lecturing posts in addition to practice work. Learning was sometimes passed on incidentally through this medium, whereas in other cases the learning had been done specifically in support of some teaching or training role, sometimes to be passed on as a presentation. The teaching role was particularly important in obstetrics and gynaecology.

Other means of passing on learning included regular practice meetings in the case of some solicitors, general practitioners and less often architects, who frequently group and regroup in teams anyway; multidisciplinary team meetings (which when convened by social workers sometimes function as informal training forums) and more routine organisational meetings; general practitioners and social workers also tended to pass on learning at case-discussion meetings.

Medical practitioners in particular referred to 'exchange networks' in which they pooled and passed on materials such as journal articles and cuttings, and even built up libraries; and in some practices architects talked about passing on learning to members of a consortium and sharing information with another practice with whom there was already a good working relationship.

Atypically, two interviewees talked about deliberately with-holding information. A mechanical engineer feared 'giving away' a computer programme he had written, and a solicitor did not pass on the 'trade secrets' of his now highly developed specialism. But such instances were rare.

*"What's really dangerous in our profession is if you don't know what you're not good at. If you can recognise and really be honest with yourself and say, actually, that I feel is a weakness, or that is an area I'd like to know more of."*

*(Architecture)*

*"I think [name] has encouraged that kind of 'cascade' training, so it's part of the philosophy of training I think. .... [name] is very obsessed with cost effectiveness and all this stuff you know, quite rightly, sometimes to a ludicrous degree but .... In this respect it has empowered people to feel that they can have a contribution to make here and it has good by-products for them and they are as good and sometimes better than having outside experts to continue the whole process, they might begin it but then you can continue it and transmit it further along to people. There's in-house research, as well, that we tend to do with evaluation project teams which are a combination of people inside evaluating their own services, and some people from different divisions coming in and providing some help, some support and researchers, and that also makes people realise potential within themselves that they didn't feel that they necessarily had because they weren't a researcher themselves. Clearly they need the discipline of research to help them, and a researcher has to be part of the group, but it's amazing how important it is for people to own that process themselves."*

*(Social Work)*

*"If I come across something that I haven't come across before, I can go and ask [name] because [name] has been around a long time, and has the expertise, and say 'I haven't come across this before', and chat to her. Now that can cut down two or three hours of research. Now if I do that on other things as well, well I may just save time there, and I might find out another bit of information, which I wasn't looking for. So you obviously can't sit all day chatting to people, but it's important to have exchanges with people, to have room for that, not just purely work things. And sometimes you may get a little bit extra out of somebody."*

*(Law)*

## Summary

It is necessary to be very cautious about generalising from this evidence, but our qualitative and quantitative data do suggest certain features of the informal learning process in the professions we studied. Informal learning appears to be a widespread and indeed commonplace feature of professional life, although many people are not aware of it as such. It involves both specialist and related aspects of professional work. Such learning starts for a very wide range and sometimes complicated mix of reasons. It tends to evolve in a very natural and unpredictable way rather than being systematically planned. Other people are the most important single resource in and for such learning; materials, courses and other resources play a supporting role. Most informal learning projects achieve their original aims. Most would not be altered much with hindsight. In most cases the learning is passed on, often informally. On the whole people find their informal learning extremely rewarding, albeit often in quite unexpected ways. Although it most frequently arises from some form of external pressure, many outcomes and rewards are also felt to be very personal.

Informal learning thus seems to be a very pervasive and positive phenomenon in continuing professional development, although it does have its limitations to which we shall return in the Conclusions. Next, however, we must explore the main factors - organisational, professional, social or personal - which seem to affect it.



#### IV. FACTORS AFFECTING INFORMAL LEARNING

Informal learning clearly does not take place in a vacuum. It is embedded in professional organisations, work, roles and relationships, and is intimately related to the individual's own professional development. Having analysed one project in some detail, we therefore moved on in the interviews to explore some of the factors which may affect informal learning, not only in relation to the one project just analysed, but in general terms. In this section, we report what people said about the relationship between informal learning and the organisation they work in, the people they work with, the profession they belong to, the actual work they do, and other personal and social factors.

##### **Organisational Factors**

The degree to which organisational factors affected informal learning varied from person to person. Individual professionals worked in a wide variety of organisational settings, from single-handed professional practices to multi-national corporations. For some individuals the organisation was a remote entity, for others it impinged directly on their day-to-day working. Several broad issues emerged from this aspect of the study.

Organisations had both *positive* and *negative* effects on the informal learning of individuals. The organisation could have a culture, an ethos and atmosphere that encouraged or discouraged the development of its staff, including their informal learning. The ways in which this culture manifested itself were varied. Time off for educational activities, formal or informal, could be granted or denied. The company could facilitate learning by providing materials, either informally by passing round documents, or in a more formalised, structured way by having education units or centres. But there was sometimes the problem of a lack of cohesive policies and a fragmented approach by management to staff development. In some instances there was also a discrepancy between stated policy and what was actually done. Some organisations, whilst stating that they valued staff development, did little to facilitate it. The organisation might expect staff to be involved in continuing development, but would do nothing to support it and in some instances might make it very difficult in practical terms to pursue such development. These problems themselves sometimes led to projects developing: for example, several social workers had formed mutual support groups to provide supervision and support because managers didn't have the time to do this. Other organisations again were considered neutral, neither appearing to be interested in staff development nor making it difficult for individuals to pursue their own development.

The *scale* of the organisation mattered. Those working in large organisations often had organisational problems at both the macro and micro levels to contend with. The problems associated with large-scale organisations were in some instances overcome by working in smaller units and departments, and relating primarily to that unit. Social workers often saw

*"It sounds a terribly snobby thing but the sort of egalitarian hospital canteen was the death of doctors getting together at lunchtimes, it just doesn't happen. I qualified at the time when it was just disappearing, but I can just remember. I trained in [name] and most of the hospitals there still had somewhere where all the doctors went at lunchtime, nobody else just the doctors. And the consultants would generally occupy one sort of area, by common consent, and the registrars would be somewhere else, and a lot of business went on there. A lot more than I felt at the time. It was always somewhere you knew you would see someone that particular day. I mean you didn't bother ringing them or 'phoning them because you knew you were going to see them at lunchtime. It was quite an interesting way that transactions took place."*

(Obstetrics and Gynaecology)

*"Learning is suddenly fun .... Now it's exciting and I'm learning what I want to learn. I can pick and choose. I can set my own targets, that's really good."*

(Nursing)

*"Nowadays we have to pay to go on courses. We get a certain grant if we've gone. It doesn't cover the costs of them, because the money that we now get paid was part of what we used to get paid anyway. So effectively we've got to pay for courses. The result is that loads and loads of business people have got involved in this and you know there are just commercially run courses and they can see a killing. They know that doctors have to go for five days a year and they run these mindless courses that we have to go to and the quality has just plummeted, but if we don't go, we don't get our postgraduate allowance, which is a large portion of our salary, and it may have consequences in the future as to whether you're allowed to continue to practice if you don't go to the courses. So we all go to them. That's not to say that they're all bad. There are some formal courses that are still run and have good motives, but they're diminishing every year. So the informal learning, reading journals, chatting to other people, chatting to consultants, reading round diseases that our patients present to us is endless. I would think it's now more important than the formal."*

(General Practice)

their social services department in a different light from the team they worked in, and their views about the team were generally more favourable than their views about the department. The presence of a hierarchical structure in an organisation sometimes led to a sense of remoteness and a feeling that people did not know what was going on in other areas of the organisation. In some hospitals the traditional hierarchy and the institutionalised attitudes of doctors were matters of concern for some nurses.

Budgetary issues were often raised in relation to organisations. Individuals from all professions (but especially nurses) mentioned that financial restrictions often meant that attendance at external courses and other training events was seriously curtailed, and this had in many instances led to informal learning to compensate for lack of formal provision. Financial constraints in some instances had meant that journals, and other library facilities or resources had been restricted. This applied to both large and small organisations. One or two single-handed GP practices could not afford to attend courses because locums had to be paid to cover; however if they did not attend sufficient formal provision to meet the new Post Graduate Education Allowance criteria the practice could be penalised financially.

The degree of specialisation in organisations and amongst individuals also had implications for informal learning. In some professional practices, such as those of GPs and solicitors, there was typically some specialisation in the practice. This was often not only in terms of professional expertise. Amongst GPs, for example, different partners had taken on different management responsibilities. If these practices met on a regular basis then a forum for exchanging information and expertise could be established, and second opinions were on site. This also happened amongst social workers in large organisations: if someone was recognised as having some particular interest or expertise they might be called upon to use that knowledge in various circumstances. Some solicitors and architects talked of the problem of not being able to share information or draw on other people's specialist knowledge leading to a less effective use of resources.

The relationship between senior and junior staff affected the implicit apprenticeship pattern of learning in some professions. For example, in obstetrics and gynaecology, the change in some hospitals from a 'firm' system to a 'shift' system for junior doctors had led to a loss of continuity. Not only did some consultants feel that they no longer got to know their juniors properly, the junior doctors also were said to have little sense of belonging or support. Against this, the shift system exposed junior doctors to a wider range of experienced practitioners in a shorter time than before.

Practice meetings were often mentioned. However, their usefulness varied. For example some GPs only discussed clinical issues, not management ones, and in these instances they found the meetings of limited use, since clinical and management issues were sometimes intertwined. And formal meetings were no real substitute for frequent informal contact, when issues could be raised and often dealt with as the need arose.

There was in many instances a tension between the needs of the organisation - what it required from the individual - and the needs of the individual. Individual development needs could conflict with the organisation's performance or production targets. Tensions could arise for example over getting time off to attend courses, or to undertake informal learning. In many instances there seemed to be a perpetual struggle to find the right balance between the long-term benefits for both the individual and the organisation, and the short-term pay-off.

*"I would say that there is probably some statement somewhere where the organisation says it would encourage people to develop professionally, and certainly there are plenty of resources and there is no doubt they are substantial training resources. The issue isn't so much about that sort of explicit provision of resources or statement about .... I am not sure that there is a climate in which it is possible for people just to charge off and do their own thing, which to me is implied when you do an informal learning project, it really implies that people are free to pursue their own interests."*

(Social Work)

*"It's how much people are prepared to share with like-minded professionals, and I've always felt and had an aversion to the prima donna architect hiding behind his brass plaque. I started practising in a set-up like that and I was determined not to have the same thing when I got into that position. It's back to building walls again. If you break those walls down you actually, in having some communication, you support one another and you also push one another to being better at your job."*

(Architecture)

*"I think I would only emphasise that continuous development has got to be a mixture of informal and formal and I don't think either on their own is sufficient and that's for two reasons. One is the formal stuff helps to create a culture within the organisation. Secondly, that culture is a commitment to develop people and if you don't do that then individuals will not necessarily believe that it's in their best interest to develop and train. I think that if you're going to get the right culture, it's not just putting training courses on, but it's trying to create the right feeling that people are important in an organisation ...."*

(Mechanical Engineering)

Another issue was that of partnerships and relationships with people in the organisation. There were issues here equally for large organisations, professional practices and sole practitioners. For sole practitioners there was obviously the lack of opportunity to share with partners, although sharing could still take place with others; for example, a GP could still share learning or problems with practice nurses and other staff. In professional practice there was also the need to get on with other partners. Some indicated that they had initially chosen partners who got on well together, thus allowing a greater feeling of openness and hence constructive discussion to develop more easily. Several architects also discussed the importance of relationships with partners. There had been a problem with a 'nagging' partner and in one instance the 'de-partnering of the partner' became a learning project in itself. Several individuals were concerned with setting up networks within organisations in order to facilitate work and learning, an example of how difficult it is sometimes to distinguish between the effects of the organisation and of the people who work together in it.

### **People and Relationships**

From what has been said already, it will be clear that relationships were a critical factor in much informal learning. Not only were people crucial resources in informal learning projects, they played an important role in the area of informal learning in general. Almost everyone said that other people had an effect on their learning. Whilst there was a generally positive view of the role of others, there were a couple of instances where the negative attitudes of others were mentioned. For example, the attitudes of doctors and consultants led to a feeling of being undermined, according to some nurses, and the issue of sexism was raised in architecture.

Day-to-day working relationships were important to most people. Individuals were affected by the degree of enthusiasm, encouragement and support of others. The willingness of other people to share knowledge and experience through discussion was an important factor, indeed resource, for people's informal learning. Many talked of how the people they worked with were in part or indirectly responsible for the informal learning they undertook. One solicitor, for example, said that his learning needs were stimulated by the learning of those he worked with. A nurse said that if colleagues were keen, then it rubbed off and made you want to learn more. If the people one worked with provided an environment that was intellectually stimulating, dynamic and challenging, this in turn affected the motivation of the individual, often spurring him or her on to further learning.

