The practice of medicine implies life long learning, and the modern health service expects career grade doctors to engage in a programme of continuous professional development.1 Doctors are a highly motivated group, and so the expectation that they will participate seems well founded. For those in the training grades, professional development is supervised and made explicit within post-graduate medical education and training.2-4 Seniors have traditionally planned their professional development unassisted and in isolation. Most manage this with ease and confidence, moved forward by the day to day challenges of clinical practice, health service management, teaching, and research. However, a few do too little in preparing for the changes of their working lives, and as a result are resistant when confronted with new ideas or novel ways of doing things.

In responding to the needs of a patient, a doctor draws upon all of his or her wisdom and life experiences. These resources far exceed the confines of medical knowledge or transferable clinical skills. For doctors, professional conduct, core beliefs, and personal integrity are inextricably interwoven.5 This being the case, professional development is contained within personal development. Personal development is part of the process of long learning and follows basic educational principles. It shares with education a common philosophy, ethical framework, and psychology, as well as practical components. This article reflects on the commonality between the two, with reference to the needs of senior doctors. The parallel helps to make the learning processes of personal and professional development more explicit, and allows us to see where components such as reflection, mentoring, continuous medical education, and appraisal fit in.

The education cycle
Education begins by asking a question (fig 1). This entry step into the cycle is crucial in a number of ways. First, learning is facilitated when the process is initiated and owned by the learner. This concept is at the heart of andragogy, the theory of so called “adult” learning.6,7 Taking personal possession of an inquiry demands that currently held knowledge is re-examined and its boundaries and limitations defined. Internal reflection prepares for step 2, the collection of external, objective information, and puts it into context. Information out of context is usually unmemorable. In step 3, new information is assimilated, processed, and given a value, which in turn leads to a change in knowledge. Old concepts are either reinforced or altered, sometimes radically. It is a one way process. A well accepted or successful expansion of knowledge is likely to spark off the next question, and so the cycle repeats. For this reason the two dimensional image of learning is inadequate and many would prefer to describe education as an expanding spiral, taking the learner through ever widening horizons.8

Confirmation of a previously held view is a valid end point of learning. Education, however, has the power to change the perception and knowledge of the individual, and therefore has an ethical dimension. In general, one regards the process of learning as honourable and empowering; knowledge is universally thought of as a good thing. However, changed perception can be hard won, even painful. Anybody at a particular time may find neutral, unsolicited external information to be intrusive or harmful. All teachers, including the educators of apparently robust senior doctors, need to work sensitively with the “crooked timber of humanity” (see appendix).9 Nevertheless, by taking responsibility for the reflective, questioning entry step into the cycle, the mature learner is better able to adapt to the changes that will follow. In doing so, permission is given to undertake the risk of change. This philosophical educational point comes into sharp focus when applied to personal development and the role of appraisal.
and intrinsic factors. Extrinsic factors—for example, might come from cultural pressures within the health service: obligation or reward; a mixture of sticks and carrots. Intrinsic factors are generally more effective and durable than extrinsic ones, and are thus rated more highly by teachers. Moreover, there is a hierarchy within intrinsic motivation. The motivation of loyalty to a colleague, or the sense of belonging to an organisation, ranks below that of self esteem. Higher again is “self actualisation”, the need to know, understand, appreciate, or create. In practice, people are driven by various internal and external pressures all at the same time. This analysis is well reviewed by Rogers and is as relevant to personal development as it is to education. Intrinsic, high level motivation will be promoted if the individual finds that the investment in learning or development is personally rewarding, creating a positive feedback loop.

Probably one of the greatest blocks to personal development is that the crucial entry step demands time for reflection; not a generously available commodity in today’s health service. Personal reflection therefore needs to be built into the time table of work. It also needs to be structured so that there is a comprehensive assessment of past progress on which to consider future needs. Check lists are available to assist with this process and some have been adapted to computer programmes such as XXEN (3E Development Ltd, Cambridge, UK). Not everybody will follow the same approach. Some will find the reflective process to be enhanced by maintaining a personal diary, portfolio, or a log. Some will benefit from contact with a mentor, a senior colleague whose experience and wisdom extends beyond the person seeking guidance. This relationship might be particularly valuable for newly appointed consultants. Others will find that their thinking is facilitated by discussion with peers in the same specialty; a one to one “buddy” system or a small group meeting of equals. Having to voice one’s thoughts to another sympathetic and trusted colleague clarifies thinking and injects reality.

