Continuing education for general practice. 2. Systematic learning from experience

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SUMMARY. Prompted by evidence that the recently-adopted arrangements for ongoing eduction among established general practitioners are unsatisfactory, the first of a pair of papers examined the theoretical basis of continuing education for general practice and proposed a model of self-directed learning in which the experience of established practitioners is connected, through the media of reading, reflection and audit, with competence for the role. In this paper a practical, systematic approach to self-directed learning by general practitioners is described based on the model. The contribution which appropriate participation in continuing medical education can make to enhancing learning from experience is outlined.

Keywords: continuing education; behavioural objectives; self instruction; learning techniques.

Introduction

IN the preceding paper we examined the theoretical basis of continuing education.[1] While it is acknowledged that experiential learning results from a complex and ill-understood interaction between individual characteristics and external influences, the purpose of this second paper is to describe a practical approach to self-directed learning by general practitioners which uses three familiar learning media, reading, reflection and audit. By applying three steps of increasing complexity — selection, organization and interpretation — to personal experience using the chosen media, it is postulated that experiential learning, and therefore competence, will be increased. The role of participation in continuing medical education in supporting and enriching this process is examined.

Media and methods

Reading

Reading is the medium most commonly used by doctors to keep up to date.[2] However, the motivated professional faces three challenges: the selection of material; the ability to retain and subsequently access information; and the evaluation of what is read — so-called critical reading.[3] For the generalist, isolated from the educational support and stimuli of an institution and without a clear specialist focus, these challenges are formidable; the additional tasks placed upon general practice by the recent National Health Service reforms have increased these challenges significantly.

Selection. Fifteen years ago it was calculated that a new article was being added to the medical literature every 26 seconds,[4] the rate is now likely to be higher. This explosive growth of medical information, the evolving role of general practice and the time constraints under which general practitioners work, make selective reading imperative.[3] Unless doctors are able to 'winnow the grain from the chaff' information overload or important omissions are inevitable.[5] Many suggestions have been offered to enable doctors to be selective in their reading: consulting authorities about suitable publications; reading editorials and abstracts of leading journals; and using a checklist system.[3,6] Traditionally, general practitioners have employed one or a combination of methods or devised their own way of selecting what to read. However, professional experience may well be the best guide: rather than reading an article simply because it has just been published, is recommended or fits checklist criteria, the choice of reading should stem from, and relate to, a specific example of recent practice experience. In this way, the habit of reading ceases to be driven (and often overwhelmed) by the rate of publication and is transformed into the habitual commitment of time by the established general practitioner to directly relevant reading.

Organization: filing and retrieving information. It follows that doctors need an efficient filing system to store and access literature for future reference. Index card systems,[7] cut-and-paste scrapbooks,[8] and computers[9] are possible options. Computer-based information systems offer advantages in terms of storage capacity and speed of retrieval and since most practices now use a computer for other reasons,[10] the task of maintaining an up-to-date database of recent journal contents is straightforward and can be delegated to administrative staff. Commercial databases of the family medicine literature are also available on computer disk. Arrangements for journal storage and indexing in a practice library are well documented.[11]

Interpretation: critical reading. Having retrieved a publication with the aim of illuminating experience, critical reading enables general practitioners to make considered decisions as to what information to absorb and what to reject.[12] Krogh has suggested a checklist system which enables 'doctors to review medical literature quickly while remaining critical of what is read':[3] by looking at the title and the summary of an article, doctors can judge whether it is 'relevant' to their experience and therefore 'essential' for them to read. This approach was designed as a screening test in selecting papers for discussion with colleagues in the forum of a traditional journal club. However, judgement about whether a particular article is relevant and essential is best decided by the individual after critical reading stemming from immediate professional experience. On this basis a journal club becomes a forum for sharing both experience and related reading.

Reflection

Reflection is standing back and thinking about an aspect of experience in an attempt to break free from assumptions already made; examining action in the light of intention.[13] Reflection has been shown to be an effective tool in raising the awareness of professionals to the wealth of learning in their daily work;[14] it enables reflective practitioners to examine their actions and reasoning and hence become more skilful and effective.[15] The edu-

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cation literature reveals various definitions of reflection and reflective practice.[13,15,16] However, reflection is seen here as 'a cycle of paying deliberate, systematic and analytical attention to one's own actions, feelings and thinking in relation to a particular experience for the purpose of enhancing perceptions of and responses to current and future experience.'[17]

The practice of reflection is rooted in experiential learning theory which emphasizes that experience is the basis of learning but that learning cannot take place without reflection.[13,18] Kolb's experiential learning cycle suggests that learning is a sequential process involving experience, reflection, conceptualization and experimentation.[18] A problem or an event may prompt 'an inner sense of discomfort and perplexity' in the learner which stimulates him or her to think and create both meaning and alternative perspectives which may lead to change. In Kolb's view, reflection is an essential step in making sense of experience; involvement alone is not enough for learning to take place.[18]

However, in our view reflection is central to learning from experience; it should not be seen simply as one step in the experiential learning cycle but present throughout. Hence, reflection is a medium of learning involving, in sequence, the processes of selection, organization and interpretation (Figure 1).