The atmosphere in which people worked was considered crucial by nearly everyone. One important factor in creating a 'good' atmosphere was the quality of communication between those working together. The ability to communicate well not only with clients or patients but also with colleagues was cited by many. In some instances deliberate efforts had been made to improve working relationships with and communication between colleagues. Several architectural practices had gone quite far down that road. This included a sharing of leisure activities, travelling abroad together as a practice; one practice had the sharing of information written into its corporate design. The quality of communications and working relationships obviously varied. For example, practice nurses often appeared to have better working relationships with doctors than did hospital nurses. Several social workers talked of how it often came down to the personalities of the other individuals they worked with, and a

*"I think there can be something in the ethos, the ethic of the organisation that can change it. The encouragement in an organisation of learning and discussion can be very present or very absent, depending upon some of the culture of the organisation and the attitudes of the senior executives. If people are encouraged to find out and contribute it's similar to the junior school, the manager or the teacher that encourages seems to find that the kids are bright."*

(Mechanical Engineering)

*"I know it's too simplistic a cliché to say information is power, but in large bureaucracies if you know how to deal with things, it can be perceived as a threat by some people and therefore you can get into odd discussions, where people will deliberately, if you like, not declare or not share or whatever words you want to use, because they feel that they're somehow going to be diminished by that exchange."*

(Social Work)

*"Don't we all have role models? Don't we all, certainly in clinical methods, have to go through an apprenticeship system? How else do you learn? You don't learn from books."*

(Obstetrics & Gynaecology)

*"And the learning usually goes, starts, when a new member of staff comes along, gets woven into the firm, has to pick up the sort of work we do. We have to explain to them and if you want to put words to it, I call it MBO, management by overlap, so really nobody works in a little watertight compartment, either in terms of responsibility or job or time. Everybody overlaps all the time, so these are discrete packages of learning."*

(Architecture)

*"They can either motivate or demotivate you. You know the general air of the ward really. If you're not happy and they're not happy, they're not approachable. If they're enthusiastic then it creates a good learning environment at work and you're more likely to carry that on outside work."*

(Nursing)

couple of architects talked of working relationships in practices that had in effect broken down.

Practice, team or group meetings provided opportunities for communication between colleagues and were also very important occasions for sharing knowledge and information. The nature of practice/group meetings varied across a spectrum from formal, arranged meetings to informal, almost casual, get-togethers. At one end of the spectrum some solicitors had fairly structured practice meetings, and in one or two cases members took it in turns to give a presentation in an area that other members would be interested in. Most GPs had regular practice meetings where clinical, or management issues, or both would be discussed. A few used the calls from drug representatives as a time when all partners got together, to listen to the visitor but also often as the only opportunity in a busy schedule to meet other partners. Social workers also tended to meet on a regular basis, sharing information and also providing a forum for mutual support. At the other end of the spectrum, in terms of structure, the nature of architecture usually meant that informal gatherings were more likely than formal practice meetings, with those working in teams. One nurse talked of using coffee and lunch breaks as 'virtual learning groups'. Occasions like these were important for all professions. However, in the case of obstetricians and gynaecologists this had been limited by the abolition of doctors' dining rooms in most hospitals. The importance of being able to chat informally with colleagues at various times - for example in the ward or over coffee - was seen as important.

Practice meetings were often an opportunity to share knowledge and experience with colleagues who might be specialists in areas other than one's own. In some professions the practice/group meeting was an opportunity to meet with members of other professions. GPs often had other professionals such as nurses working in their group practice. Architects often worked with members of other professions in the construction industry. Social workers were usually members of a multi-disciplinary team that might include doctors, nurses, psychologists and others. Meetings of different colleagues from different professions meant that a cross-fertilisation of views, approaches and ideas could take place. People could bring together their expertise in different but related fields. The presence of different specialisms and professions was considered beneficial by those who were in that situation, although one or two social workers talked of sometimes experiencing professional isolation. One social worker thought that this type of exchange was not recognised for the powerful learning force it could be.

For most people the discussions with colleagues and others were considered as valuable, and in some instances more valuable, than other methods of informal learning such as reading. One engineer said that you could always read books but 'interfacing' with people was better. And discussions within the organisation were not always confined to immediate colleagues. A couple of engineers, for example, had identified people in their company whom they considered valuable and used them very deliberately as resources. Discussions also took place with people who were not immediate colleagues. Formal provision quite often played a part in networking for GPs, engineers and social workers in that they might have met network members at a formal educational event, and social and travel clubs played a key role in obstetrics and gynaecology. Those lucky enough to have established professional networks considered them very valuable. The ability to phone someone and 'pick their brains' was invaluable. It was a very useful way of getting to know what was happening. Again, networks were not necessarily confined to members of the same profession. Engineers, for example, also mentioned architects, solicitors, and accountants in their networks. This pattern

*"I think the buildings are important as well. I think we'd like to have meetings, but we haven't really got anywhere suitable. The waiting room's hopeless. Upstairs is a bit small. I know other practices, at [name] they have meetings sometimes with outside consultants and there's two practices down there and they talk to each other. But that limits us."*

(General Practice)

*"I don't think they give you any encouragement, and they certainly don't give you any space to do it. They don't discourage you from doing it, they are glad when you do, but they don't encourage you either."*

(Social Work)

*"Time must be the factor which is top of the agenda here. It has certainly been a lot more difficult since our new contract. The additional paperwork, the additional management things which one is involved with, annual reports, all this audit and everything which is going on at the moment, means that there is less time than there was. We used to have .... twice a week we would have lunch time meetings, we would have a drug rep in, provide some sandwiches or something and we would have an educational meeting with either a film or a slide show, usually a film, over some coffee and sandwiches twice a week. That's gone. We don't see reps at all now, for the last three years."*

(General Practice)

*"I dissociate myself from the organisation. I'm too ashamed of them really."*

(Social Work)

*"The service priority is all and, really, at the end of an average day one's always too exhausted to even begin to think about sort of types of practice and ways that that could alter. You get rather blinkered vision and just carry on, and don't perhaps do as much structured or unstructured learning as one might like."*

(Obstetrics & Gynaecology)

*"The other thing is respect. I can't be an effective leader if I don't have respect from the staff, so therefore it motivates me to keep on top of things all the time."*

(Nursing)



was repeated for the other professions, giving in turn access to even wider networks. Networks were especially important for sole practitioners or those working in small practices.

The importance of good communication was mentioned by members of all professions. The presence of good interpersonal relationships also meant that in some instances it was easier to admit mistakes and learn from them. Similarly, the importance of good communication with clients/patients was also mentioned by most. Conversely, rigid and unhelpful attitudes could inhibit informal learning. In some cases informal exchange might also be limited because of a sense of competition, perhaps with regard to publication, and for some individuals working in particular organisations, the old idea that 'knowledge is power' could lead to a rationing of shared information/knowledge. Patient/client confidentiality could also limit sharing in some ways, as could commercial or security considerations.

Specific relationships were also important for some individuals. A couple of solicitors mentioned particular relationships, one with a boss on the same wavelength. Similarly a couple of social workers mentioned special relationships with supervisors. Some obstetricians and gynaecologists had worked very closely with particular colleagues for some years, complementing one another's expertise in a specific field of research. Relationships outside work were also mentioned by many. Nurses, architects, engineers and social workers all talked of the importance of personal relationships in providing support.

### **The Profession and Professional Bodies**

For most individuals, professional bodies appeared to have little or no effect on their informal learning. In many instances any effect tended to be indirect and was in the nature of general inputs or stimuli: journals or other information provided by the professional body, conferences, courses or other events. Several mentioned the usefulness of facilities such as libraries or databases. Materials that could be used in distance learning were also mentioned by a few individuals across the professions.

One engineer pointed out that the impact of his professional body was limited because of lack of effort on his own part. Many architects and some social workers and engineers also thought that the impact of the professional body was determined largely by how active the local branch was, and in their experience some branches were not very active.

Whilst the content of courses, seminars, workshops and so on were mentioned by some individuals as being useful, in many instances the opportunity to meet colleagues at such events was of more significance. The quality, relevance and level of formal provision by professional bodies, in the shape of lectures, seminars and courses, was questioned by individuals in several professions, although others did find such provision useful and stimulating.

The extent to which professional bodies were felt to reflect and represent their members was raised by several individuals. The view that their professional bodies were remote and out of touch with what was going on was expressed by quite a few individuals in most professions. One social worker did not think that BASW was representative, another accepted this but said he would not be a member if he did not share their views and approach. Several engineers

*"I think what's helped here is the informal corridor chat, where you can actually go in and ask other colleagues questions about a particular situation. Having worked in a very large organisation where everything is faceless and nameless and coming to a small firm like this, where everybody gets on well, it makes an awful lot of difference. If you can get on well with your colleagues, your secretaries and everybody else, it makes the job an awful lot easier."*

(Law)

*"Well you're interacting all the time. We're not working professionally in isolation .... up to a point we're responding to different stresses and strains. We're not just sitting on an island, reading books, saying what will I do tomorrow, how will I move? You're interacting with people. Even the research one does is .... not driven by some sort of inner genius that tells you that this is what you must study. It's the push and pull of what other people are interested in and who will help and what you can get the money for at a practical level."*

(Obstetrics & Gynaecology)

*"I think if you're a giver of information you actually receive a fair bit in return."*

(Mechanical Engineering)

*"Well I think informal learning suffers, its like open learning, it suffers from a lack of peer group pressure and I think you need that, because you're going to learn from say, in a formal learning situation you're going to be learning as much from the students, your companions, as you are from your lecturer or teacher. I think that's the great weakness of it and you are on your own so to speak. That's why I've always tried to link other people with that process."*

(Architecture)

*"Well, I don't think the formal medical hierarchy is conducive to people asking questions and challenging. I think it's also severely backward in examining education as a whole, and how one educates oneself, and how one develops one's thinking skills. It's a rote-learning speciality. I think things are changing now, from what I understand from people at medical school now but, certainly, when I was at medical school it was positively destructive to any development of thought, which is a real shame."*

(General Practice)

said that whilst IMechE no longer had much impact, other professional bodies had more, perhaps reflecting their shift into specialised areas or into more managerial roles. There were also criticisms about the lack of impact professional bodies appeared to have in the wider world.

Several GPs were very critical of what they viewed as a lack of effective response to recent government changes on the part of their professional bodies. They were viewed as toothless tigers. One GP thought that this was in part due to the fact that they had tried to engage in politics and were inexperienced in this arena, and he believed their involvement had actually had an adverse effect on the profession. Several architects thought that the priorities of their professional bodies were not those of their members. Architects were concerned about the potential effect that disbanding their registration body ARCUK would have. By contrast, the great majority of obstetricians and gynaecologists had a favourable opinion of their Royal College, although its impact on their informal learning was typically indirect rather than direct. Several architects, nurses, solicitors, and engineers thought that professional bodies might have a greater effect in the future especially if the recording and certification of CPD increased, because this would impinge more directly on the work itself.

### **The Work Itself**

For almost everyone interviewed, the nature of the work they did was a crucial factor in their informal learning. Whilst the need to get on with what was required on a day-to-day basis limited the amount of time that was available for informal learning, at the same time such learning was often driven by the knowledge, skills and competences that were required to perform on a daily basis. For most people the demands of their everyday work drove their informal learning, and in most instances it provided the direction that informal learning had to take. As a result it was often difficult to disentangle informal learning *projects*, according to our definition, from the ongoing everyday informal learning that was described as 'specific' or 'general' at the beginning of Section III.

Within work, one of the main factors was change. Individuals in each of the professions talked a good deal about change. There was always something new that had to be tackled. Change might be at a macro level, for example in policy, or it might be brought about by new technology or new cases to be dealt with. Change usually resulted in a demand for new knowledge or skills, leading to informal learning.

Individuals often explained that much of their work was case-led, problem-driven, or project-based, and this in turn gave rise to informal learning. A GP might encounter something he or she had only seen in textbooks before, or an architect might have to deal with a planning regulation not previously encountered. In all professions individuals mentioned that they learnt from patients, clients or customers; what they brought to, or wanted from, the professional often helped shape what he or she had to learn about. Similarly, new techniques, materials or products might all involve some informal learning before they could be used effectively. Such learning was commonly used to deal with things as they cropped up. From a wider perspective, changes in society, changing societal expectations, social issues and social problems had all led to informal learning for individual professionals. Social issues and social problems led to change and resulting informal learning for social workers, GPs and nurses. The idea of using informal learning to 'plug the gaps' was also mentioned in all professions.

*"Well I think some people are much better at motivating themselves than others for their own learning and if you're someone who's very good at motivating yourself, structuring your time, reading, doing things on your own, then you're probably very good at organising your own learning, whereas if you're somebody who's not very good at doing things unless they're structured for you, then it's better to do them formally."*

(Social Work)

*"I think one's continually reading, I do most of my learning at home by reading journals and watching medical videos and in teaching the trainees. They are the ones that keep me on my toes more than anything else, because they're constantly asking awkward questions, which I've got to go and find out about in order to answer. Which is why I went into training in the first place, to have a fresh person in the practice every six months so they're going to make me think and make me look things up and question what I'm doing. Because they're the ones that are coming in with the new ideas so it really is a challenge to me to re-evaluate the things I'm doing day-to-day."*

(General Practice)

*"I suppose it depends on what kind of person you are as to how you want to learn, as to what you do about it. So I will tend to go and look at books, because I like to do things on my own and I like to reflect on them and think about them. But that doesn't mean to say that sometimes I wouldn't like to go and join in something and be part of the group doing something. But on the whole I tend to do things on my own."*

(Social Work)

*"I think that informal learning has got to be there all the time. I think it might change in some ways .... as you go through your career, as you start off as an engineer or as a technical person, you've got a whole series of things which are technical and then there's a little bit which is to do with management and a little bit to do with strategy. Now as you change, if you change out of engineering into management and then management into dealing more with strategy, then your learning processes just change and you're learning quite different things."*

(Mechanical Engineering)

Gaps in clinical or technical knowledge could also be filled, completely or in part, by undertaking self-directed informal learning.

