

**Theoretical Foundations**

## **Physician Teach Thyself: The Place of Self-Directed Learning in Continuing Medical Education**

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**Abstract:** *The theme for the Nineteenth Annual Meeting of the Alliance for Continuing Medical Education was Creating a New CME Paradigm: Seizing the Opportunities within the Health Care Revolution. Among seven global objectives, it was intended that participants should (1) understand how health care changes might affect the provision of CME and (2) increase the options available to CME practitioners to enhance their role as facilitators of change in the new health care paradigm. This article contributes to the accomplishment of these two objectives. It begins by discussing the need for self-directed learning in the health care professions, particularly in continuing medical education. It is argued that self-direction can help to provide flexible, responsive, and relevant CME. The article then turns to a consideration of what is meant by the term paradigm shift and, using self-care as an analogy, it is argued that self-direction, if embraced and implemented wholeheartedly, would represent a far-reaching change to all aspects of medical education and of continuing medical education.*

**Key Words:** Education, medical, continuing; education, professional, continuing; paradigm shift, physicians; self-care, self-directed learning

The theme for the Nineteenth Annual Meeting of the Alliance for Continuing Medical Education was *Creating a New CME Paradigm: Seizing the Opportunities Within the Health Care Revolution*. According to the conference brochure, "this theme was developed from the changing realities of health care and from the dissatisfaction expressed by many continuing medical education (CME) providers with their current role and status within the health care environment."<sup>1</sup>

One of the changes within CME is the move toward acknowledging the central importance of self-directed learning and facilitating and accrediting activities independently undertaken by medical practitioners as part of their professional responsibility to maintain currency in knowledge and skills. It is the purpose of this paper to explore

this movement and, in particular, to examine its potential as an alternative to what might be viewed as the current dominant paradigm of CME.

In April 1988, a Committee of Inquiry, which had been set up in January 1987 to look into medical education and the medical workforce in Australia brought down its final report. One of its many conclusions was "...that more integrated and interdisciplinary programs are needed and that the emphasis should be changed from teaching to inquisitive learning, in order to provide the basis for a lifetime of self-directed continuing education and to avoid curriculum overload with ill-connected information."<sup>2</sup> (The italics are mine.)

In arriving at this recommendation, the Committee was merely restating a conviction held to be true in virtually all areas of professional training<sup>3</sup> and was echoing a very similar finding in the Association of American Medical Colleges' *Report of the Panel on the General Professional Education of the Physician and College Preparation for Medicine (the GPEP Report)*.<sup>4</sup>

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According to at least one commentator on the GPEP Report, the “most important concept emphasized that physicians must be learners throughout their careers and that the learning must be self-directed, active, and independent.”<sup>5</sup>

From the point of view of someone engaged in higher education, but outside medical education, such an observation seems eminently reasonable. It is almost a truism to say that the rate of growth in knowledge in most technical areas, including medicine, is so great that no one can hope to learn in a few years at university all that they will need to know in a lifetime of practice. However, it is also intuitively apparent that no amount of formally organized continuing education, no matter how systematically planned or innovatively delivered, could hope to meet the diverse learning needs of all practitioners in every situation. Accordingly, practitioners’ own individual and self-directed learning efforts must be the cornerstone of any program of continuing medical education.

### What Is Self-Directed Learning?

At one level, all learning is self-directed. What individuals value, and what they choose to take from any educational encounter (or indeed from any life experience) is ultimately a matter of personal choice. Thus, even a person who is enrolled in a highly directive, teacher-centered program is engaging in self-directed *learning*, when they actually learn something.

But when educators talk about self-directed learning, they usually have in mind something a little different. In the literature, self-directed learning is customarily contrasted with teacher-directed learning. It is exemplified by the fact that the learner decides what, how, when, and where to learn. It is an open-ended form of inquiry, unpredictable in its course or its outcomes, which probably has more in common with curiosity-driven research than with alternative methods of teaching. As a radically different educational approach, in which all the major prerogatives and decisions are

in the hands of the learner, it embodies a conception of empowerment and personal autonomy not commonly associated with other forms of learning.

While self-directed learning in general enjoys a highly positive image, it is not without its critics. Some more conservative educators, mistakenly believing that learning can only occur as a consequence of teaching, argue that self-directed learning is misguided, even subversive. In a classic paper entitled *Participative Education and the Inevitable Revolution*, Wight<sup>6</sup> deals with some of the objections raised by traditional educators. One, for instance, described giving learners responsibility for their own learning as “just damned rhetoric that can lead to nothing but mischief,” and went on to say that “one does not put lunatics in charge of the asylum,” calling this “the fool for a master school of education.”