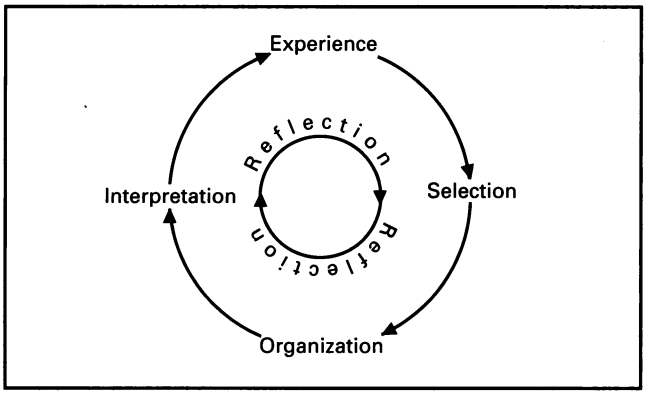

Figure 1. *Role of reflection in learning from experience.*

Selection. As a natural process human beings tend to reflect on memorable events, whether they are good or bad, and in this sense everyone is selective. However, in this form reflection is merely addressing critical incidents[19] and neglecting the larger part of experience which may contain useful lessons. Given that it is not possible to reflect on each and every facet of experience, general practitioners need to have a systematic way of incorporating 'routine' actions into the process of reflection. The key would appear to be setting aside a short time at the end of each day in order to focus on specific aspects of the day's work. Thus, a general practitioner may choose to reflect on the most memorable event(s) and a routine one, for example the first or last patient seen that day, or one facet of the operation of the practice.

Organization. General practitioners will make better use of reflection if, having focused on particular events, they then try to organize their conclusions. While this may be an entirely internal process it can also become the basis of discussion with colleagues or of a piece of writing. Writing as a process 'is simultaneously enactive (hand), iconic (eye) and symbolic (brain) in nature'.[17] By writing down the results of reflection on selected daily events, professionals fix experience, reinforce feedback, produce material for subsequent reference and, above all, increase their effectiveness.[14] General practitioners can utilize the process by keeping personal documents in the form of a journal, case notes or a diary.[20] Group discussion may enhance the process of reflection.

Interpretation. Many actions are guided by ideas, values and other assumptions that are stored subconsciously. The process of reflection establishes connections between events drawn from experience and these underlying constructs and enables us to become aware of the divergence of theory and practice in our actions.[16] This awareness plays an important part in understanding the relationship between competence and performance in specific examples of professional practice.[13] In this way general practitioners should be able to initiate and adapt to change: 'through reflection, professionals develop ideas about how to do things more effectively, and they transform these ideas into action'.[13] At the same time, self-awareness may help demonstrate to general practitioners their effectiveness and hence foster self-esteem and job satisfaction.[21]

Audit

In contrast to the other learning media, audit is now a contractual requirement of general practitioners.[22] However, experience gained in piloting the supportive infrastructure has revealed negative attitudes to audit among many general practitioners;[23] for audit to be embraced as a medium of self-directed learning will require these attitudes to be explored and reversed. Perceptions of complexity, threat and control[24] associated with audit reflect a reaction by the profession to a process which, to the majority, is both unfamiliar and externally imposed. For these reasons alone it is important that audit remains both professionally-led and directed towards educational goals. In this way it is more likely to promote the long-term professional development of general practitioners and thereby their clinical and managerial competence. The relationship between the three stages in learning from experience and the conventional audit cycle is shown in Figure 2.

Selection. Audit techniques can be applied to almost any aspect of general practice, and selection is therefore a key decision for the individual general practitioner. While clinical issues are a popular starting point,[25] often they cannot be separated from issues associated with the operational performance of the practice as a whole. In deciding on a subject, general practitioners probably make pragmatic decisions based upon the views of others in the practice, the resources available (for example, through a local medical audit advisory group) and the potential gain. It is likely that the latter is determined in part by perceived shortcomings in existing performance and fears that these may have important consequences for the individual or the practice.