Some nurses and social workers talked of reflective practice. This was both a deliberate and structured activity. They thought about what they had done and whether it could have been done better or differently, and this was in itself a learning process. One social worker described it as a process of constantly questioning what she was doing. Feedback from clients also fed into the learning process. A few nurses and social workers also talked of the role informal learning had in relation to the theory-practice issue. Informal learning helped in striking a balance between theoretical or abstract knowledge and practical problems and procedures.

The issue of specialisation within work cropped up, often in contradictory ways. If an individual was an expert/specialist, then informal learning was often required to maintain that position, especially if he or she was at the forefront and hence could not rely on provision being available elsewhere. This might be the case in, for example, obstetrics and gynaecology. However it could also mean that he or she was concerned with quite a narrow field, and perhaps paid less attention to more general developments. Conversely a generalist might see generalism as a reason for not needing to have detailed knowledge. For example, one GP said that since GPs were generalists, they had to remain aware of advances in hospital medicine, but obviously not to the extent that specialists would.

Teaching situations or opportunities in the workplace involved informal learning in many instances. GP trainers would perhaps have to undertake informal learning in order to be able to answer students' or trainees' questions, and a similar pattern could be found in other professions. Experienced engineers acted as mentors to young engineers. Student nurses, junior doctors and social work students undergoing placements required not only formal instruction, but informal supervision or coaching. And the issue of teaching also raised questions about the person's roles, and how those affected him or her informal learning.

## **Roles**

A teaching role was mentioned by many individuals. In all the seven professions experience and expertise led to an expectation that teaching would be undertaken, either voluntarily or as a formalised responsibility. For some, such as the obstetricians and gynaecologists, it is quite an explicit role. For many others it is a more recent and still implicit one. For example in nursing, whereas some nurses have always had teaching roles, as a result of changes in their professional codes of practice, all qualified nurses now have informal teaching roles. Several engineers talked of their roles as mentors to younger engineers. GP trainers also have an obvious teaching role. Many social workers are expected to teach on an informal basis and also in a more formalised manner if they are practice teachers.

Many of the professionals also had special responsibilities within their practice or organisation. Examples included GPs in charge of the computing side of the practice or the practice library; some female GPs found that they were given special responsibility for areas such as child health and family planning; some solicitors had responsibilities for the dissemination of information; and an architect was responsible for pastoral and educational activities in the practice. Many professionals had responsibilities for specific projects, management areas or

*"Yes, I think the longer you're in a job the more you become proficient in it. I think it's a learning process all the time, really, and particularly with law because it's not static. It's changing all the time, so even if you have forty years' experience and you haven't taken voluntary early retirement for some strange reason you're still going to be learning all the time, because things change."*

(Law)

*"You know, when we were juniors - my first job - I had one night, I think one night a week off .... and you learned by being on the job, you learned by being in the place, you learned by the stuff coming out of the walls at you. It's all experience. And you see, the trouble is, in a clinical scenario, there is no substitute for experience."*

(Obstetrics & Gynaecology)

*"You're always a GP really, even when you're out at parties or whatever."*

(General Practice)

*"Certainly personal changes within life in general have helped me understand situations better. I'm thinking especially of having a family within the time I've worked in social work. This certainly helped to understand the idea of child rearing and problems of having children. Certainly experiences in general, bereavement, etc. they all impinge on how you are, how you react, and how you understand situations for others."*

(Social Work)

departments. Other implicit roles were also evident. Some architects talked of their roles as the 'spanner', 'initiator' or 'innovator' in the practice. Similarly, several solicitors and nurses saw themselves as 'the catalyst' or 'the resident expert'. The roles of 'change maker' and 'catalyst' were also mentioned by one or two nurses.

Roles were important motivating factors for informal learning. Individuals in all professions talked about the responsibility that accompanied their roles as 'experts' which meant that others approached them for information and/or advice. One social worker, for example, talked of the responsibility that accompanied seniority in that he felt a need to be up-to-date and to keep abreast of developments, so that he could pass on accurate information. Some nurses talked of having a senior position in the hierarchy: being a team leader meant that there was pressure to stay ahead of the game. Those in a position where they were seen as leaders were also conscious of the responsibility of not only needing to be ahead of the game but also to lead by example. Several of the engineers were in very senior executive positions. They talked of their roles in setting the tone, direction and ethos of the organisation. They thought that they should be involved in informal learning if they expected others in the organisation to undertake such learning. They at least had the seniority that often resulted in greater autonomy, thus allowing them to be in a better position to set their own agenda and timetables. One engineer thought that those on the shop floor would find this more difficult. A social worker said that in a previous management role he had encouraged others to undertake informal learning, although this responsibility/seniority had meant that he had not been able to undertake as much informal learning himself as he would have liked, often due to time pressures. Seniority and responsibility could thus lead to constraints as well as providing opportunities and freedom to be more autonomous when it came to informal learning. Some consultant obstetricians and gynaecologists commented that their very seniority made it more difficult to admit uncertainties or gaps in knowledge, and this meant that much of their learning had to be informal and private.

There were other ways in which roles affected informal learning. Several social workers talked about the effect of being the only social worker in a multi-disciplinary team. This had several consequences. Firstly, they had to keep abreast of what was going on in their own profession but also what was happening in their colleagues' professions. Secondly, conflicts sometimes arose about the approach to be taken, and this again often led to informal learning in order to understand the differing approaches of the different professions. Thirdly, they had to represent their profession, which again meant responsibilities in terms of being sure of their knowledge base. One health visitor also talked about role conflict in a team which had originally obstructed learning. The situation prompted her to try to understand the problem better and to improve the situation in the team.

### Stages

Although, as noted at the outset, we found that people under forty were slightly more likely to have undertaken projects than those over, there did not appear to be a clear relationship between career stage and level of activity of informal learning. Many individuals said that they had always been involved in learning and would continue to be so, no matter what stage in their career they happened to have reached. Motivation, working styles, habits and roles were all seen as more important than career stage *per se*.

*"Now that I understand what you mean by informal learning, yes. All through my career I have been engaging in informal learning, without being aware of it, what you call informal learning."*

(Law)

*"Until you actually sit down and think about the informal learning process, you don't realise how much you actually do. Just going through the questions you raised now, it's not something you give any thought to at the time you're doing it, it just seems to happen"*

(Law)

*"I don't know, do I have to choose? I can see the point of both. If you'd asked me the question before you started, I'd have said formal, because you go in and you learn things and you come out thinking well, I didn't know that, and it's all quite structured and I do think you learn quite a lot from formal courses and things in quite a concentrated way but, now you've asked me all these questions .... I've probably been unaware of what you do learn in dribs and drabs through the day, from other people and from picking something up from a journal and that sort of thing. I think you probably learn as much from both, really."*

(General Practice)

*"I think you need a mixture. I would say 50/50. You need to have a framework, a skeleton, which is the formal course system. People need to know what they need to learn. They want the A to Z .... They can envisage what is required in the syllabus, but the real learning, to my mind, is the apprenticeship system."*

(Obstetrics & Gynaecology)

*"Formal definitely. There's no replacement for professional experts who understand the subject and present it properly and then test you on that. There's no substitute."*

(Mechanical Engineering)

*"I think informal, definitely. For me certainly. It obviously depends on the individual, but I am a great believer in that something you have to find out for yourself sticks much more than something you listen to and somebody else says."*

(Law)



Whilst career stage did not appear to have much to do with *level* of learning activity it did have an effect on the *content* for many people. Some of the engineers said that the knowledge that they required changed over time and this was reflected in their informal learning activity. Whereas quite a narrow range of practical work-related knowledge might be required at the beginning of their careers, as they progressed a broader, often more theoretical understanding was required, and this was again reflected in their informal learning. Similarly a couple of solicitors talked of how the knowledge they had acquired at an early stage was more basic and more focused. Later, this opened out to become more analytical and also more satisfying. One GP said that he probably no longer studied topics in as much depth as he did as a hospital doctor early in his career, but experience had also meant that he now recognised his limitations and knew when to refer to hospital colleagues. This broadening of knowledge was seen in the other professions too. Obstetricians and gynaecologists were more likely, at later stages, to be learning about organisational changes and budgeting issues than learning about new surgical techniques. Likewise, one of the more experienced nurses mentioned 'quality' and said that her learning was now concerned with managerial issues.

Some individuals described their early career in terms of being 'dropped in at the deep end' and having to learn very quickly just in order to survive. At an early stage the need to rely on themselves, often exacerbated by the gaps between training, expectations and reality, could result in quite steep learning curves. How the early stage was tackled and dealt with often set the pattern for how new things would be dealt with subsequently. However, there were differences amongst individuals in the intensity and quantity of informal learning at different stages in their careers. For some the learning was most intense in the early years, for others subsequent changes meant a good deal of learning in later years. One obstetrician and gynaecologist commented that since systematic, formal training tended to stop at registrar level, the onus was on informal learning beyond that stage.

The importance of experience and being able to draw on existing knowledge, past cases or problems and previous ways of tackling them, was obviously related to career stage. This relationship could, however, break down if someone moved to a new job, where past experience might be inappropriate. The age of the individual, which in any case wasn't always neatly related to career stage, could also be important in terms of available general experience, and also self-confidence.

There was one area where career stage did appear to be important in relation to informal learning across the professions. This was where individuals were contemplating a career change or had actually undertaken such a step. A couple of engineers described how they had acquired new skills, in great part informally, which allowed them to change career direction. This was also the case amongst social workers, quite a few of whom had changed direction within social work, again using skills acquired informally. Three solicitors contemplating career changes also saw a role for informal learning in helping them to develop new skills or knowledge in other areas of law.

### **Personality**

Personality was thought to be a factor in informal learning by almost everyone. However, 'personality' meant different things to different people. It was often thought of not only in terms of individual characteristics but also of how people developed or reacted to both

*"Well, I think it's typical of doctors .... I think actually we have all these courses, but I think they really learn by example and apprenticeship. They think they learn by going on a course, but they really learn by example. The hidden agenda of watching your consultant do it is far more important than anything you learn formally. They teach you that it should be done that way and this way."*

(Obstetrics & Gynaecology)

*"Anyway in nursing, gone are the days when you had a lot of study days, seminars on offer and you were there and it was laid on a plate, really. I think a lot of it, mostly, has to come from your own initiatives."*

(Nursing)

*"I think the architectural profession has got beyond the idea of just buying tickets for courses, because so much has been done now, not only on self-directed learning, but particularly on office-based learning. There's material here on what's called office-based learning, which was why I came up with the term continual professional development, because it seemed to me to encompass the office unit as well as an individual."*

(Architecture)

*"Every seminar you go to, we always said this, every seminar you go, everything you go to .... you learn 10% of what the lecturers tell you, you learn 90% from everybody else that's in the room."*

(Mechanical Engineering)

*"The thing about going on a course is that you're exposed to different people .... you can actually get quite narrow-minded by picking the brains of your consultant colleagues, because that's only four or five people, and then you'll go to a College meeting and you'll be meeting consultants from all round the country who will express widely different views and expect people to have a debate on it."*

(Obstetrics & Gynaecology)

training and working environments. Motivation, in particular, loomed large. Various phrases were used to describe one's own or others' personalities. Individuals talked of being 'active', 'curious', having an 'enquiring mind' and one described herself as having a 'dominant personality'.

Characteristics such as being driven, keen, enthusiastic, motivated and energetic were also mentioned. A few GPs and some obstetricians and gynaecologists talked of being obsessive or compulsive. Several said they saw informal learning as a form of self-discipline. One or two engineers mentioned how they liked to feel in control of their learning, its organisation and pace. For them this may have been a way of trying to achieve their own internalised high standards. Differing descriptions were given by individuals of their own approach to learning: liking to glean information; being a browser; being thorough but opportunistic; digging around; short bursts of activity; going at it hammer and tongs until they became fed up with it; erratic patterns of information gathering; and being a potterer. For some people, informal methods seemed to provide the flexibility that suited their own personal style of learning.

Several people said that their initial professional training played a part in how they approached informal learning. One social worker who had trained whilst a mature student thought that her professional training had probably more influence on her approach to learning than personal characteristics did. Similarly two solicitors thought that their preference for informal learning was more attributable to their training than to personality. An engineer thought that his motivation to learn was influenced by his formative years as an engineer, and several of the obstetricians and gynaecologists believed their postgraduate medical studies had helped to inculcate an independence of thought and capacity for self-direction: characteristics which are associated, at least in theory, with the notion of a professional.

Different types of thinking were mentioned by quite a few individuals. Several individuals saw themselves as theorists, abstract thinkers, where others saw themselves as more practical. One engineer opined that some people thought too much and did too little and vice versa. Another engineer considered some people were original thinkers and others 'good memory people'. A couple of solicitors spoke in terms of being initiators or wanting to know 'why' as well as 'how', and several obstetricians and gynaecologists talked of a critical, questioning habit of mind.

The idea of challenges also came up in relation to personality. A couple of engineers thought that whilst some people were inspired by a challenge, others shrivelled up, and different people would make different use of opportunities presented to them. Another engineer also thought that personality became relatively more important if the organisation was not proactive in creating opportunities for people to learn and develop. Quite a few talked of the enjoyment of learning for its own sake, although for some individuals acquiring knowledge that could be used was more rewarding than the process of acquisition itself.