Although this represents an extreme version of the opposition to self-direction, there are plenty of other more moderate reservations that one can find expressed in the literature. Some are concerned that, because of lack of familiarity with the subject being studied, the self-directed learner may learn things that are incomplete, inaccurate, or out-of-date. Others express concern that self-directed learning is too individualistic, that it is inefficient in that learners are simply “left to pick things up” for themselves,<sup>7</sup> or that it is unduly time-consuming as it may involve learning things slowly and laboriously that might be more quickly mastered through being taught. Others again may express the (somewhat unfashionable) concern that educators will become superfluous if all learning is to be self-directed.

It is argued here that self-directed learning will never entirely replace direct instruction, and that many of these misgivings are more imaginary than real, being based either on a lack of familiarity with the concept, or a misplaced concern about its inappropriate use. In particular, there is nothing to say that self-directed learning must be solitary, or that it must be independent of professional assistance. This is a theme to which I will return later in this paper.

### **How Does This Relate to Continuing Medical Education?**

Continuing medical education has a very long and distinguished history. There is evidence to suggest that doctors have traditionally been preoccupied with the currency of their skills and knowledge. For instance, in his marvellous book *Venice: The Biography of a City*, Hibbert writes of the long-standing attractions of Venice as a city: its shrines, its famous Arsenal, its renowned hospitality. He goes on to write:

A few were even drawn to Venice by the highly skilled doctors who practised in a city which had had a government-sponsored School of Medicine since 1368 and in which, since 1335, there had been a team of physicians and surgeons whose salaries were paid by the state and whose professional skills, like those of all other doctors licensed to practice, were presumed to be enhanced by their compulsory attendance at annual courses in anatomy.<sup>8</sup>

It would be presumptuous for me to be drawn into a controversy as to whether attendance at courses should be compulsory, or even whether anatomy is the first and most vital element in CME! The point remains, however, that for a long time medical practitioners have been concerned to keep up-to-date. Moreover, public confidence is enhanced, when it is known that doctors undertake some sort of regular, systematic, CME.

I have every reason to believe that doctors have always seen it as a vital part of their professional responsibilities to attend lectures, read journals, participate in meetings and conferences, and undertake other forms of upgrading, refreshing, and retraining. In that sense, self-directed CME is hardly new.

What is new, however, is the push to include such activities in the publicly observable domain; to verify and accredit them as part of the accountability that the profession owes to the public. Clearly, this is an issue of vital concern at this conference; in addition to this particular article, a number of others deal with changing patterns of

CME, while several focus specifically on aspects of self-directed learning.<sup>9-13</sup> It seems to me that the move toward greater recognition for self-directed CME has two major implications: what it means for control over the quality and amount of self-directed learning undertaken by individual practitioners, and what it implies for the changing role of the continuing medical educator. Each of these will be considered in turn.

**Recording and accrediting self-directed learning.** In common with other similar bodies in the United States, Canada, and elsewhere, the Royal Australasian College of Physicians has recently introduced a program called the *Maintenance of Professional Standards (MOPS) Program*. It requires Fellows of the College to accumulate credit points over a 5-year cycle, drawing on activities in each of the following five categories: (1) accredited meetings, (2) accredited workshops and seminars, (3) accredited learning projects, (4) accredited self-assessment, and (5) practice-related CME activities.<sup>14</sup> While activities such as accredited meetings, workshops, and seminars are familiar standard ways of maintaining currency, of particular interest to me are categories 3 and 5, which involve self-directed learning activities, often in clinical or work-related settings.

*Accredited learning projects* (category 3) are described as follows:

These projects allow Fellows the opportunity to pursue an area of interest in a structured and systematic manner. The key features of these projects are that they are learner-initiated and planned, have clearly specified educational objectives and are formally evaluated. Projects should be carefully planned to meet these criteria and should indicate the intended time of completion. Guidance in such projects may be sought at any time from the Director of Education. Fellows commencing a project should seek approval in advance from the Director of Education or local MOPS contact person.<sup>14</sup>

Although self-directed and individualized, such activities still have many of the hallmarks of formal, structured, training programs.