While audit will often be a collaborative enterprise every general practitioner should consider the following criteria before a topic for audit is selected, either individually or collectively: Are

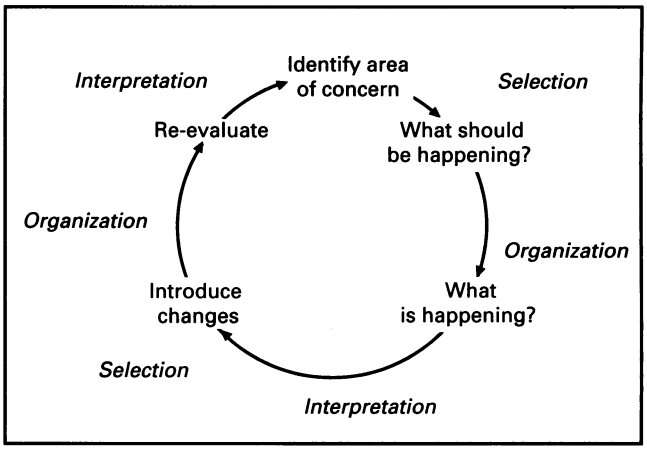

Figure 2. *Selection, organization and interpretation of experience through audit.*

the findings of the audit likely to be important to me? Will I be able to evaluate my own performance? Do I have concerns about my performance in this area? Failure of a proposed audit to satisfy these criteria should lead a general practitioner to reconsider participation and to seek other options for audit.

Organization. At one level organization can be the systematic collection of data on performance and on related standards, and at another it may involve survey and other measuring instruments and a broader process of standard setting. For the individual, much day-to-day experience can be the source of data, given the application of simple data collection documents or the more systematic use of computer databases. For example, general practitioners could choose to audit the age–sex distribution of their surgery attenders, the proportion of their workload which results from follow-up attendances, or the proportion of laboratory investigations which yield a useful result. As with reflection, audit as a medium of self-directed learning could help general practitioners to explore routine experience alongside the more dramatic aspects of their work.

Interpretation. The results of audit merit careful interpretation. Standards gathered from the literature may not reflect typical circumstances, and deviation from them is not necessarily the cue for despair or rejoicing. Rather, it should lead to positive feelings about the increased capacity to make decisions — whether, for example, to institute specific changes, to recognize the need for more data or to share the process of interpretation with others. Equally, in completing a full cycle for a particular topic the resulting re-audit may reveal performance which still falls short of the chosen standard but nevertheless demonstrates progress in the chosen direction.

Audit, then, is a process of travelling hopefully rather than expecting to arrive; for the generalist there are many journeys to be undertaken, some repeatedly. Without a personal stake in the findings of practice audit general practitioners will continue to view the process as external quality control rather than a learning medium through which the manifold aspects of their performance in the role can be explored, and their competence increased.

Role of continuing medical education

Provision

The major responsibility of continuing medical education provision is to address two sequential tasks: first, to sustain motivation among established general practitioners for self-directed learning based on experience; and secondly, to devise ways of sharing individual experience which both interpret and enrich learning. Currently, much continuing medical education for general practice is failing to address either of these tasks. While this raises wider issues about the planning and organization of continuing medical education provision in the United Kingdom, here we are concerned to identify the contribution of such provision to the self-directed learning of established general practitioners.

Given our deliberate emphasis on self-directed learning by general practitioners from experience, it is important to connect this autonomous individual activity with learning among and from colleagues. Learning alone is linked to learning with others via a continuum of activities. This extends from the most informal, often social conversation, through mentorship and small-group learning to courses in which the general practitioner participates as learner or teacher and beyond to the more strategic activities of authorship and the planning of continuing medical education. In what follows, and because of previous neglect, emphasis is placed on those learning formats which involve high levels of participation.

Participation

Medical anecdote. Almost when and wherever one doctor meets another the exchange of medical anecdotes can be witnessed. The anecdote represents one outcome of reflection on specific experience and has been studied in other professional groups.[26] Because the process of storytelling organizes and interprets reality, the term 'anecdotal' has come to be used dismissively, particularly by the scientific community.[27]

However, this standpoint neglects the value of the medical anecdote which lies, not in its objective recall of reality, but in its subjectivity for the narrator and listener. For example, the anecdote may exaggerate or diminish the prescience of the narrator, thereby revealing the key lessons which have been learned; and/or sharpen the dilemmas of the real situation in order to highlight issues of significance for the listener. Thus, the medical anecdote may be an important and neglected method of teaching/learning for established general practitioners which directly taps into the selection, organization and interpretation of experience through the medium of reflection. Use of the professional anecdote merits encouragement among all general practitioners and further study within education and research.