Self-knowledge and insights into their own personalities were also mentioned. A few nurses talked of being aware of their own personal growth and self-development. Quite a lot of architects also appeared to be concerned with self-knowledge: being able to reflect not only on what they had done but why, was central for some. One social worker talked about a constant sense of restlessness, being self-critical, never being satisfied and always wanting to do better. Several other social workers talked of the same sort of feelings but in terms of their responsibility to both other social workers and their clients. Wider religious, social and

*"Yes, I think some formal courses are excellent, but again, to put it very simplistically, I wouldn't want to swap the contents of our bookcase for any amount of courses."*

(Law)

*"I know that I like every so often to go away and do something formal and that's about me needing a push, if you like, or a challenge, but also something outside the job itself. But having said that, on a day-to-day level then it is the case that I will read books and look at publications relative to the work I do."*

(Social Work)

*"I think that informal learning is available if you like, inasmuch as it involves looking things up in books or going to ask a colleague about something. It's always available and it can be tailored very much to your own particular needs. If you go on a course somewhere - I mean I have been on courses which dealt with aspects of immediate concern to me, but quite often it's a question of going on a course and thinking, oh yes, that would have been extremely useful to me about six months ago. I wish I'd known that then. So storing things away for future use which may or may not be required."*

(Law)

*"You never stop learning, you can't. If you give up trying to learn you don't do your job as well. You don't have the information at your fingertips to give to people and you just sit there and plough through your day and go home. You're not developing at all, which I think is a wholly sorry state of affairs to get to."*

(Law)

political values were thought by some individuals to have consequences for their informal learning, in terms of the effect on their work, how they approached things and what they were involved in.

### **Other Factors**

Finally, we tried to discover what other factors outside the workplace might have an effect on informal learning. Almost everyone said that the most important inhibiting factor was time: the lack of time to pursue a professional interest or sometimes a number of interests. This was obviously linked to the day-to-day pressures of getting through all that had to be done. For some, such as solicitors, the issue of time-costing was also important: not being able to pursue activities that could not be billed to clients.

There were other areas of life and experience that provided more useful insights for informal learning. Events such as marriage, parenthood and bereavement all provided learning experiences for individuals in all professions. In some instances this was quite closely related to work. For example solicitors felt better able to relate to family matters as lawyers, and nurses and GPs felt better able to relate to parents and young patients after becoming parents themselves.

A valuable learning experience for many was being on the *receiving* end of their type of service. For example, one GP found being a patient a very valuable experience and one gynaecologist found it rather traumatic. Several social workers, working in the area of therapy, found that undergoing a course of counselling or therapy themselves had helped them in their roles as social workers.

The other area that sometimes helped was involvement in outside, social or leisure activities. This manifested itself in two main ways. The first was involvement in areas such as voluntary work. This often broadened horizons, providing contacts with a wider range of people than would otherwise be encountered: being better able to relate to the wider world, as one GP put it, while an engineer thought that his involvement in charity work was character building and thus ultimately had an effect on his work. There were examples of involvement in voluntary and charity work in all the professions. Involvement in activities such as being a school governor had a similar effect, although it was difficult for those with unpredictable patterns of work, for example obstetricians and gynaecologists, to take on regular external commitments. Indeed for many doctors, their work seemed to be their life, and to consume most of their time, energy and interest.

The second main benefit of involvement in outside activities was that it helped to ensure a balance between work and personal life. Although several social workers said that the distinction between work and personal life was blurred, most people found that involvement in activities and hobbies provided a time to relax, to switch off and help to re-charge batteries, which in turn helped the individual in the workplace. And in many cases and all the professions, the increasing job and career pressures due to some of the organisational changes mentioned earlier meant that such relaxation and diversion was no longer merely a *desideratum* but a necessity for their own continued professional well-being.

*"It's difficult, they're just so completely different. I mean the learning about developments in the law, it's great to sit down and be taught for half a day on a subject. It could take me forever to plough myself through a textbook and learn it. For things other than straight law, it can be great. I think informally is much easier. And obviously you can also timetable it, you can fit it in to suit yourself."*

(Law)

*"The way to learn a problem is to deal with it and it doesn't matter how often you're told in a lecture until you've dealt with it I honestly think you're not going to .... it's not going to sink in."*

(Obstetrics & Gynaecology)

*"I think formal still plays a very important role. Informal, if you can be strong willed and organised with yourself, I think you can probably gain a lot more from it because of the initiatives and efforts that you are putting in. And because you'd be more likely to apply the theories of adult learning, and more likely to retain the information if you are perhaps going at your pace, and it's relevant to you. But there still is a place for formal learning, by an expert, away from the work area and the home area."*

(Nursing)

*"However, if you are in a role as I now am where there are an increasing number of managerial cut backs, then it is hard for you to say you want to spend time visiting certain other organisations because you are actually needed on the work side, but on the other hand it makes it more important that you struggle with that and try and keep yourself learning because if you don't set that kind of example to your staff, they are not going to internalise that kind of expectation for themselves either."*

(Social Work)

## V. CONCLUSIONS

### **Continuing Learning and Continuing Education**

The first conclusion that can be drawn from this study is that for everybody - individuals, managers, professional bodies and universities - the ultimate focus should be on continuing learning rather than continuing education. There are three reasons for saying this.

The first is that what matters in the end is not how many courses or conferences people attend or books or journals they read, but what they learn from these and other activities. In other words, we should concentrate on the learning 'outputs' or outcomes rather than the educational 'inputs'. The latter are simply a means to an end, a contribution to learning; the end is more effective practice.

The second reason for suggesting such a shift is that, in reality, it happens anyway. Whereas the centre of gravity or locus of control of initial professional education lies with the institution, in the form of a required curriculum and organised teaching, once that is finished, the centre shifts to the individual professional. The very concept of a profession implies a degree of individual autonomy and responsibility and hence most continuing learning is likely to be initiated, organised, controlled and indeed evaluated by the individual. The institution-directed model of initial education should not be transposed to the essentially self-directed continuing stage. The external curriculum gives way to (in Ben Snyder's phrase) an 'inner curriculum'.

The third reason emerges most clearly from this study. It suggests that professional people employ a wide variety of means and resources to continue their learning. But whereas the main emphasis for organisations and professional bodies is typically on overt, formal and public means, with any informal learning in the background, for the individual it is the informal which looms largest and the formal inputs which play a supporting role. This is not, as was stressed at the outset, a matter of *either* formal *or* informal, but rather a matter of emphasis, of foreground and background. Organised continuing education, such as courses, conferences, seminars or study packages, do play an important role in many professions. We have noted, for example, the funding mechanisms for such events that exist for GPs, the widespread availability (until recently) of courses and packages for nurses and the need for social workers to be thoroughly and authoritatively briefed about the legal and administrative aspects of their work. Formalised learning may also provide a better defence in litigation concerning a professional's continuing competence. Organised continuing education may also be particularly important for certain kinds of individuals in each profession: those who are isolated geographically or socially, or who perhaps lack the experience, confidence or motivation to engage in self-directed learning. In addition, as we have seen, some individuals may simply prefer one or other mode of learning. We must also recognise that the participants in this study were self-selecting, and this could have biased the findings towards preference for

the informal, although since many interviewees did not initially understand the nature of the research, this factor is less important than it might seem. However, the general picture that emerges from the research is of a process that is largely self-organised, informal and often collegial (in the case of involving colleagues) and in which the overt and organised activities represent only the visible tip of a rather large iceberg.

### **Three Kinds of Continuing Learning**

As noted at the outset, the research identified three over-lapping but distinguishable types of continuing learning. 'Specific' learning is stimulated by and usually limited to particular cases, problems or needs, and is part and parcel of everyday professional work. General learning arises from the broad endeavour to keep up-to-date, in touch or abreast of trends and developments in a profession. It is not related to any particular problem or activity, but may be stored away for future use, literally or figuratively.

However, it was with the third kind of continuing learning - developmental - that this study was mainly concerned. Developmental learning is dynamic, progressive and cumulative and it manifests itself in what we, following Tough, have labelled 'learning projects'. Such projects may be triggered by a specific case or problem, but they typically evolve beyond it; they may draw on general reading, contacts or awareness, but they concentrate and direct these towards a particular end. They are thus distinguishable from the normal, on-going continuing learning which one would expect most professionals to engage in; they form identifiable events, strands or episodes in a person's professional life.

Several features of this third kind of learning are worth emphasizing again. First, it is widespread: half the interviewees could identify between two and five such projects within the last three years, within the definition used (the equivalent of one working day etc.) and a further quarter could identify between six and ten. These figures are bound to be approximate, given the nature of the enquiry, but they point unequivocally to a pervasive activity. Moreover, such projects were typically substantial and occupied much more than the one-day-equivalent minimum: 94% involved more than a week's work (though usually not in a single block).

The projects, as noted already, were more likely to have 'evolved' or involved a blend of planning and evolution than to have been systematically planned. They are unlike planned courses in this respect, and were widely felt to be flexible and opportunistic in the best sense of the word. They drew primarily on other people, and secondarily on materials (of various kinds) and other sources such as courses and meetings. Those people were typically but not always immediate colleagues. Professional networks could be important, especially in a relatively small and homogeneous field such as obstetrics and gynaecology, but people also drew sometimes on specialists in other, cognate fields, or even on people outside work altogether. Although materials were important in some professions (especially law) and in individual cases, it appears that people's main resource in continuing learning is other people: different again, from the initial curriculum-bound, materials-based stage of professional education. People variously provided enthusiasm, ideas, information, technical or practical know-how, and acted as sounding-boards, mentors, counsellors and informal evaluators.



Three other points about such developmental learning are worth reiterating. A majority of interviewees (57%) would not, with hindsight, have gone about their projects differently, and even among the 34% who would, the hypothetical change was often merely in terms of speeding them up or recognising their full scope more quickly. However, a minority did say that they thought that they should have approached the task in a more structured way with more expert help or instruction. Fully 80% of the interviewees considered that the aims of their project had been met or soon would be, and 84% had already passed on some of what they had learned, usually informally, and typically to their immediate colleagues.

Such figures should not be treated as precise indicators, but together with the qualitative data they point to a simple general conclusion: that in the eyes of those who carry them out, learning projects *work*. Whether they would meet externally defined standards and criteria is another issue to which we shall return, but in general terms we have here a form of continuing learning which appears to be effective. And because such projects typically arise out of or stem from the actual work people are doing (in 96% of the cases) there is every reason to believe that they in turn impact on and feed back into that work, thus having a direct effect on professional practice. By contrast, organised continuing education, in the form of courses, conferences and the like, was perceived to be of varying relevance and applicability, and much depended on the quality of the actual materials or events. Indeed, the informal get-togethers that surrounded courses or conferences were sometimes seen as more fruitful than the events themselves.

### **Some Means of Continuing Learning**

These three kinds of learning - specific, general and developmental - overlap and feed one another. A particular case or problem can grow, indeed mushroom, into a much larger project, eventually involving the equivalent of weeks' or months' work; or a project may crystallise a more general sense of what is 'in the air', and begin to focus the continuing scanning which professionals carry out in order to stay 'in touch'. All three types of learning are important, however, and the emphasis on each probably changes over time. The fact that a person cannot identify many projects does not mean that he or she has stopped thinking about everyday problems, reading the literature or discussing issues with colleagues. Relatively quiescent or routine phases may alternate with bursts of development, depending on circumstances.

We can relate these different types of learning to the means people use to accomplish them: means which range from the very informal to the highly formal (see Figure 9 overleaf). Specific, everyday, problem- or case-driven learning will typically draw on conversations with colleagues, targeted reading (e.g. consulting reference material) or meetings at which current work is discussed. Other specific sources of information, human or technological, might also be used, for example retrieval systems or databases. What we have called general learning is likely to draw on general reading, general conferences, seminars or meetings and perhaps other events where one meets colleagues and has the chance to chat about what is happening in the work or profession. Developmental learning may, as we have seen, draw on the entire range of means and resources, but with the emphasis typically on the informal rather than formal.

	Informal	Formal	
Small-Scale	Work	Meetings	Seminars
	Conversations	Audit	Lectures
Large-Scale	Reading	Mentoring	Courses
	Visits	Teaching	Conferences

**Fig 9 Some Means of Continuing Learning**

Any of these means or resources may be drawn on at any stage in the process, so one cannot lay down a general pattern. Formal events such as seminars, lectures, conferences or courses (face-to-face or packaged) may provide the germ of the project idea, but in most cases they seemed to figure later on, when an interest had already been identified and people knew what they wanted. They sometimes also served to 'firm up' the results of the learning at the end of the project. Less formal but still organised activities such as departmental meetings, medical or practice audits, individual mentoring or group teaching might also play a part, especially in the development of the project or its diffusion to colleagues. However, in most cases, the prime resources for learning were the work itself, conversations with colleagues and others, focussed reading and visits to people or centres of known expertise, all of which were relatively informal.

In the end, it does not matter whether the resources for learning projects are formal or informal, small-scale or large-scale. What is crucial is that the initiative and momentum of such learning should be facilitated by access to the appropriate means, and sustained by adequate organisational and collegial support. We will now set out what this implies for individuals, organisations, professional bodies and universities.

### **Implications for Individuals**

Individuals need to recognise that the main responsibility for continuing learning rests with themselves. Employers, managers and professional bodies may of course help or hinder the process, but ultimately it is the individual who is the prime agent. This is not just because the professions embody a norm of individual autonomy and responsibility, but because the very nature of continuing learning is individual.