*Practice-related CME Activities* (category 5), on the other hand, are defined as follows:

...activities in which clinicians are involved during their day-to-day practice, which contribute to their maintenance of professional standards. Usual activities in this category would include the reading of appropriate journals, undertaking literature searches, involvement in journal clubs, attendance at grand rounds, local clinical meetings, and teaching rounds.<sup>14</sup>

In both cases, there is a maximum of flexibility in the types of activities that may be counted and, likewise, in the sorts of evidence that may be presented. It is clear that self-directed activities are regarded as legitimate—even vital—building blocks in the whole structure of CME.

**Changing role of continuing medical educators.** Given the status, accessibility, and increasing acceptability of such learning, continuing educators could be forgiven for worrying that their days are numbered and that very soon they will be rendered superfluous by the self-directed learning activities of practitioners. This is unlikely to happen. At one level, it can be preempted by the simple expedient of prescribing minimum and maximum numbers of credit points that may be gained through these sorts of self-directed learning activities. In this way, it is possible to ensure that formally organized and accredited workshops and seminars are still represented in the 5-year cycle and, accordingly, that continuing medical educators are not yet out of a job.

On a more serious note, continuing medical educators perhaps need to develop new ways of assisting their clients (i.e., their colleagues) to learn. Such an approach is described by Manning and others in an article entitled *A Method of Self-Directed Learning in Continuing Medical Education with Implications for Recertification*.<sup>5</sup> In this program, 91 physicians participated; each was required to develop at least one “learning plan” or “contract” with the following components:

- a goal or statement of what is to be learned;
- resources and strategies including types of material required;
- evidence of accomplishment;
- criteria and means of evaluation.<sup>5</sup>

According to the authors, “completing a learning plan helps physicians examine their educational needs and define their goals rather than proceed with vague notions about what is to be gained from the experience. The plan can also provide evidence of accomplishment to state boards, medical societies, and medical speciality boards.”<sup>5</sup>

For each project, a small team was assembled consisting of the physician, “a clinical librarian who served as information broker and program coordinator; two part-time education specialists who helped the physicians develop their learning plans, facilitated discussion in the groups, and recorded group progress; and an evaluation specialist who documented and evaluated the project.”<sup>5</sup>

Of those participants who responded to end-of-program questionnaires, 52% indicated that self-directed learning was equally as effective as CME programs, and 45% rated it superior. In addition, 89% “would recommend the project to other physicians” and 51% stated that “it would have been more difficult to achieve their goals through traditional approaches.” One “serendipitous outcome” of the process was, according to the authors, that “69% of participants reported they had become aware of medical resources that they previously did not know existed.”<sup>5</sup>

Despite these generally favorable findings, there is no suggestion in the article that self-direction will ever—or should ever—replace “conventional” CME in its entirety. The authors note:

No single method of continuing medical education can accommodate the learning styles and learning needs of all physicians as well as the multiple purposes of continuing medical education itself. Courses, conferences, and general reading are useful in giving the physician an understanding of the current state of medicine. These activities provide a framework on which to build,

but they are usually not specific enough to permit the physician to apply information directly in his or her practice. For specific information on a particular patient, the physician does best to consult a colleague, search a medical textbook, or read pertinent journal articles.

Our method is most applicable to the review of specific topics, such as principles of diagnosis and management of depression, hypertension, or acid peptic disease.... We therefore see self-directed learning, as described here, to be a valuable addition to traditional continuing medical education and a possible means to link education to individual practice and perhaps even a part of the recertification process.<sup>5</sup>

It would seem, then, that there is definitely a place for self-directed learning and, as previously stated, that it can usefully form a cornerstone of attempts to provide comprehensive, flexible, timely, and relevant continuing medical education while, at the same time, reassuring others inside and outside the profession that individual practitioners take their continuing professional education seriously. It is also apparent that this trend does not necessarily spell the end of "traditional" or "conventional" CME, but that it does provide an opportunity—indeed an imperative—for medical educators to reinvent themselves as educational brokers and facilitators of learning, rather than as mere transmitters of knowledge.

### **A Change in Paradigms?**

All of this offers a healthy prognosis for self-directed continuing medical education, but it raises some intriguing questions about whether or not this is really a new paradigm, or just a modification of existing structures.