Facilitation and mentorship. Although the notion of facilitating adult learning seems innovative, it is not new. It goes back to the early 1940s when Rogers maintained that learning and personal growth are facilitated by 'A relationship in which at least one of the parties has the intent of promoting the growth, development, maturity, improved functioning, improved coping with life of the other. The other, in this sense, may be one individual or a group'.[28] Facilitators and mentors need to be clear about their role, which exists 'for the development of creative, adaptive and autonomous persons'.[28]

A helping relationship between facilitators, mentors and their clients is based on honesty and acceptance; it recognizes the uniqueness of individuals,[29] and their right to make decisions and participate freely in a 'purposeful, goal-directed, working interaction'.[30] Although elements of friendship are involved, there should also be inspiration of trust, an exploration of self-defeating behaviour and an encouragement of systematic thinking.[31] Recently, mentorship has been proposed as a solution to the problems experienced by young principals[32] and facilitation, in the form of 'education brokers' has been proposed as a device to encourage practice-based learning. Audit facilitators are seen as an effective way of increasing audit activity in a practice.[23,33] While this is a welcome trend, it is important to set limits to the role: continuing medical education facilitators and mentors should not 'try to get their hands on the total range of [GPs'] learning and guide it, manage it, and stamp it with their seal of approval at the end'.[34] That there are risks involved is implicit in the following quote from Tough: 'I am often asked why we should become involved at all trying to facilitate a natural process that is already reasonably successful. We might mess things up and make them worse for people... If we thoroughly and accurately understand the natural phenomenon before we try to be helpful, however, and if we try to fit into the person's natural process instead of making the person fit into ours, I believe we can be of great benefit'.[35]

Some were fortunate enough to enter general practice at a time when senior colleagues shared their wealth of experience freely, if unobtrusively. From surveys of young principals it appears that, currently, this nurturing process is less well developed.[32] While mentorship and facilitation will often need to come from colleagues outside the practice, as activities they are close to the

sort of supportive relationship between partners which should characterize a caring profession.

Reading and the journal club. Traditionally, a journal club has been a forum in which members of a peer group (who may be general practitioners, other members of the primary health team or other professional colleagues) discuss published journals as a way of sharing the burden of reading.[36] Typically, the process involves dividing responsibility between members for scanning recent issues of mainstream journals, with individuals presenting their selection of articles. It has been seen as 'an excellent solution' to the challenges facing the medical reader.[3]

However, once reading by individuals is linked to a specific aspect of experience this process needs to be amended. The key difference is that an individual will start by recalling the experience that prompted the search for a relevant article. Critical reading skills will be evident in the choice of, and in the conclusions drawn from, any article.[12] Group members share and enrich both reflection on experience and the contribution of reading to understanding its significance. In this way the potential of the journal club is extended from its origins on the green hill of biophysical certainty to encompass uncertainty typical of practice in the biopsychosocial 'swamp'[16] including issues in the organization, planning and resourcing of primary health care.

Reflection and the personal document. Although group discussion, problem case analysis and other methods have long been used in part to enhance reflection, they require resources which discourage busy practitioners from using them (preparation time, group work skills, a special setting and so on). Paradoxically, simple and practical methods like a log-diary or a personal journal, which have been shown to initiate and intensify reflection for individuals,[20] have received little attention as resources for such groups. It seems logical to propose that with the help of a group the reflection of individuals on such material will be enhanced as well as shared. Moreover, it should reinforce the integration of work and education; encourage all members of the group to participate; and reveal differences in the real world between 'espoused theory' (intention) and 'theory in use' (action) as described by Schon.[16] Seen in this way, work contributes to professional development rather than being an obstacle to it.[14]

Audit and group work. At present audit is being led by enthusiasts and by those appointed to local medical audit advisory groups. In contrast, we have given audit a central role in the experiential learning of individuals and suggested criteria which, if applied to a project, would help general practitioners to overcome negative attitudes and to perceive gain from participation.