It is not, however, necessarily *private*. This study has shown just how important people and the relations between them are to the whole process. The individual therefore has a professional responsibility not only to pursue his or her own learning, but to encourage and help colleagues in *their* learning, formally and informally.

Professionals can only do this fully, however, if they understand the nature of the process. Various things get in the way of continuing learning at this level: lack of time, isolation, competition, poor leadership, arrogance or timidity, and the unwillingness to share ideas or admit problems. But the main obstacle is lack of *awareness* that continuing learning goes on in the way that it does, and depends so heavily on other people in the process. As long as professionals think of continuing learning in terms of external inputs, resources and requirements, they will tend to ignore their main resource, which is one another.

So the main requirement is for a shift of awareness and attitudes. Clearly, this had already occurred in many of the individuals and organisations we encountered: how to generalise it is more problematic. One issue is the extent to which initial professional education creates a dependency or complacency syndrome in this respect, or how far it instils a habit of enquiry, an expectation of continuity. But the problem we found frequently was that although individuals were obviously involved in continuing learning they did not recognise this until they were encouraged to give an account of it. Because the concept is lacking, the label is missing, and because the label is missing, the activity is not recognised and valued for what it is. Continuing learning needs to be brought home.

### **Implications for Management**

The implications of the study for employing organisations and their managers can be summed up in four words: *time, resources, contact* and *ethos*.

In the professions, it may in the end be counter-productive to push productivity to the limit. Continuing learning inhabits the interstices and margins of professional life, and if there are no margins left, there will be little or no learning. Those interviewed in the study identified lack of *time* as the main obstacle to continuing learning, not only in simple arithmetical terms, but in its effect on energy and priorities. Control over one's time is partly a function of one's seniority in the profession and the wider status of that profession itself: ultimately of power. The pressures-of-working right 'up to the wire' were felt most keenly in nursing and social work, where participants often felt they had little influence over their working time. However, time was also cited as a problem by those who had reached relatively senior positions in their organisations: consultant obstetricians and gynaecologists and those mechanical engineers who were already part of management. Even for those who worked outside large organisations in apparently autonomous units - medical practices, and small architectural or legal firms - pressures of various kinds meant that some people had very little left to spare for continuing learning. This would lead to a routinised rather than exploratory approach to problems, to 'satisficing' rather than 'optimising', and would tend to reduce contacts and conversations with colleagues to a functional minimum.

The effects of this 'lack of margin' may not be immediately felt although they may in fact lie behind overt problems of 'poor communication' or 'lack of liaison'. It is over the longer term

that the real price is likely to be paid, in the shape of lack of continuing informal development, a general hardening of the organisational arteries and a breakdown in any sense of collegiality or professional community. The job becomes just that.

Continuing learning also needs *resources*. Several interviewees warned that one of the dangers of emphasizing informal learning is that it could give organisations a pretext for reducing funds for formal learning: study leave, course fees, job release, learning materials. We have already made clear that such resources are important not only for 'general' learning, but may also form a key element in what we have called developmental learning. The study-day, course or training package finds its place as part of a more personal learning agenda. But if resources for such events and activities are not forthcoming, then the signal from the organisation to the individual is clear: continuing learning is your own business; it is essentially a private matter. It thus loses its crucial organisational and collegial dimension.

Frequent opportunities for *contact* between people are also essential. These may occur naturally because of the pattern of work and proximity of colleagues. There may also be regular, structured departmental or practice meetings. These can vary in formality. One GP described to us how the doctors in his group practice met informally over coffee for half an hour after surgery every morning, without fail. And he argued that in the end, this actually saved time, because problems could be dealt with immediately, time was not wasted on trying to get hold of one another during the day, and people knew what was going on all the time. There was thus less need for formal practice meetings.

But the study suggests that something more is necessary: as one doctor put it, time spent together when not actually working. Or at least not overtly working, because it is clear that when professionals get together, they often 'talk shop' and doing so in a more relaxed and flexible setting may in fact be a better way of transacting some kinds of business than the structured meeting. The pattern of communication and interaction that goes on over coffee, lunch, in the pub or on a trip can be extremely versatile in meeting individual needs, and also in managing potentially divisive issues. As one obstetrician and gynaecologist put it, there is no substitute for the constant 'drip-drip' of internal communication of this sort.

Another aspect of contact worth noting is that between senior or experienced and junior or novice staff. In addition to the 'horizontal' relationships described above, these 'vertical' ones are important in that they may involve an element of apprenticeship and role modelling. Much professional knowledge seems to be relatively unsystematic, subtle and tacit. It is 'picked up' rather than overtly 'learned'. People in the interviews typically used terms like 'osmosis' or 'sitting by Nellie' to describe it, and stressed the importance of observation, anecdote and generally 'being around'. This implies a degree of continuity, as well as variety, in the relationships between new and experienced practitioners.

This emphasis on the importance of contact both between experts and novices and among peers tallies with some of the more recent research on the nature of professional expertise, in terms of the importance placed on 'modelling' and what might be called embedded and embodied learning. What professionals do cannot fully be explained in terms of the simple application of theory to practice, or the mere acquisition of rules and facts (see the references in the Appendix on Methodology). How novices eventually become experts is still a matter of great uncertainty and debate, but it is safe to say that the process of informal contact and learning

described in this project is central to the development of the procedural knowledge (or know-how) which allows the practitioner to practice.

Finally, the *ethos* of the organisation affects continuing learning. It is extremely difficult to generalise about the *structures* of the organisations in which the interviewees worked: they ranged from small (a handful of colleagues) to those employing thousands; straddled the public and private sectors; were located in both large cities and small towns; ranged from the relatively self-contained to the interdependent; and had internal structures which ranged from the hierarchical and bureaucratic to the democratic and collegial. However, one can to some extent generalise about the *culture* of these organisations in relation to continuing learning. Organisations which facilitated or encouraged continuing learning were described as open, supportive and interested in those who worked in them. Organisations which did not were described as remote, rigid, short-sighted or unrewarding. In many cases, it was the attitudes of those at the top, or who were in a position of influence (not necessarily the same) which seemed to be critical, and of course the climate could change if such people came or left.

Clearly, the culture of organisations is not independent of their structure, but neither is it wholly determined by it. One can have supportive or unsupportive hierarchies, consensual or conflictful democracies, open or closed groups. Communications and relationships are not necessarily better in centralised or de-centralised organisations and the relationship between scale and ethos is by no means simple. The message for managers is perhaps that whatever kind of organisation they manage, they should try to create certain basic conditions for learning. It would be naive and unhelpful to suggest that informal learning can only occur in certain types of organisational structure. However, the pre-conditions for such learning certainly include (1) a degree of flexibility and openness to new ideas and initiatives at every level, (2) a measure of security and trust which allows people to share not only innovations but problems, and (3) some rewards for, or at least absence of sanctions against, informal learning and development.

### **Implications for Professional Bodies**

The inadequacy of initial professional education as a preparation for one's entire working life is now well recognised by professional bodies. It is not just that knowledge dates, but that the very conception and interpretation of professional tasks and roles changes over time. And there is also perhaps a growing realisation that to try to cover everything at the critical undergraduate or postgraduate stage ('front-loading' in the jargon) is highly unlikely to be effective in terms of learning either.

Many bodies and organisations are therefore now setting up systems to encourage, provide, monitor and evaluate continuing professional development (CPD). One can roughly plot the position of each body on a spectrum that ranges from passive *acceptance*, through positive *recognition* to the active *requirement* of CPD, however that is defined.

We have argued that the primary responsibility for CPD has to rest with the individual, although the organisation in which he or she works can have a powerful environmental influence. The role of professional bodies is thus likely to remain secondary, indirect rather than direct, but it is nonetheless important for three reasons.

First, such bodies can feed continuing learning by organising and providing resources and sources for it. The importance of such activities goes beyond the actual provision of them, because they send a signal to members that CPD is professionally important, important enough to put money and effort into. They can thus help to create a climate which is conducive to continuing learning, which may help to stir otherwise lethargic or complacent individuals, or counteract the negative effects of unsupportive managers and organisations.

Secondly, professional bodies can have a role in stimulating and monitoring continuing learning. This is increasingly a matter of legal self-interest as well as professional image. The problem is what, how and by whom. The implications of this study are that such bodies should take as comprehensive a view as possible of continuing learning, and try to recognise and reward not only the public event but the private activity. Since the latter is often episodic and elusive, it is difficult to regulate it, but the increasing emphasis on personal learning plans, logbooks and portfolios points to a trend which goes well beyond the formalities of attendance at courses, conferences and the like. It should be possible to develop a self-report form which would be simple enough not to deter users, but detailed enough to discourage abuse, and indeed some examples of such forms and procedures already exist. Such claims could stand alongside the more familiar claims for attendance at courses or the completion of training packages. However, it should be stressed that some continuing learning - of the 'specific' and 'general' kinds - will always slip through the net of any CPD scheme, and should be regarded simply as a normal part of professional working life.

The third point has to do with standards. Is the individual professional the final arbiter of his or her need for and achievement of continuing learning? Or does the professional body also have a role in evaluating or policing the quality and scope of such learning? If so, '*Quis custodiet ipsos custodes?*' (Who is to guard the guards themselves?). Juvenal's question presupposes a hierarchical system of vertical controls, but the situation of the professions is more one of overlapping responsibilities and interests, involving not only the individual and the professional body but the state and the client as well, with some involvement of the higher education system.

Informal, self-directed learning is only as good as the people who do it. It depends on their expertise, and relies on their internalised sense of standards. In most cases, this will probably suffice; indeed, it has to because there is no way that professional bodies or anyone else can effectively monitor and evaluate all the continuing learning that is going on. The controls are essentially individual and collegial.

However, there may be areas of work which are so critical and common to the exercise of the profession that the body has to take collective responsibility for them by requiring certain knowledge and skills, licencing certain people to teach them, and testing the outcomes. The consequence of not doing this could be increased litigation on the part of individuals and/or increased regulation by the state.

The evidence from this study is that most of the people who had embarked on informal learning projects were satisfied with what they had learned. That is clearly a subjective judgement but it must be remembered that exercising one's judgement is an inherent part of professional activity, and therefore the individual's own self-evaluation must be taken very seriously in this case; besides, because of the interactive and collegial nature of much informal learning it is unlikely to be a judgement made *in vacuo*. However, continuing professional

development does involve a certain amount of common ground, in the form of changes which affect all or most practitioners. (The lists of projects given in Section III constitute a limited empirical survey of what that common ground currently is, and might help professional bodies to plan their programmes of courses and other events. Did they know that this was what their members were teaching themselves?) However, as some of the quotations from the interviews make clear, there are cases where organised courses and structured learning are sensible in terms of collective benefit, or necessary in terms of collective risk. A profession comprises a body of individuals and the emphasis on the collectivity or individuality varies from case to case and time to time. In some cases and at some times, it may be necessary for the profession to prescribe some areas of continuing education, as a logical extension of its initial membership requirements.

In terms of the totality of continuing learning, however, these regulated areas seem likely to remain the exception rather than the rule. The picture that emerges finally from this study is of an activity which is primarily initiated, organised, resourced and evaluated by individuals and their colleagues. Indeed, it is difficult to see how anything else could be consistent with the notion of a profession.

### **Implications for Higher Education**

Is there any role for higher education in all this? We have already suggested that the key actors in the situation are individuals, their immediate colleagues, and those who manage the professional organisations they work in. Professional bodies are likely to have only an indirect role, and the same is even more true of higher education. However, universities can perhaps play a supporting and supportive role in three ways. The first is to make available their expertise for formal professional education and informal professional learning alike, through courses, consultancies, databases and personal contacts. Here, they are likely often to collaborate with the professional bodies and employing organisations in assessing what needs to be provided, and in evaluating the benefits.

Secondly, they can continue to carry out research into the nature and process of continuing professional development, research of which this study is only one example and which needs to be complemented by studies of different kinds. Certainly, such research is important if universities are to target and deliver continuing professional education in an effective way, and to embed it in the totality of continuing professional learning.

Thirdly, universities and other colleges could act as a model for the kind of continuing learning that we have been exploring here. Such informal learning is surely implicit in the idea of an academic *community*, of the *collegium*, and the spirit of *enquiry* which is meant to pervade research. Continuing, informal learning should be part and parcel of academic life, of the very being of such institutions. Whether it is, is a searching question, which would make an interesting study closer to home.