The term paradigm is a much overused one, which owes its popularity largely to a brief but scholarly book by Kuhn entitled *The Structure of Scientific Revolutions*,<sup>15</sup> in which the author argued that "normal science" proceeds largely within the confines of a widely agreed frame of reference or "paradigm." Most scientists, Kuhn argued, spend their working lives "sweeping out the corners" of

the dominant paradigm, rather than questioning its validity. However, over time, an accumulation of anomalies—findings that cannot satisfactorily be explained within the dominant paradigm—prompts people to search for a new explanatory system. When one is put forward that both explains the anomalies *and* satisfactorily subsumes all current knowledge in the domain as well, a "paradigm shift" usually occurs. This, however, is by no means an instantaneous process; many people have a vested interest in maintaining a commitment to the current paradigm—the *status quo*—indeed it may take a full generation or longer for a new paradigm to supplant an old one and, in turn, to become dominant.

In preparing this article, I was struck by what seemed to me to be relevant parallels between the move toward self-care in medicine and toward self-direction in CME. Accordingly, it might be instructive to examine the assumptions underlying these two movements and, in particular, to consider whether the relationship between self-care and the dominant medical paradigm might hold lessons for the relationship between self-directed learning and its educational counterpart.<sup>16</sup>

What, then, is self-care, and what are the features of the dominant paradigm to which it might be seen as an alternative? To answer these questions, I examined a few definitions of self-care. This is what Kemper says about the concept: "Medical self-care stresses how to recognize common problems, what to do when they occur, and when and where to seek appropriate help.... Medical self-care education can be defined as organized efforts to help generally healthy individuals develop skills, knowledge, and motivation for preventing, recognizing, and managing common health problems which may affect themselves or their families."<sup>17</sup> (Fig. 1.)

Levin, Professor of Medicine at Yale and considered by some to be the "father" of self-care writes: "Self-care is a process whereby a layperson functions on his or her own behalf in health promotion and prevention and in disease detection

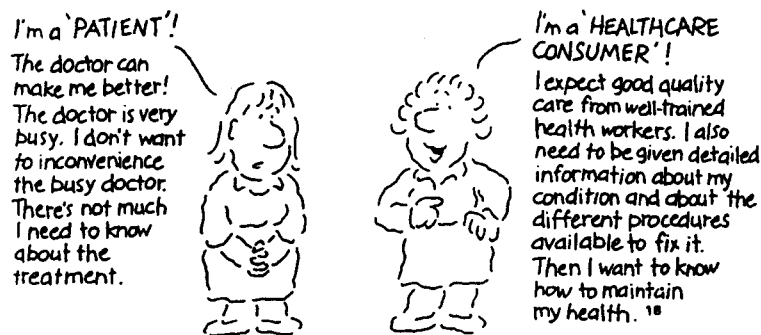


Figure 1 Patient or Health Care Consumer?

and treatment at the level of primary resource in the health care system.”<sup>19</sup>

And in their *Textbook of Medical Practice*, Fry and Byrne write: “Self-care takes place outside the established medical system, distinguishing it from primary care, or first level entry with medical care system. There are four roles encompassed by the concept: (1) health promotion, (2) disease prevention, (3) self-diagnosis, self-medication and self-treatment, and (4) participation in professional services.”<sup>20</sup>

It seems to me that if we substitute “self-directed learning” for “self-care,” and “education” for “health promotion,” the concepts appear very close indeed. Patient responsibility is predicated on the notion of personal empowerment, on an acknowledgment of the rights of individuals to self-determination in relation to matters that intimately affect them (i.e., their own health), and on a redistribution of the asymmetrical power relationship between doctors and their patients. In this sense, it appears to have much in common with self-direction in learning: both seek to shift to the beneficiary the burden of responsibility for appropriate action; both acknowledge the highly context-specific nature of each person’s individual situation; both recognize that it is the prerogative of the individual to take responsibility for those aspects over which he or she has control; and both assume that people’s ability to be self-responsible can be enhanced through educational interventions. Self-directed learning may

even, in some senses, be seen as involving the same, or at least analogous, steps as medical self-care, viz:

- self-assessment;
- self-monitoring;
- self-treatment; and
- compliance.

While there may be intriguing points of practical and ideologic convergence between self-care and self-directed learning, it is still necessary to examine whether individually they represent alternatives to some other dominant orthodoxies and, if so, whether those existing paradigms are themselves parallel.

