

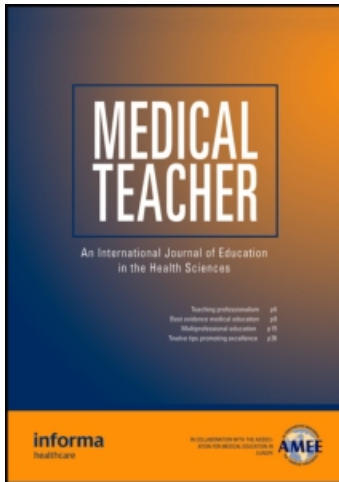
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Tetrahedron of medical academics: Reasons for training in management, leadership and informatics

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PERSONAL VIEW

Tetrahedron of medical academics: Reasons for training in management, leadership and informatics

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Abstract

Medical school professors and lecturers are often called to be practicing clinicians, researchers in their own field, in addition to executing their education and curricular responsibilities. Some further accumulate healthcare management responsibilities. These areas pose conflicting demands on time and intellectual activity, but despite their apparent differences, knowledge and skills from management, leadership and informatics may prove useful in helping to smooth these conflicts and hence increase personal effectiveness in these areas. This article tries to clarify some concepts and advance why training in management, leadership and health informatics would seem particularly useful for the medical academic. As opposed to the idea of educational dispersion/specialization, the concept of an integrative tetrahedral education framework is advanced as a way to plan workshops and other faculty development activities which could be implemented transnationally as well as locally.

Medical school professors and lecturers are often practicing clinicians, researchers in their own field, as well as adhering to their education and curricular responsibilities. In addition to these three already-challenging treads of activity, some members further accumulate healthcare management responsibilities at different levels of the healthcare system, either willingly or through necessity. These areas pose conflicting demands on time and intellectual activity as they divert attention to activities which, traditionally, have always been equated as almost non-dissociable. This is especially true in large healthcare academic centres worldwide, where most medical education takes place. It is widely accepted that knowledge and skills from the areas of management, leadership and informatics are powerful tools for personal effectiveness in the clinical area (Donald 1997). Such skills are becoming increasingly important in both the education and research threads as well (Plsek & Wilson 2001).

One could say simplistically that management is about completing tasks in an efficient and effective manner with the least effort and least expended resources while arriving at the best outcome. It deals with *how*. This concept ranges from *how* you organize a meeting in a medical school, *how* you run your daily medical work activities or *how* you negotiate conflicts between competing members of a research group. Some more specific areas within the field of management like marketing, operations or accounting can be more or less relevant to activities of medical academics. In detail, it would seem that the management subfields of human resources, dealing with aspects such as managing meetings, effective motivation of collaborators or selecting/contracting knowledge workers would be relevant for both the educator,

Practice points

- Management is about completing tasks in an efficient manner with the least effort and expended resources while arriving at the best outcome. It deals with improving *how*.
- Many medical academics will be called to occupy directorship posts and expected to perform as leaders, such required leadership skills can, and should, be enhanced before that.
- Knowledge of information technologies and of the skills to use it effectively (i.e., health informatics) are essential to the medicine academic of the XXI century.
- Management, leadership and informatics should be tackled by integrative faculty development program and taught differently but at all levels of the medical academic career.

as well as the researcher. The clinician would further benefit from insights from cost-effective analysis and system thinking approach to healthcare just to name a few. Budgeting and business case approach to proposals to organizational leaders would definitely help the researcher and the clinician to secure necessary resources for their activities in the face of competing demands from other stakeholders. To a lesser extent, these skills and organizational tactics are not to be discarded from the educator as he/she plans to move to expensive education strategies such as *transnational* educational projects or the use of simulators. No

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doubt new education strategies will require funds and a capacity to justify their investment. This type of management language, once foreign to education, is becoming increasingly more commonplace. Last, two of the richest areas in management are organizational behaviour and strategy. Knowledge, understanding and the ability to apply insights gained in these subjects provides better decision-making and organizational positioning which are likely to be crucial for the success of the educator–researcher–clinician triad.

There are many possible ways to think about leadership. Two concepts seem sufficiently broad and yet useful for this discussion. On one hand, true leadership is about having a new vision for an organization, an activity or process and the capacity to make others reach that goal. This means not all incumbents occupying formal *directorship* positions (e.g. head of department, dean, etc) are necessarily leaders, and, thus, the manner in which organizations select candidates for these roles is likely to be critical. On the other hand, assuming a more realist stance, many medical academics will necessarily be called to occupy directorship posts and expected to perform as leaders. They will be called upon for a new vision, stir motivation and bring about change, while managing other routine operations as required of a competent manager. This concept means that the educator–dean, the researcher–group leader and the clinician–head of department/hospital will necessarily need to develop some leadership skills. Thus, regardless of whether one accepts one notion or the other, what remains is that teamwork leadership, change management skills or negotiation, and planning will be required when occupying these organizational roles if success is to be attained. These can be significantly enhanced even in *non-innate* leaders (Doh 2003).