## SELECT BIBLIOGRAPHY

- Abrahamsson, K. (1983) *Between Liberal Education and Professional Training*, Stockholm: National Board of Universities and Colleges.
- Allen, M. (1991) *Improving the Personal Skills of Graduates*, Final Report of a three year project by the Personal Skills Unit of the University of Sheffield.
- Allery, L., Owen, P., Hayes, T. and Harding, K. (1991) 'Differences in Continuing Medical Education Activities and Attitudes between Trainers and Non-trainers in General Practice', *Postgraduate Education for General Practice*, **2**, 176-182.
- Anderson, L. J. (1989) 'Practice Management: does training matter?' *Professional Negligence*, **5** (6), 204-205.
- Anon (1982) 'Professional Career Development: report of a meeting of the North Western Branch of the Institution of Mechanical Engineers on 8th October 1981', *International Journal of Mechanical Engineering Education*, **10** (1), 61-66.
- Baker, R. (1990) 'Experience in Medical Audit: general practice', *Postgraduate Medical Journal*, **66**, Supplement 3, pp. S14-S16.
- Bandura, A. (1986) *Social Foundations of Thought and Action*, Englewood Cliffs: Prentice Hall.
- Barbour, R. S. (1984) 'Social Work Education: tackling the theory-practice dilemma', *British Journal of Social Work*, **14**, 557-577.
- Baskett, H. K. (1989) *Knowledge Utilization in Social Work Practice: implications for education and staff development*, Paper presented at the Meeting of the Canadian Association of Schools of Social Work, Quebec City, Canada, June 1989.
- Baskett, H. and Marsick, V. (1992, eds) *Professionals' Ways of Knowing* (New Directions for Adult and Continuing Education No. 55), San Francisco: Jossey-Bass.
- Batstone, G. F. (1990) 'Educational Aspects of Medical Audit', *British Medical Journal*, **301**, 326-328.
- Becher, T. (1994, ed.) *Governments and Professional Education*, Milton Keynes: Open University Press.
- Belcher, I. (1991) 'Tutors get a Chance to Learn from each other', *Doctor*, 7 March, 75.
- Bell, C. (1987) 'Continuing Education: an appraisal' *Solicitors' Journal*, **131** (26), 858-860.



- Benner, P. (1984) *From Novice to Expert: excellence and power in clinical nursing practice*, Menlo Park: Addison Wesley.
- Birmingham Research Unit of the Royal College of General Practitioners (1977) 'Self-evaluation in General Practice', *Journal of the Royal College of General Practitioners*, **27**, 265-270.
- Blumberg, P. and Daugherty, S. (1989) *Good Student of Good Physician: what are we encouraging?* Paper presented at the Annual Meeting of the American Educational Research Association, San Francisco, California, March 27-31, 1989.
- Boreham, N. C. (1987) 'Learning from Experience in Diagnostic Problem Solving' in Richardson, J. T. E., Eysenck, M. W. and Piper, D. W. (eds), *Student Learning: research in education and cognitive psychology*, Milton Keynes: Open University Press.
- Boreham, N. C. (1988) 'Models of Diagnosis and their Implications for Adult Professional Education', *Studies in the Education of Adults*, **20**, 95-108.
- Bouhuijs, P. A. (1985) 'Planning Continuing Medical Education for General Practitioners: a case study from the Netherlands', *Studies in Higher Education*, **10** (3), 269-275.
- Branthwaite, A., Ross, A., Henshaw, A. and Davie, C. (1988) *Continuing Education for General Practitioners*, Occasional Paper 38, London: Royal College of General Practitioners.
- Brockett, R. G. and Hiemstra, R. (1985) 'Bridging the Theory-Practice gap in Self-Directed Learning' in Brookfield, S. (ed.) *Self-Directed Learning: From Theory to Practice*, New Directions for Continuing Education, Number 25, March 1985, San Francisco: Jossey-Bass.
- Brockett, R. G. and Hiemstra, R. L. (1991) *Self-Direction in Adult Learning: perspectives on theory, research and practice*, London: Routledge.
- Brockett, R. G., Hiemstra, R. and Penland, P. R. (1982) 'Self Directed Learning' in Klevins, C. (ed.) *Materials and Methods in Adult and Continuing Education*, Los Angeles: Klevens Publications.
- Brookfield, S. (1985a) 'Analysing a Critical Paradigm of Self-Directed Learning: a response' *Adult Education Quarterly* **36** (1), 60-64.
- Brookfield, S. D. (1985b) 'Self-Directed Learning : a critical review of research', in Brookfield, S. (ed.) *Self-Directed Learning: from theory to practice*, New Directions for Continuing Education, Number 25, March 1985, San Francisco: Jossey-Bass.
- Brookfield, S. D. (1986) *Understanding and Facilitating Adult Learning: a comprehensive analysis of principles and effective practices*, Milton Keynes: Open University Press.
- Cafferella, R. S. and O'Donnell, J. M. (1989) *Self-Directed Learning*, Nottingham: Department of Adult Education, University of Nottingham.

- Candy, P. (1991) *Self-Direction for Lifelong Learning: a comprehensive guide to theory and practice*, San Francisco: Jossey-Bass.
- Cannell, R. L. (1985) 'The Updating of Engineers - improved profitability or just more courses?', *Proceedings of the Institution of Mechanical Engineers*, **199**, B3, 169-173.
- Carter, R. (1985) 'A Taxonomy of Objectives for Professional Education', *Studies in Higher Education*, **10** (2), 135-149.
- Cervero, R. M. (1992) 'Professional Practice, Learning, and Continuing Education: an integrated perspective', *International Journal of Lifelong Education*, **11** (2), 91-101.
- Cervero, R. and Scanlan, C. (1985) *Problems and Prospects in Continuing Professional Education* (New Directions for Continuing Education No 27), San Francisco: Jossey-Bass.
- Chi, M., Glaser R., and Farr, M. (1988) *The Nature of Expertise*, Hove: Lawrence Erlbaum.
- Cohen, B. (1985) 'Skills, Professional Education and the Disabling University', *Studies in Higher Education*, **10** (2), 175-186.
- Coles, C. (1990) 'Making Audit Truly Educational', *Postgraduate Medical Journal*, **66**, Supplement 3, pp. S32-S36.
- Collins, R. and Hammond, M. (1987) 'Self-directed Learning to Educate Medical Educators. Part 2: Why do we use self-directed learning?', *Medical Teacher*, **9** (4), 425-432.
- Corbett, H. (1987) 'Continuing Education', *Solicitors' Journal*, **131** (1), 17.
- Cowan, J. and Garry, A. (1987) 'Learner-Centred Learning for Professional Development' in Todd, F. (ed.) *Planning Continuing Professional Development*, London: Croom Helm.
- Cross, K. P., (1982) *Adults as Learners*, San Francisco: Jossey-Bass.
- Crossland, B. (1989) 'The Life-long Education and Training of Mechanical Engineers', *Proceedings of the Institution of Mechanical Engineers*, **203**, B, 139-144.
- Dahlgren, L. O. and Pramling, I. (1985) 'Conceptions of Knowledge, Professionalism and Contemporary Problems in some Professional Academic Subcultures', *Studies in Higher Education*, **10** (2), 163-173.
- Dalton, G. W., Thompson, P.H. and Price, R. L. (1977) 'The Four Stages of Professional Careers - A New Look at Performance by Professionals', *Organizational Dynamics*, Summer, 19-35.
- Davies, B. (1987) *Nursing Education: research and developments*, London: Croom Helm.
- Davies, C. (1983) 'Professionals in Bureaucracies: the conflict thesis revisited', in Dingwall, R. and Lewis, P. (eds) *The Sociology of the Professions*, London: MacMillan.

- Difford, F. and Hughes, R. C. W. (1992) 'General Practitioners' Attendance at Courses Accredited for the Postgraduate Allowance', *British Journal of General Practice*, **42**, 290-293.
- Dingwall, R. And Lewis, P. (1983, eds) *The Sociology of the Professions*, London: Macmillan.
- Dixon, N. (1990) 'Practical Principles of Medical Audit', *Postgraduate Medical Journal*, **66**, Supplement 3, pp. S17-S20.
- Donald, A. G. (1984) 'Continuing Learning in Practice Project (CLIPP)', *Journal of the Royal College of General Practitioners*, **34**, 242-245.
- Dreyfus, H. L. (1992) *What Computers Still Can't Do*, Cambridge, Mass: M. I. T. Press.
- Dunn, W. R. and Hamilton, D. D. (1985) 'Competence Based Education and Distance Learning: a tandem for continuing education', *Studies in Higher Education*, **10** (3), 277-287.
- Eccleston, S. J. (1989) 'Continuing Education and the Compulsory Scheme', *Solicitors' Journal*, **133** (12), 384-385.
- Editorial (1992) 'Competence is the Name of the Game', *Journal of the Law Society of Scotland*, **37** (6), 203.
- Ellis, R. (1988, ed.) *Professional Competence and Quality Assurance in the Caring Professions*, London: Croom Helm.
- Eraut, M. (1985) 'Knowledge Creation and Knowledge Use in Professional Contexts', *Studies in Higher Education*, **10** (2), 117-33.
- Eraut, M. (1992) 'Developing the Knowledge Base: a process perspective on professional education', in Barnett, R (ed.) *Learning to Effect*, Milton Keynes: Open University Press.
- Evans, N. (1984) *Exploiting Experience*, FEU/PICKUP Project Report, London: Further Education Unit.
- Fabb, W. E. (1981) 'Continuing Education - Identifying Our Needs', *Journal of the Royal College of General Practitioners*, **31**, 395-400.
- Falk-Whynes, J. and Whynes, D. (1992) 'What Type of Postgraduate Education do General Practitioners Want?', *Postgraduate Education for General Practice*, **3**, 147-151.
- Farmer, J. Buckmaster, A. and LeGrand, B. (1992) 'Cognitive Apprenticeship: implications for continuing professional education' in Baskett, H. and Marsick, V., *op. cit.*
- Farnish, S. (1987) 'How Do Ward Sisters Learn?' *Nursing Review* **6** (1), 10-12, 14.
- Farrell, L. (1991) 'GPs can Organise their own Learning Sessions', *GP*, 8 February, 55.

- Freidson, E. (1983) 'The Theory of Professions : state of the art' in Dingwall, R. and Lewis, P. (eds) *The Sociology of the Professions*, London: Macmillan.
- Freire, P. (1970) *Pedagogy of the Oppressed*, New York: Herder and Herder.
- Gardiner, D. (1989) *The Anatomy of Supervision: developing learning and professional competence for social work students*, Milton Keynes: Open University Press.
- Gardner, R., Sutcliffe, S. and Taylor, J. (1981) *Continuing Professional Development for Architects*, Research Paper 20, York: Institute of Advanced Architectural Studies, University of York.
- Gardner, R. (1991) *Notes for CPD Organisers' Workshop and Report of a Two-day Workshop held at King's Manor*, York: Institute of Advanced Architectural Studies.
- Garrett, R. (1987) *The Learning Organisation*, London: Collins.
- Garrison, D. R. (1987) 'Self-Directed and Distance Learning: facilitating self-directed learning beyond the institutional setting', *International Journal of Lifelong Education*, 6 (4), 309-318.
- Garry, A. and Cowan, J. (1986) *Continuing Professional Development: a learner-centred strategy*, FEU/PICKUP Project Report, London: Further Education Unit.
- Geldhart, D. and Brown, A. S. (1987) *A Largely Unsatisfied Need: Continuing Professional Development for Process and Process Plant Industries: A Summary*, FEU/PICKUP Project Unit, London: Further Education Unit.
- Goodlad, S. (1984, ed.) *Education for the Professions*, Guildford: Society for Research into Higher Education.
- Gould, N. (1989) 'Reflective Learning for Social Work Practice', *Social Work Education*, 8 (2), 9-19.
- Grant, V. J. (1987) 'Teaching Medical Students about other Health Professionals: an experiment in self-directed learning', *Medical Teacher*, 9 (3), 271-274.
- Gray, I. (1979) *The Engineer in Transition to Management*, New York: IEEE Press.
- Green, J. S., Grosswald, S. J., Suter, E. and Walthall, D. B. (1984, eds) *Continuing Education for the Health Professions*, San Francisco: Jossey-Bass.
- Guide to Software and Resources for Computer Based Learning in Medicine, Nursing, Dentistry and Veterinary Science*, (1992) 2nd edition, Bristol: CTI Centre for Medicine, University of Bristol.
- Gutman, R. (1985) 'Educating Architects: pedagogy and the pendulums', *The Public Interest*, 80, Summer, 85-101.
- Hammond, M. and Collins, R. (1987) 'Self-directed Learning to Educate Medical Educators. Part 1: how do we use self-directed learning?', *Medical Teacher*, 9 (3), 253-260.

- Hancock, C. (1992) *Nurses and Skill Mix: what are the issues?* from a speech first delivered at the conference on 'Nurses and Skill Mix', organised by Bart's Conferences, London: Royal College of Nursing.
- Harri-Augstein, E. S. and Thomas, L. F. (1992a) 'Self-Organised-Learning in Action', *Training and Development*, June, 19-21.
- Harri-Augstein, E. S. and Thomas, L. F. (1992b) 'Self-Organised-Learning for Personal and Organisational Growth', *Training and Development*, March, 26-30.
- Harris, R. J., Barker, M. W., Reading, P., Richards, M. and Youll, P. (1985, eds) *Educating Social Workers*, Leicester: Association of Teachers in Social Work Education.
- Harris, S. and Rymer, D. (1983) *Case Studies in Continuing Professional Development*, Research Paper 22, York: Institute of Advanced Architectural Studies, University of York.
- Harris, S. (1984) *Learning Methods in Architects' Continuing Education*, unpublished PhD thesis, York: Institute of Advanced Architectural Studies, University of York.
- Harris, S. and Roberts, N. (1986) *Design of Learning*, Research Paper 25, York: Institute of Advanced Architectural Studies, University of York.
- Harrison, W. D. (1987) 'Reflective Practice in Social Care', *Social Service Review*, **61**, 393-404.
- Hasler, J. (1991) 'The Changing Face of Continuing Education', *Postgraduate Education for General Practice*, **2**, 79-81.
- Hedge, A. (1975) *Mid-Career Education for the Building Professions: a study of learning needs and learning styles*, Research Paper 10, York: Institute of Advanced Architectural Studies, University of York.
- Hennessey, C. (1992) 'CPD: defining your needs', *RIBA Practice*, **82**, 6-7.
- Hewson, M. G. (1991) 'Reflection in Clinical Teaching', *Medical Teacher*, **13** (3), 227-231.
- Heylings, P. N. K., and Alexander, N. (1982) 'The Bransholme GP Clinical Club', *Journal of the Royal College of General Practitioners*, **32**, 579-580.
- Houle, C. (1961) *The Inquiring Mind*, Madison: University of Wisconsin Press.
- Houle, C. (1981) *Continuing Learning in the Professions*, San Francisco: Jossey-Bass.
- Hunt, E (1992, ed.) *Professional Workers as Learners*, Washington, D.C.: Office of Educational Research and Improvement, US Department of Education.
- Jackson, J. (1970, ed.) *Professions and Professionalisation*, Cambridge: Cambridge University Press.
- Jarvis, P. (1985) *The Sociology of Adult and Continuing Education*, London: Croom Helm.