According to De Jong,<sup>21</sup> self-care is a reaction against an excessively “medicalized” model of health care; a deliberate attempt to restore individual control in a context where many had come to “hold that the physician is the expert and the ‘patient’ is a passive cooperator in the process.”<sup>22</sup> What, then, are the features of this medical model to which self-care is posited as an alternative? According to De Jong, the following implicit assumptions underlie “the medical model”:

- the physician is the technically competent expert;
- the physician is the principal decision maker for the care of the patient;

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- the “patient” assumes the “sick role,” which requires him or her to cooperate with attending medical practitioners;
- the main purpose of medicine is the provision of acute and restorative care;
- illness is primarily treated through the use of clinical procedures (e.g., drug therapy and surgery); and
- illness can be diagnosed, certified, and treated only by trained professionals.<sup>21</sup>

Clearly, this is a caricature, a gross oversimplification designed to emphasize and highlight the differences between the conventional paradigm and the self-care model, which is offered as an alternative. Like all such caricatures, it stresses some features and plays down others; there would be very few medical practitioners who would subscribe unconditionally to the “medical model” as presented here.

As an outsider to medicine, and to medical education, it is not clear to me whether the assumptions of the medical model are under attack and, if so, whether this constitutes part of the “Health Care Revolution” referred to in the title of the conference. What is fascinating, however, is the way in which self-care, ostensibly advocated as an antidote to the “medical model,” seems to have been co-opted by it instead. Gantz observes:

Although many physicians are interested in wellness, the medical self-care model is typically driven by symptoms or problems. The role of the expert (the physician) is to direct actions that must be undertaken by patients to achieve therapeutic outcomes identified by physicians as consistent with the latest in medical knowledge. Patients are expected to change behaviors in order to carry out medical recommendations (i.e., compliance). The physician’s perspective usually takes precedence over the patient’s perspective. In other words, emphasis is placed on the need of the patient to adapt or modify behavior in order to deal with a disease or condition, rather than the modification by the physician of treatment recommendations to accommodate the patient.<sup>23</sup>

If self-responsibility is seen as a reaction against the excessively “medicalized” model of health care, yet it has ended up being an accessory to that very approach, is it not possible that self-directed learning might suffer a similar fate? Viewed as an alternative to an existing paradigm of CME, could self-directed learning finish up being subsumed by that very approach to which it is proposed as an alternative?

Let me return to the issue of parallels. If indeed a parallel exists between self-care in medicine and self-direction in learning, then perhaps a parallel also exists between “the medical model” and “the continuing medical education model.” A comparison of underlying assumptions is presented in Table 1.

It can be argued that there are indeed parallels between the dominant “medical model” on the one hand, and the traditional teacher-centered educational model on the other. Furthermore, if self-care has been advocated as a corrective to the excesses of the medical model, and self-directed learning as an alternative to the teacher-centered model, then the success or otherwise of self-care in dislodging or challenging its established counterpart may hold lessons for continuing medical educators, especially those who advocate self-directed learning. (Fig. 2.)

### **Conclusion**

The purpose of this comparison has been to sound a note of caution. For a start, it is rare that one paradigm is entirely correct and the other completely flawed. The nature of paradigms is such that they have strengths and weaknesses that are often complementary. This point was made elegantly by Kuhn himself:

To the extent...that two scientific schools disagree about what is a problem and what is a solution, they will inevitably talk through each other when debating the relative merits of their respective paradigms. In the partially circular arguments that regularly result, each paradigm will be shown to satisfy more or less the criteria that it dictates for itself and to fall short of a few of those dictated by its opponent... Since no paradigm ever solves all the problems it defines, and since no

**Table 1 Comparison of the “Medical Model” and Teacher-Centered Education Model**

Medical Model	Teacher-Centered Education Model
The physician is the technically competent expert.	The medical educator is the technically competent expert.
The physician is the principal decision maker for the care of the patient.	The medical educator is the principal decision maker for the learner.
The patient assumes the sick role, which requires him or her to cooperate with attending medical practitioners.	The practitioner assumes the dependent/ignorant role, which requires him or her to cooperate with and submit to medical educators.
The main purpose of medicine is the provision of acute and restorative care.	The main purpose of continuing medical education is the remediation of evident deficiencies in knowledge or skill.
Illness is primarily treated through the use of clinical procedures (e.g., drug therapy and surgery).	Learning is achieved primarily through the use of formal educational procedures (courses, workshops, seminars).
Illness can be diagnosed, certified, and treated only by trained professionals.	Learning needs can be identified, certified, and addressed only by trained professional educators.