For most people, leadership is associated with grand posts, high responsibility positions and even sometimes with charismatic personal rarities. This seems a rather limited interpretation, often reinforced by conventional literature on personas like Madre Theresa or Martin Luther King. There is no reason not to see frequent leadership acts of much smaller dimension as worthy of similar note and development strategies. For example, educating a group of medical students is to lead them, in a *transformational leadership* sense. The educator has a vision of the knowledge, skill and attitude set he or she wishes students to make real, then a complex, often demanding, wheel of education events is set in motion as this collective try to reach such a goal. Each class, each Team-based Learning (TBL) or Problem-based Learning (PBL) session, each lecture, should be interpreted as a leadership activity and, thus, potentially confer benefit from insights and skills developed as one learns the *hows* and *whys* of leadership. If this example is not convincing by itself it is enough to look at any research endeavour. From the on start, there can only be a hint, a hypothesis at best, linked with a desire to reach something palpable or obtain knowledge of a process. If it is true that researchers do not often have a vision of what they may encounter, their ability to strive against failure, often for years, ‘dragging’ with them increasing amounts of funds and human resources, cannot but be a living evidence of powerful leadership. This is a natural requirement of the role. It can, however, be amplified if leadership skills are

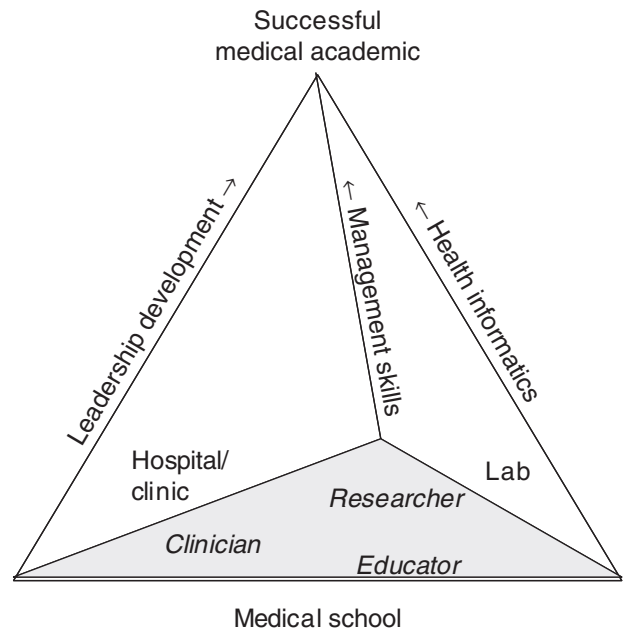


Figure 1. The tetrahedron of management, leadership and informatics development for medical academics. This classical figure is characterized by four triangular faces, six edges and four vertices. The inferior face represents the medical academic, who works simultaneously at the three horizontal edges of being clinician, researcher and educator. He/she often used spatially dispersed settings. The three vertical edges represent the pillars of the trifurcated education in the areas management, leadership and informatics considered relevant to improve faculty performance; all of these three are axis of skills development regarding all three of the activity areas represented in the bottom (clinical, research and education).

further developed and incorporated in the daily conquests of the clinician–researcher.

The third area which is unquestionably becoming an important issue and part of any strategy in large medical academic centres is the use of Information Technology (IT) to the extent that it leads to effective health and biomedical informatics applications. The IT skills, *per se*, are just the beginning of a long path of informatics understanding and use which can lead to significant advances if ‘planted’ and ‘harvested’ correctly. Health and biomedical informatics can be (IMIA 2000) grossly defined and the use of IT to enhance clinical, education and research in the areas of medically relevant basic science and medical practice. Knowledge of the technologies and the skills to use them effectively are, thus, essential to the medical academic of XXI century.

The *educator* cannot avoid e-learning, virtual environments or distance teaching especially if the trend towards international and transnational student, teacher and curricula continue to accentuate. Many articles in medical education journals and conferences attest to this emerging phenomena. The *clinician* needs to understand informatics urgently! This is for the benefit of his or her patients. A sound clinical perspective is still often lacking in many clinical software companies or does not get fully incorporated on their

products. The inherent idiosyncrasies of each healthcare institution often mean solutions need to be tailored, adapted or not adopted at all. Thus both of these elements definitely need to be incorporated in the technical and social realms of IT solutions in healthcare units around the world. While one could think this is already being done, or that it should be done by healthcare managers, the reality shows it is far from being completed. As such, it is the responsibility of all clinicians to do so, but particularly of those occupying senior clinical positions, who often are the medical academics. Besides, medical academics are in a position to pass a critical yet constructive attitude regarding informatics to their students and future doctors.

Today's successful *researcher* is already aware of the need for reliable clinical or non-clinical databases, the use of computational modelling and the required proficiency in using spreadsheets or database software. However, he or she should familiarize with existing software for meta-databases and for linking healthcare informatics to and from research databases, particularly when working in clinical-related projects, which is often the case for medical professors and lecturers. In addition, there are an increasingly great number of tools and software to support collaborative projects, effective query of the literature and world databanks, for writing articles and proposals and for orchestrating academic networks for benchmarking, referencing and audience.

Existing faculty development programme (FDP) often focus only on one of these treads, must notably medical education, ignoring other competing priorities and, thus, further adding to a sense of overwhelm. Possibly if FDP activities were to incorporate topics from the three areas mentioned and, in a way that they are relevant to the three treads and provide integrated solutions to medical academics, these might find them more useful and surely more reassuring for the challenges ahead of them. The tetrahedral approach (Figure 1) proposed in this article attempts to address the importance of such integration while the content areas

previously suggested would form its constitutive educational elements. The combined development represented by an 'elevation' in each of the three vertical edges would result in a overall increase in the knowledge and skills set of the medical academic. Such perspective wants to reinforce the notion that these are interrelated areas of faculty development which should be tackled by integrative programs. It will remain to be seen, however, if medical schools, and especially those responsible for FDPs, are ready and willing to respond to their collaborators' needs in these areas. Perhaps by doing so, they would be providing ample reward in exchange for the strenuous and unswerving daily efforts displayed by many of today's medical academics who have become split into three '*personas*'.

Notes on contributor

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