**Personal development**

Personal development too can be seen as a cycle or spiral (fig 2). The similarity with education is striking. Both are entered through a process of internal analysis, reflection, and questioning. In the same way that the learner uses this step to take responsibility for any change in knowledge base, in personal development the individual gives authority for the changes that will occur in performance and attitude. Personal development can be encouraged and assisted, but because it has the potential to alter self perception and outlook, those who would facilitate the process in others need to do so within ethical constraints.

The second step in personal development deals with external information, just as it does in the education process. This includes information sought out by the individual, such as critical reading, as well as formal, collective activities, such as the rather didactic events of some present day continuous medical education, advanced practice, or management training. Importantly, objective feedback on current performance and appraisal belong here. It is not the purpose of this article to comment in detail on senior medical staff appraisal, but illustrative points can be drawn from the education cycle analogy. The purpose of appraisal is to provide information that is valuable to the person in terms of growth and maturity. It should not be confused with assessment, which is a measure of performance against a standard. From time to time, appraisal is bound to show up weakness in a person that he or she may find difficult to deal with. If the initiative for appraisal remains with the mature learner, to pursue the andragogic analogy, these difficulties are more likely to be overcome, and appraisal seen as a productive activity.

**Promoting personal development**

How can the important self directed entry into personal development be promoted? Within education the necessary motivation has been explored and described in terms of extrinsic and intrinsic factors. Extrinsic factors—for example, might come from cultural pressures within the health service: obligation or reward; a mixture of sticks and carrots. Intrinsic factors are generally more effective and durable than extrinsic ones, and are thus rated more highly by teachers. Moreover, there is a hierarchy within intrinsic motivation. The motivation of loyalty to a colleague, or the sense of belonging to an organisation, ranks below that of self esteem. Higher again is “self actualisation”, the need to know, understand, appreciate, or create. In practice, people are driven by various internal and external pressures all at the same time. This analysis is well reviewed by Rogers and is as relevant to personal development as it is to education. Intrinsic, high level motivation will be promoted if the individual finds that the investment in learning or development is personally rewarding, creating a positive feedback loop.

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**Measurements**

Educators have agonised over the most appropriate ways of measuring the educational process. Whereas it is relatively easy to quantify teaching activity, assessing the extent of knowledge is complex. It is even harder to determine the true output of the education process—that is, reinforcement or change in knowledge base. The Royal Colleges set entrance examinations for membership or fellowship, but after that they use easily quantifiable activities, such as time spent in recognised continuous medical education as a surrogate for measured progress. This misses the point. There is evidence that attendance at continuous medical education meetings per se does little to change the performance of consultants, unless it is linked to practice reinforcing strategies. Re-examining the knowledge base of consultants at intervals would be a huge and costly exercise that might define a standard, but not show whether they had progressed in their performance to match the demands placed upon them. Similar difficulties occur in attempting to measure personal and professional development.

Can changes in performance be measured in the personal development cycle? As far as the
individual is concerned the answer is “yes”. Each cycle re-engages the process of reflection and self analysis (fig 2). There is an examination of the progress made and an acknowledgement of any failures. By keeping a written record of one’s personal development, and therefore not trusting to fickle memory, a clear picture emerges. Most people will be far more judgmental about themselves than would an external agency.

In the present political climate, clinical practice is under scrutiny, and an assurance of quality is demanded. Self regulation of the medical profession and the measurement of consultant performance have become contentious issues. Counting continuous medical education activity might placate those who demand tighter regulation, but not for long. Self managed records of personal development are appropriate and potentially far reaching measures, dealing with real end points of the process and preserving motivation. Although some of this information is private and would not be disclosed, a component dealing with professional matters might become a valuable public measure of the good standing of a doctor. Will the medical profession adopt this approach? If so, can it be done, researched, and tested in time to assuage those who think that regulation belongs outside the profession altogether?