- Jarvis, P. (1987) 'Lifelong Education and its Relevance to Nursing', *Nurse Education Today*, 7 (2), 49-55.
- Jewell, D. (1991) 'General Practice Education: things to come', *British Medical Journal*, 303, 510-512.
- Joblin, D. (1988) 'Self-Direction in Adult Education', *International Journal of Lifelong Education*, 7 (2), 115-125.
- Johnson, M. (1983) 'Professional Careers and Biographies' in Dingwall, R. and Lewis, P. (eds) *The Sociology of the Professions*, London: Macmillan.
- Jones, E., Jones, J. V., Putnam, W. and Sowden, S. (1987) 'A Self-directed Learning Package in Rheumatology for Family Physicians', *Medical Teacher*, 9 (4), 433-437.
- Kathrein, M. A. (1981) *A Study of Self-Directed Continued Professional Learning of Members of the Illinois Nurses' Association: context and process*, unpublished PhD thesis, Northern Illinois University.
- Keen, T. (1987) 'Appraisal of Teacher Performance' in Todd, F. (ed.) *Planning Continuing Professional Development*, London: Croom Helm.
- Knowles, M. S. (1975) *Self-Directed Learning: a guide for learners and teachers*, New York: Association Press.
- Knowles, M. S. (1970) *The Modern Practice of Adult Education: andragogy versus pedagogy*, Chicago: Follett.
- Knowles, M. S. (1984) *The Adult Learner: a neglected species* (3rd edition) Houston: Texas.
- Kolb, D. (1984) *Experiential Learning*, Englewood Cliffs: New Jersey.
- Koppel, J. I. and Pietroni, R. G. (1991) *Higher Professional Education Courses in the United Kingdom*, Occasional Paper 51, London: Royal College of General Practitioners.
- Lathlean, J. and Dodwell, M. (1989, eds) *Management and Professional Development for Nurses*, London: Harper and Row.
- Leeuwenhorst European Working Party, (1980) 'Continuing Education and General Practitioners', *Journal of the Royal College of General Practitioners*, 30, 570-574.
- Legal Education and Training Group (1992) *Training for Quality*, 3rd Annual Conference, London: Legal Education and Training Group.
- Lewis, A. P. and Bolden, K. J. (1989) 'General Practitioners and their Learning Styles', *Journal of the Royal College of General Practitioners*, 39, 187-189.
- Lindblom, C. (1959) 'The Science of "Muddling Through" ', *Public Administration Review*, 19 (2), 79-88.

- Lindblom, C. (1979) 'Still Muddling, Not Yet Through', *Public Administration Review*, **39** (6), 517-26.
- Long, H. B. (1987) 'Item Analysis of Guglielmino's Self-Directed Learning Readiness Scale', *International Journal of Lifelong Education*, **6** (4), 331-336.
- Long, H. B. (1990) 'Psychological Control in Self-Directed Learning', *International Journal of Lifelong Education*, **9** (4), 331-338.
- Lovin, B. (1992) 'Professional Learning through Workplace Partnerships' in Baskett, H. and Marsick, V., *op. cit.*
- Marsick, V. J. (1987, ed.) *Learning in the Workplace*, London: Routledge.
- Marsick, V. J. and Watkins, K. E. (1990) *Informal and Incidental Learning in the Workplace*, London: Routledge.
- McCall, M. W., Lombardo, M. M. and Morrison, A. M. (1988) *The Lessons of Experience*, Lexington, MA: Lexington Books.
- McCart, C. L. et al, (1985) *Learning Styles Among Established Professionals*, Paper presented at the Annual Meeting of the American Educational Research Association, Chicago, March 31 - April 4, 1985.
- McKendrick, M. (1987) 'The Professionals', *Journal of the Royal College of General Practitioners*, **37**, 292-295.
- McKenzie, D., O'Reilly, D. and Stephenson, J. (1985) 'Independent Study and Professional Education', *Studies in Higher Education*, **10** (2), 187-197.
- McLaughlin, C. (1990) 'Action Plan : keep on learning', *Pulse*, 3 November, 77-78.
- Merriam, S. B. and Caffarella, R. S. (1991) *Learning in Adulthood: a comprehensive guide*, San Francisco: Jossey-Bass.
- Mezirow, J. (1985) 'A Critical Theory of Self-Directed Learning' in Brookfield, S. (ed.) *Self-Directed Learning: from theory to practice*, New Directions for Continuing Education, Number 25, March 1985, San Francisco: Jossey-Bass.
- Millac, J. (1985) 'Continuing Medical Education', *Journal of the Royal College of General Practitioners*, **35**, 303-304.
- Muir Gray, J. A. (1986) 'Continuing Education: what techniques are effective', *The Lancet*, August 23, 447-448.
- Mulholland, H. (1990) 'Continuing Medical Education - is there a crisis?', *Postgraduate Education for General Practice*, **1**, 69-72.
- Mulholland, H. and Tombleson, P. M. J. (1990) 'Assessment of the General Practitioner', *British Journal of General Practice*, **40**, 252-254.

- Newsletter (1988) 'Continuing Legal Education', Continuing Legal Education Association, **51**, 15-20.
- Noble, R. D. (1985) 'Adjunct Position : one way to keep up with technology and education', *Chemical Engineering Education*, **19** (3), 162-163.
- Nolan, P.J. (1992) 'An Alternative Way to Learn', *Yorkshire Medicine*, **4** (2), 3.
- O'Connor, I. and Dalglish, L. (1986) 'Cautionary Tales for Beginning Practitioners: the fate of personal models of social work in beginning practice', *British Journal of Social Work*, **16**, 431-447.
- Page, R. (1991) 'Survival of the Leanest', *Professional Lawyer* **2** (1), 6-8.
- Papell, C. P. and Sklonik, L. (1992) 'The Reflective Practitioner: a contemporary paradigm's relevance for social work education', *Journal of Social Work Education*, **28** (1), 18-26.
- Pearson, A. (1991) 'Try a Little Do-it-yourself Education', *GP*, 12 April, 64.
- Peddler, M., Burgoyne, J. and Boydell, T. (1988) *Applying Self-Development in Organizations*, London: Prentice-Hall.
- Pietroni, R. (1992) 'New Strategies for Higher Professional Education', *British Journal of General Practice*, **42**, 294-296.
- Portner, H. (1982) *Individualized Professional Development: a cooperative process that works!*, Paper presented at the Annual Meeting of the National Council of States on Inservice Education, Atlanta, Georgia, November 19-23, 1982.
- Putman, A. O. (1989) 'Mid-Career Support: an approach to lifelong learning in the organization', *Lifelong Learning Omnibus of Practice and Research*, **12** (7), 7-10.
- Queeney, D. S. (1987) 'The Practice Audit Model: a needs assessment/programme development process' in Todd, F. (ed.) *Planning Continuing Professional Development*, London: Croom Helm.
- Queeney, D. S. and Melander, J. J. (1984) *Establishing Foundations for University/Professional Collaboration*, Pennsylvania: Kellogg Foundation/Pennsylvania State University.
- Revans, R. (1982) *The Origins and Growth of Action Learning*, Bromley: Chatwell Pratt.
- Richardson, J. T. E., Eysenck, M. and Piper, D. W. (1987, eds) *Student Learning: research in education and cognitive psychology*, Milton Keynes: Open University Press.
- Riegel, K. F. (1979) *Foundations of Dialectical Psychology*, New York: Academic Press.
- Rivera, W. M. (1982) *Professional Life Planning: a self-directed systematic approach*, Paper presented at the National Adult Education Conference, San Antonio, Texas, November 1982.



- Roberts, N. (1991) 'Personal Development Plans', in *RIBA Journal*, **98** (6), 88.
- Robertson, G. (1987) 'How 'Self' Directed is Self-Directed Learning?', *Management Education and Development*, **18**, Pt 2, 75-87.
- Roith, O. (1987) 'Coming to Terms with Complexity - Mechanical Engineering 1986 and Beyond', *Proceedings of the Institution of Mechanical Engineers*, **201**, B1, 11-19.
- Rosenfield, S. (1981) 'Self-Managed Professional Development', *School Psychology Review*, **10** (4), 487-493.
- Royal College of General Practitioners (1990) *An Educational Strategy for General Practice for the 1990s*, London: Royal College of General Practitioners.
- Royal College of Obstetricians and Gynaecologists (1991) *Report of the RCOG Working Party on Continuing Medical Education*, London: Royal College of Obstetricians and Gynaecologists.
- Rueschemeyer, D. (1983) 'Professional Autonomy and the Social Control of Expertise', in Dingwall, R. and Lewis, P. (eds) *The Sociology of the Professions*, London: Macmillan.
- Savage, R. (1991) 'Continuing Education for General Practice : a life long journey', *British Journal of General Practice*, **41**, 311-313.
- Schön, D. A. (1987) *The Reflective Practitioner*, San Francisco: Jossey-Bass.
- Scott, D. (1990) 'Practice Wisdom: the neglected source of practice research', *Social Work*, **35**, 564-568.
- Secker, J. and Clark, C. (1990) *A Bibliography of Relevant Research in Social Work Education and Training, No. 2*, Edinburgh: Universities of Edinburgh and Sheffield.
- Shove, E. (1988) *Interests in Continuing Education: a report for the Building Centre Trust*, York: Institute for Advanced Architectural Studies, University of York.
- Simon, H. A. (1990) 'Invariants of Human Behaviour', *Annual Review of Psychology*, **41**, 1-19.
- Squires, G. (1987) *The Curriculum Beyond School*, London: Hodder and Stoughton.
- Stephen, K. D. (1986) 'The Use of Distance Learning in Industry', *Proceedings of the Institution of Mechanical Engineers*, **200**, B2, 131-137.
- Sternberg, R. J. and Wagner, R. K. (1986, eds) *Practical Intelligence*, Cambridge: Cambridge University Press.
- Strein, W. (1982) *Applying the Supervisory Pool Concept to Supervision in School Psychology*, Paper presented at the Annual Convention of the American Psychological Association, Washington D.C., August 23-27, 1982.

- Super, D. E. (1953) 'A Theory of Vocational Development', *The American Psychologist*, **8**, 185-90.
- Tannenbaum, S. I. and Yukl, G. (1992) 'Training and Development in Work Organisations', *Annual Review of Psychology*, **43**, 399-411.
- Tennant, M. (1988) *Psychology and Adult Learning*, London: Routledge.
- Thompson, D. G. and Williams, R. G. (1985) 'Barriers to the Acceptance of Problem-Based Learning in Medical School', *Studies in Higher Education*, **10** (2), 199-204.
- Thompson, P. H., Baker, R. Z. and Smallwood, N. (1986) 'Improving Professional Development by Applying the Four-Stage Career Model', *Organizational Dynamics*, Autumn, 49-62.
- Todd, F. (1987, ed.) *Planning Continuing Professional Development*, London: Croom Helm.
- Tough, A. M. (1967) *Learning Without a Teacher : a study of tasks and assistance during adult self-teaching projects*, Toronto: Ontario Institute for Studies in Education.
- Tough, A. M. (1971) *The Adult's Learning Projects*, Toronto: Ontario Institute for Studies in Education.
- Tough, A.M. (1976) 'Self-planned Learning and Major Personal Change' in Tight, M. (1983, ed.) *Adult Learning and Education*, London: Croom Helm/Open University.
- Tuck, J. W. (1988) 'Professional Development through Learning Centres', *Training and Development Journal*, September, 76-79.
- Usher, R. S. and Bryant, I. (1987) 'Re-examining the Theory-Practice Relationship in Continuing Professional Education', *Studies in Higher Education*, **12** (2), 201-212.
- Varnam, M. (1990) 'Continuing Medical Education: learned or taught?', *Postgraduate Education for General Practice*, **1**, 5-9.
- Vaughan, P. (1991) *Maintaining Professional Competence: a survey of the role of professional bodies in the development of credit-bearing CPD courses*, Hull: University of Hull, Department of Adult Education.
- Walter, V. (1976) 'Self-Motivated Personal Career Planning: a breakthrough in human resource management', Parts I and II, *Personnel Journal*, Part I - March, pp. 112-115 and 136-137, Part II - April, 162-168.
- Watson, A. and McManus, M. (1992) *Professional Development Diary*, London: The Chartered Society of Physiotherapy.
- Watt, M. (1990) 'The Role of Andragogy in Continuing Medical Education', *Postgraduate Education for General Practice*, **1**, 148-153.
- Woodward, S. (1990) 'Education for Life', *Professional Lawyer*, **1** (3), 11-13.