Audit groups, for example those based on a locality,[23] are vulnerable to two risks: either they may fail to retain members who are seeking 'off the shelf' projects, or they may become an arena in which enthusiasts seek recruits to collaborative projects. The first reflects a failure to engage some general practitioners in audit as a personal activity; the second, a tendency for enthusiasts to see the significance of audit in terms of the scale of the project. Moreover, we perceive tensions between the role of audit in self-directed learning, which to us is fundamental, and the natural tendency of medical audit advisory groups to seek to address issues collectively, for both professional and NHS managerial reasons. It follows that those who convene small groups of general practitioners for the purposes of audit must be conscious of these risks and endeavour to empower and enable doctors to undertake audit which is meaningful for them as individuals. In this way, an effective small audit group will become aware of the need to hold a balance between competing claims upon its members. Having charted these difficult waters a small group can become an ideal forum for the exchange of ideas about audit. In the process ideas about selecting other topics and the methods to be employed in the organization of experience as audit, will become apparent to members of the group.

Other learning formats. Implicit in the arguments for experiential learning is a reduced role for much that is currently described as continuing education for general practice. In particular, certain lectures and courses, and the reading of particular publications would cease to have a part to play. However, participative workshops and interactive distance learning[37] would flourish where wider sharing of experiential learning is appropriate.

Explicit in our arguments is a much expanded role for provision of continuing medical education which supports and facilitates self-directed learning by established general practitioners; this will require careful consideration of the training requirements of additional tutors/mentors/facilitators. Clearly a place remains for meetings and courses which either address these training needs or the minority of issues which do not stem from individual professional experience. Since validation for the postgraduate education allowance rests with regional advisers in general practice, decisions related to the proposed changes lie in the hands of the profession.[38]

While this approach will diminish the distinction between teacher and learner, it is anticipated there will be greater numbers of general practitioners involved in writing about and discussing their work with colleagues. In this sense we might, in a few years, be experiencing a true renaissance of general practice.

Conclusion

As a result of the recent NHS reforms general practice has entered a new era in its development through being accorded centre place in the national strategy for health care.[39] To fulfil this role general practitioners need to be able to establish broadly-based competence and sustain acceptable performance. Given the evolving nature of their role and growing accountability to their patients, to management and, through reaccreditation, to the profession, increasingly general practitioners need continuing medical education which is effective and which integrates learning with daily work. The major implications of our approach to learning by the established general practitioner are three-fold. First, and in line with the principles of adult learning,[29,40,41] the place of work is the natural setting for continuing education. Secondly, experience must be captured and processed in order to become the substrate of learning. Thirdly the role of educational provision (and hence of the postgraduate education allowance) is to enhance individual learning through methods which draw upon and share experience between established general practitioners.

Fortunately, general practice long ago recognized the importance of participatory education and has pursued learner-centred education in vocational training and other activities.[42] Indeed, general practice can claim to be among the first branches of medicine to introduce, albeit for a minority of general practitioners, innovative learning methods such as random case analysis, video consultation analysis and audit. While these methods are influencing basic medical education[43,44] and vocational training,[45] they have not proved generalizable among established general practitioners. The challenge that remains is to motivate and enable all established practitioners to make use of valid and ubiquitous learning opportunities in order to maintain acceptable levels of performance throughout professional life in a changing environment. This challenge is both personal and professional: while the fundamental shift needed in continuing medical education must stem from changes in the way we as general practition-

ers perceive and exploit learning opportunities, much more could be done by the profession and particularly by those with statutory responsibility. For the practice to become the natural learning environment will, in many cases, require help in the form of local facilitators, trained, deployed and supported by professional networks.

Unfortunately, on the basis of three years' experience, the postgraduate education allowance arrangements, by encouraging irrelevant or even harmful educational activity among established general practitioners, appear to be counterproductive. However, some individual, practice-based small group and distance learning is also being approved for the allowance and could contribute to experiential learning along the lines suggested here. Such arrangements are to be welcomed but will require new sophistication in the monitoring of compliance with the terms of the postgraduate education allowance as indeed will any system of reaccrediation based on educational input.

Given the present state of our knowledge, a process of reaccreditation for the role of general practitioner based on valid and reliable assessment of competence is not possible. Moreover, our model of self-directed learning suggests that uptake of continuing medical education may not be a valid measure of competence-oriented learning by general practitioners. In the absence of acceptable definitions of competence, what is needed for valid reaccreditation is a reliable and feasible method of assessing learning from experience.

Finally, the profession badly needs empirical research on the effectiveness of particular techniques of experiential learning in increasing the competence and maintaining the performance of established general practitioners. Such work is in progress in Liverpool and will form the basis of subsequent publications.[46]

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