two paradigms leave all the same problems unsolved, paradigm debates always involve the question: Which problems is it more significant to have solved?<sup>15</sup>

In relation to CME, this question can only be answered adequately by stepping back to consider more broadly the overarching purposes of the field. In a wonderful essay entitled *Beyond the Limits of the Possible*, Scott<sup>24</sup> advances the argument that “one view of human history is of it as a contest between possibilism, imagining things as they could be, and givenness, accepting things as they are.” Although he is writing about the role of the modern university in acting as “a crucial intermediary” between these two currents, perhaps it is not stretching the point too far to apply his reasoning to CME. Then, by substituting “CME” where he writes “the university,” we would have this:

As a social and economic institution, [Continuing Medical Education] is rooted in everyday life, meeting demands for new knowledge, improved techniques and professional skills, and satisfying the desires of individuals for enlightenment and self-improvement. But as an intellectual and cultural institution, [Continuing Medical Education] is future oriented...It looks beyond the horizon of what is presently known and believed. Its role is to imagine other worlds...to operate at the edge of givenness.<sup>24</sup>

Before we opt conclusively for self-direction or for some other paradigm of CME, perhaps we need to answer a prior question: which approach has the greatest potential for conveying the givenness of the present or for extending “the frontiers of the knowable and the valuable”?<sup>24</sup>

Second, the debate about self-direction in learning is not principally about methods of

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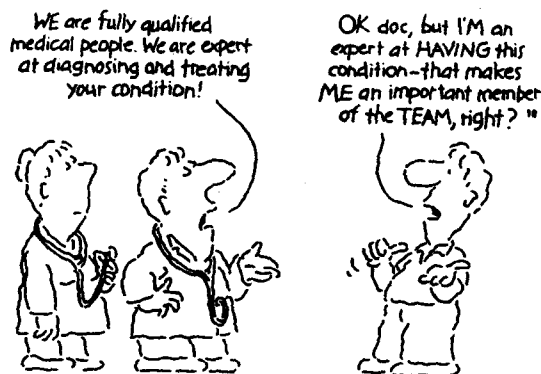


Figure 2 A question of expertise.

imparting content, or even about keeping up-to-date, any more than the issue of self-care is primarily concerned with the division of responsibility for certain tasks between doctor and patient. Essentially, both of them are about power and about whose perspective is to take priority. Thus, even in those cases where the self-directed learning approach is manifestly superior in a particular situation, it takes time to change. The forces marshalled against self-direction are formidable, extending from ignorance and conservatism through to inertia and fear, and they should not be underestimated by those who seek to change things.<sup>25</sup>

Third, it is not simply diehard conservative educators who may be disinclined to embrace self-direction. In the same way that many patients may resist the notion that they should take greater responsibility for their own health, believing that this is what doctors are paid for, many learners may reject the notion that they should (or can) take a more active role in pursuing their own continuing learning.

Fourth, it must be recognized that "a society where all, or most, chose to observe elementary rules of health care would differ considerably from the real world where so many of us risk our long-term health for short-term gratification."<sup>26</sup> Similarly, a move toward self-directed learning would have far-reaching consequences, not only for CME, but for the entire educational spectrum. Even if medical practitioners agreed that a more proactive learning role were desirable, they might feel over-

whelmed by the difficulties of identifying and articulating what they need to learn, daunted by the volume or complexity of available sources of information, or even defeated by their perceived lack of expertise in accessing information. To avoid such a situation, the process of increasing self-directedness must be a gradual one, with the seeds sown way back in their days as students.<sup>27-29</sup> The transition to self-directed CME is not so much "tinkering with accessories to the instructional machine" as it is "rebuilding the mechanical core,"<sup>30</sup> and as such it should not be entered into lightly or without considerable deliberation.

Fifth and finally, there is the vital issue of consistency. In the same way that there is something bizarre about health care professionals who enjoin others to embrace healthier lifestyles while they themselves are smoking, drinking to excess, or eating junk food, it would be incongruous for continuing medical educators to endorse self-directed learning if they did not model such behavior. "In the final analysis, the development of a sense of personal control [as a learner] is not simply a quality to be encouraged in others; it is a practice to be developed and exemplified by adult educators themselves."<sup>25</sup>

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