Where do we go from here?

Professional development is an integral responsibility for doctors at all levels of seniority, and safeguards the quality of health care. Much can be done to make the process explicit and attractive. It is helpful to see it primarily as an educational process, and part of the holistic development of the doctor. The analogy with the principles of adult learning emphasises the importance of the individual’s motivation and the need for reflection. However, this needs to be supported at many levels, by clinical directors, trusts, and by the postgraduate deans. The Royal Colleges have a vital role. For example, within the academic board of the Royal College of Paediatrics and Child Health, the subcommittee for continuous medical education has now been renamed the subcommittee for continuous professional development. The change in title is important, indicating that its remit has moved on. The bean counting exercise recording hours of teaching can be seen as politically necessary but a temporising solution. The Colleges have much higher responsibilities to their fellows. They are in the business of promoting what one might call evidence-based education—that is, educational methods that are confirmed in their ability to improve the outcome of learning. Giving positive feedback—for example, is a well tested way to motivate and to change the learning outcome in an adult.19 20

How this, and other components of appraisal, can be developed alongside clinical practice are important considerations for those leading the profession at this time. Mentors could be trained and commissioned14 peer review and buddy systems researched. Methods and skills in self analysis can be taught or written about. Computer programmes, already in existence in generic form, could be developed for specific groups of colleagues to assist in both reflection and the documentation of their development plans.

These are radical proposals and they deserve widespread and critical debate. Ideally, they should be adopted only after careful evaluation and with supportive evidence. The immediate political pressure to do something now to demonstrate consultant performance is a stimulus, but must not be used as an excuse for omitting the necessary research. Any enforcement of unconsidered or valueless regulatory schemes is likely to damage the very self motivation on which professional development depends.

Conclusion

Personal and professional development operate in a similar way to education, have similar end points, and are encompassed by the same ethical framework. This insight illustrates where mentoring, formal continuous medical education, and appraisal belong. The individual doctor maintains motivation and responsibility for the process by engaging the cycle through reflection and self analysis, the essential entry step. The Royal Colleges have a vital role in researching, advising on, and promoting personal and professional development on behalf of their members. Self maintained records of personal development might be the best way to facilitate and demonstrate the professional advancement of career grade doctors. Although the immediate benefit will be to the doctors who undertake it, personal development can only support quality assurance. This may be the way for the medical profession to be regulated.

Appendix

In his essays on the history of Western thought, Isaiah Berlin draws out the plurality of two world views. One, the academic approach, is based on the idea of a single external verifiable truth, sought out and applied by experts. This is in continuous tension with personally held internal truths, based on the unique experiences of the individual, from which derive idiosyncratic powers of originality and creativity. Modern society and its citizens live within this tension. Here lies the debate about how much doctors should be assessed and controlled, or operate with clinical freedom.

Although a personal view, this article is submitted on behalf of the members of the Royal College of Paediatrics and Child Health subcommittee for continuous professional development, who provided valuable criticism both in discussion and at the draft stage. They are Professors I Booth and M Weindling, and Drs M Little, J Shield, G Soulié, and A Thomson. The author is also grateful to Dr D Wall, Mr D Morley, and Dr MH Taylor for useful suggestions. Special thanks are accorded to Dr Z-J Playdon for her good counsel in matters of education and professional growth.

8 Harden RM, Davis MH, Crosby JR. The new Dundee medical curriculum: a whole that is greater than the sum of its parts. Med Educ 1997;31:264-71.
CORRECTION

Patterns of care and survival for children with acute lymphoblastic leukaemia diagnosed between 1980 and 1994


There were some data points missing from table 4 under the column headed “O” (After 2 years). The corrected table is printed in full below.

The error is regretted.