## APPENDIX: METHODOLOGY

In this appendix, we describe the main features of the methodology used in the study. This is not intended to constitute an exhaustive or technical account, but rather to give the reader some sense of how we went about the study and why. Any further enquiries can be addressed to the project director.

The project ran from 1st September 1992 to 30th September 1993, with most of the interviews taking place between February and May 1993. The main writing up took place, with some delays due to illness, in the autumn and winter of 1993/94. It was an exploratory study, a fact which influenced its conception, design and methods. Although as the Bibliography shows there is a good deal of literature relevant to the study, there is very little (particularly in the United Kingdom) which bears directly on it, although we did find some interesting previous and current work in the fields of architecture and medical general practice. At a more theoretical level, the work of Tough (1967) provided a key point of departure, and there are some useful recent overviews of subsequent research on 'self-directed learning' (see in particular Brockett & Hiemstra, 1991; Candy, 1991; Merriam & Caffarella, 1991). For a reference to Snyder's 'inner curriculum' see Abrahamsson (1983).

The work of Marsick (Marsick, 1987; Marsick and Watkins, 1990) is generally relevant, as is some other recent American writing (McCall et al, 1988; Baskett and Marsick, 1992; Tannenbaum and Yukl, 1992). And the whole notion of professional expertise has been opened up in the last decade in different ways by writers such as Benner (1984), Boreham (1987), Schön (1987), Chi, Glaser and Farr (1988), Simon (1990), Dreyfus (1992) and Eraut (1992). However, none of this work met precisely our need to explore informal learning in the professions in this country, and so it was difficult to establish in advance the main parameters of the research, since it was not obvious what features or factors might turn out to be important. The situation pointed towards a relatively open-ended study, which might form the basis for more focused or systematic research in the future.

Rather than concentrate on one or two professions, we decided therefore to opt for a range of professions which contrasted with one another in a number of ways: area of expertise; public/private sector; knowledge base; size; gender balance; and perceived status. Having chosen these, we approached the relevant professional bodies for their cooperation, which was generously given in all cases. As regards the selection of individuals within each profession, it was made clear from the outset that this was not a formal survey, since there was no basis in terms of representativeness on which to sample. The research in effect constituted a very large set of case-studies, and our procedures were intended to ensure only that there were no obvious influences affecting selection (for example professional reputation, interpersonal networks, or geographical bias) and that there was an element of chance in whom we talked to. The overall strategy was discussed and firmed up at a seminar held in December 1992, to which a number of members of different professions were invited.

We therefore began by establishing the availability and kinds of lists of practitioners in each profession (something which differs from profession to profession) and proceeded to choose

and contact the required number of people in each of the seven groups. The only general decisions taken at this stage were geographical: we decided to select people in the north of England *and* London, in order to avoid any purely regional biases; and to limit our interviews to cities and large towns, in order to reduce travel expenses and problems.

## **Professional Lists**

### *Architects*

The architects were chosen from the Northern Region and London Royal Institute of British Architects (RIBA) lists.

### *General Practitioners*

All medical practitioners are listed. However going through The Medical Directory to choose 20 GPs in five cities was not considered the best option. Most GPs in a geographical area are listed by the relevant Family Health Services Authority (FHSA) and it was decided to use these lists. General practitioners were chosen from the lists of FHSAs that covered Hull, Leeds, York, Sheffield and inner London boroughs.

### *Mechanical Engineers*

A complete list of qualified mechanical engineers does not exist. The Institution of Mechanical Engineers has a list of all those who are members of the Institution. IMechE agreed to send out our letters to members, chosen in the way we indicated from their membership list, as the list is not publicly available.

### *Nurses*

Nurses are registered with the UKCC, which sent out letters on our behalf. We originally decided to confine the study to hospital nurses, in order to make it more homogeneous, but the poor response rate led us to include some practice nurses and health visitors.

### *Obstetricians and Gynaecologists*

These were selected from the Register provided by the Royal College of Obstetricians and Gynaecologists and contacted directly and independently of the College, in approximately equal proportions of Fellows and Members.

### *Social Workers*

A complete register of all social workers, qualified or unqualified, does not exist. There are several associations that social workers, and others working in the area of social work and social care can belong to, but membership is not mandatory and therefore not comprehensive. It was decided to approach social workers who belong to the British Association of Social Workers (BASW). BASW agreed to send out our letters to members, chosen in the way we indicated from their membership list, as the list is not publicly available.

## Solicitors

The names of the solicitors were selected from the Register of Solicitors and Barristers. We drew on lists both of solicitors in private practice and employed solicitors.

## Selecting and Contacting Interviewees

Initially 40 letters were sent out to each profession. For the seven professions we therefore divided the relevant list into segments, selecting the last name in each segment. However, if the last name was not in an urban location we then moved backwards until we found one. These directions were given to the bodies who were distributing letters on our behalf. Several waves of letters were sent, moving back throughout the segment to choose individuals. The same procedure was followed, as far as possible, within each list. We wrote to those chosen from the lists and included a stamped addressed postcard for reply. The response rates were as follows:

## Response Rates

	Total cards out	'YES' replies	'NO' replies	'OTHER' replies	Positive response rate
General practitioners	140	26 <sup>1</sup>	70	1 <sup>2</sup>	18.6%
Social workers	60	25	16		41.7%
Mechanical engineers	80	25	18		31.2%
Solicitors	40	21	8	1 <sup>3</sup>	52.5%
Architects	113	41	27	1 <sup>4</sup>	36.3%
Nurses	120	19	26		15.6%
Obstetricians & gynaecologists	86	31	21	6 <sup>5</sup>	36.0%

In some instances however, a 'YES' reply did not actually result in an interview. For example from the 26 'YES' replies from GPs only 19 interviews actually resulted. More letters were therefore sent out and one GP was approached during a training event and agreed to take part. A similar problem arose with nurses, and eventually 5 were contacted in a 'snowball' fashion.

<sup>1</sup>Included 2 without names or addresses.

<sup>2</sup>Said 'yes', but could only spare half an hour not the hour required.

<sup>3</sup>Uncertain, became 'no'.

<sup>4</sup>Returned - practice not there.

<sup>5</sup>Included some who had moved job.

## Characteristics of Study Population

We gathered some basic statistical information about the individuals who took part in the study to allow us to present a profile of the study population.

### *Gender of Respondents*

	Frequency	Percentage
Male	100	66.7%
Female	50	33.3%

The exact two-thirds/one-third split was not planned.

### *Age of Respondents*

The age range of the respondents was considerable, spanning 45 years. There was a reasonable distribution overall, with no serious bunching.

### *Professional Stage*

Half of our respondents (48%) were in the middle stages of their careers. Whilst those in the early stages of their careers constituted a third, those in the later stages made up only about a fifth of respondents.

### *Time in Post*

Nearly a fifth (17.3%) of our respondents had been in their present post for one year or less, and just over half (52%) for 3 years or less. Just under a quarter had been in their present post for 8 years or more.

### *Type of Organisation*

Given the professions we chose it is perhaps not surprising that over half (52%) were working in the public sector. To these, one might add most of the GPs, whom we classified as working in professional practice.

### *Size of Organisation*

We asked how many people worked at a particular location, not necessarily the number of employees employed nationally or internationally. The range of organisation size was vast, from two people to approximately 25,000. About half (52.7%) of our respondents worked in organisations of 100 people or less. However, the size of the organisations did not necessarily coincide with the number of colleagues, or people that individuals were in contact with on a day-to-day basis.

### *Number of Professional Colleagues*

We asked how many colleagues people worked with, or had contact with, on a day-to-day basis. Again there was a wide range from none to fifty. Sixteen people (10.7%) said that they did not really have any colleagues with whom they worked on a day-to-day basis. Just under half worked with 5 or fewer colleagues on a day-to-day basis; the remainder with more.

### **Where the Interviews were Held**

We did not want all the interviews to take place in the local region. We also wanted to interview people in London to see if there was any 'metropolitan effect'. The additional Northern cities were chosen primarily because of the ease of travelling to and from Hull. Central city locations were chosen where possible, again to cut down travelling time. Because the number of obstetricians and gynaecologists in each provincial city is relatively small some were interviewed in other cities and towns.

	London	Hull	Leeds	York	Sheffield	
General practitioners	5	4	5	3	3	20
Social workers	6	5	4	2	3	20
Mechanical engineers	5	5	3	4	3	20
Solicitors	5	4	4	4	3	20
Architects	5	4	2	7	2	20
Nurses	5	7	2	3	3	20
Obstetricians & gynaecologists	13	0	4	0	5	22-28

### **The Interviews**

Although the project constituted an extensive set of case studies rather than a survey it was decided to use a semi-structured interview schedule. There were several reasons for this. The two full-time researchers had different backgrounds and the use of a fairly structured research instrument would help to minimise any interviewer differences. This factor became even more important when a seventh profession was added (obstetricians and gynaecologists) where two other researchers would have the responsibility for interviewing, making a total of four.

The use of a schedule also allowed some basic statistical information to be gathered, and ensured that all the topics were covered in most cases. Although the interview schedule was fairly structured in nature the interviewers did have some freedom to pursue themes and topics that arose during the interview, in a relatively flexible manner. Nine pilot interviews were conducted in December, and some revisions made to the schedule as a consequence.

The interviews, on the whole, took place at the individual's place of work. Where this was not possible, they usually took place at the respondent's home. They typically lasted about an hour although some were considerably longer. All the interviews were tape recorded (this had been indicated in the initial letter, and no one refused to be taped). Almost all the interviews were transcribed. Two tapes were too indistinct in parts to be fully transcribed and there were two occasions when our tape recorders let us down. However, the detailed notes made on the schedules during and after all the interviews provided sufficient backup in these cases.

### **Data Analysis**

The quantitative analysis was undertaken using (mainframe) SPSS. The analysis was quite limited, partly because only basic statistical information had been sought. Secondly, the nature of the study meant that statistical analysis could only be descriptive (a probability sample would have been necessary for any inferential analysis). The nature of the project meant that we were less interested in the quantitative than the qualitative analysis and the starting point for the latter was the interview transcripts. Each transcript was checked, referring back to the original audio-tape if something was unclear, ambiguous, or seemed anomalous. The interview transcripts were then 'colour coded' - themes, issues and topics were allocated highlight colours - and each transcript was analysed and marked in the appropriate way. One-fifth of all the transcripts were analysed by the researchers as a group, before individuals analysed the professions they had covered. The results of this analysis were then summarised on thematic grids, which formed the basis for an initial report on each profession. Those reports were then collated and condensed, in several drafts and through group discussion, to form this report.

### **The Interview Schedule**

The interview schedule was divided into five main sections. The first of these was devoted to completing and checking the *background* information on the interviewee which was on a form sent to the interviewee to be completed in advance of the interview. Following this, the *identification* stage involved putting the definition of an informal learning project (see page 8) to the person, and asking him or her to identify one or more projects carried out in the previous three years. Where no immediate response was forthcoming, the interviewer reverted to several 'warm-up' questions which would hopefully trigger some examples of informal learning.

One project thus identified was then selected, usually by the interviewee, for detailed *analysis*, and when this process was complete, the interview moved on to explore the *contextual factors* affecting that person's informal learning in general. Towards the end of the interview, the person was asked about the relationship between *formal and informal learning*, and about any other general, personal and social issues relating to the topic.

The following are the main questions (excluding probes, prompts and subsidiary questions) that were posed after the initial background and identification stages of the interview.



## PROJECT ANALYSIS

Over what period of time did you undertake the project/self-teaching?

Roughly how long did you spend, in total, learning about topic of learning project/self teaching?

Thinking about when you started the project/self-teaching, was there any particular reason for starting it?

Did you plan the project or did it evolve?

Did you draw on other people in this learning project/self-teaching?

What materials, or other sources of information, did you make use of during the project?

Were there any other sources of help, materials, people or events that you used during your learning project/self teaching?

What aspect of the project did you find most rewarding?

Were there any particular problems or difficulties?

Did you have an idea of the outcomes/results that you wanted to achieve when you started the learning project?

Did you pass on what you learned to anyone else?

With hindsight, would you go about it differently now?

Do you think this project was typical of the kind of learning projects you undertake?

## CONTEXTUAL FACTORS

Do you think your employing organisation/partnership has an effect on your informal learning?

Does your professional body affect your informal learning activity?

Is your informal learning affected by the people you work with?

Do you think your informal learning is affected by the work you do?

What about your role in the organisation? Does that affect your informal learning activity?

Is your informal learning related to the particular stage in your career that you have reached?

## FORMAL AND INFORMAL LEARNING

Which do you think is the more valuable kind of continuing education, formal or informal?

## GENERAL

Is this kind of informal learning/self teaching typical of you?

Do you think personality comes into this?

Have you ever been involved in any other kind of personal development? (probe: for example interpersonal skills, communication skills, stress management, time management)

Can you think of any other personal changes or learning which have helped you to become a better \_\_\_\_\_?

We have talked about various things that may affect your learning projects/self teaching. Can you think of any other factors that help, or hinder, your ability to undertake learning projects/self teaching?

Thinking in more general terms, can you think of any interests or activities, outside the professional setting, that may have an effect on your work as a \_\_\_\_\_?

Is there anything else that you want to add?

Is there anything you would like to ask me?

---

*Copies of the initial contact letter, background information form and complete interview schedule are available on request.*