Table 4 Survival of treated children categorised by age, sex, white blood cell count, immunophenotype, and Down’s syndrome status

<table>
<thead>
<tr>
<th>Age at diagnosis (years)</th>
<th>5 year % survival (SE)</th>
<th>All children</th>
<th>First 3 months</th>
<th>3 months to 2 years</th>
<th>After 2 years</th>
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<tr>
<td></td>
<td>O E p Value</td>
<td>O E p Value</td>
<td>O E p Value</td>
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<tr>
<td>Age at diagnosis (years)</td>
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<td></td>
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<tr>
<td>0</td>
<td>37 (3.8)</td>
<td>107 61.6 &lt; 0.0001</td>
<td>24 11.6 &lt; 0.0001</td>
<td>58 32.8 &lt; 0.0001</td>
<td>25 17.4 &lt; 0.0001</td>
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<td>1–4</td>
<td>81 (0.8)</td>
<td>584 738.9</td>
<td>75 80.2</td>
<td>163 231.1</td>
<td>346 427.5</td>
</tr>
<tr>
<td>5–9</td>
<td>74 (1.2)</td>
<td>433 422.7</td>
<td>36 50.5</td>
<td>162 160.6</td>
<td>235 211.6</td>
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<tr>
<td>10–14</td>
<td>61 (1.7)</td>
<td>363 263.8</td>
<td>47 39.7</td>
<td>156 114.6</td>
<td>160 109.5</td>
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<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>73 (0.9)</td>
<td>919 837.6 &lt; 0.0001</td>
<td>94 105.8 0.064</td>
<td>323 313.8 0.40</td>
<td>502 418.5 &lt; 0.0001</td>
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<td>Female</td>
<td>77 (0.9)</td>
<td>568 649.4</td>
<td>88 76.2</td>
<td>216 225.2</td>
<td>264 347.5</td>
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<td>White blood cell count (x10^9/l)</td>
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<td>0–49</td>
<td>80 (0.7)</td>
<td>928 1068.7 &lt; 0.0001</td>
<td>102 116.0 &lt; 0.0001</td>
<td>267 339.9 &lt; 0.0001</td>
<td>559 611.3 &lt; 0.0001</td>
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<tr>
<td>50+</td>
<td>57 (1.5)</td>
<td>518 377.7</td>
<td>72 59.4</td>
<td>260 183.5</td>
<td>186 134.3</td>
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<tr>
<td>NR</td>
<td>70 (4.2)</td>
<td>41 41.6</td>
<td>8 6.6</td>
<td>12 15.6</td>
<td>21 20.4</td>
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<td>Immunophenotype</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common (incl. pre-B)</td>
<td>81 (0.7)</td>
<td>847 971.6 &lt; 0.0001</td>
<td>80 109.0 &lt; 0.0001</td>
<td>213 315.1 &lt; 0.0001</td>
<td>554 547.4 0.44</td>
</tr>
<tr>
<td>T cell</td>
<td>51 (2.1)</td>
<td>286 214.7</td>
<td>42 27.2</td>
<td>173 106.9</td>
<td>71 80.7</td>
</tr>
<tr>
<td>B cell</td>
<td>51 (5.9)</td>
<td>38 18.8</td>
<td>13 3.3</td>
<td>20 6.6</td>
<td>5 8.8</td>
</tr>
<tr>
<td>Null</td>
<td>56 (3.2)</td>
<td>120 107.4</td>
<td>17 19.2</td>
<td>63 51.6</td>
<td>40 36.7</td>
</tr>
<tr>
<td>NR</td>
<td>71 (1.9)</td>
<td>196 174.5</td>
<td>30 23.3</td>
<td>70 58.8</td>
<td>96 92.4</td>
</tr>
<tr>
<td>Down’s syndrome</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>57 (5.7)</td>
<td>39 15.6 &lt; 0.0001</td>
<td>9 2.2 &lt; 0.0001</td>
<td>15 4.8 &lt; 0.0001</td>
<td>15 8.6 0.041</td>
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<tr>
<td>No</td>
<td>75 (0.6)</td>
<td>1448 1471.4</td>
<td>173 179.8</td>
<td>524 534.2</td>
<td>751 757.4</td>
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The expected numbers of deaths and log rank tests for each variable were based on a stratified analysis allowing for all four other variables. O, observed deaths; E, expected deaths; P, two sided p value from log rank test; NR, not recorded.
Education and personal development: a reflection

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