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COMMENTARY

Competencies in Medical Education: a Trap for the Unwary

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Abbreviations
EPAs Entrustable Professional Activities

Introduction

The competency-based approach has dominated medical education for several years. It has much to commend it, and competencies can help us think through many of the issues that confront us as educators. However, the usefulness of a competency-based approach can seduce us into thinking that it is a solution to all the problems we face as educators. Our joy at finding a good hammer to use on nails can seduce us into thinking that every issue we need to solve is a nail to be hammered. We can end up instead with a sledgehammer approach to medical education. The underlying problem is that medical education is a complex business. We need a range of thinking tools to deal with all the issues we face. Simply relying on one way of thinking, such as the competency-based approach, is inadequate. We need flexibility and criticality in our thinking. We need to be able to select the right thinking tool for the right problem. There are other ways of thinking and talking that we can use in addition to the competency-based approach.

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The Role of Competencies

The competency-based approach became successful when it was realized how useful it was in helping educators cope with some of the problems they faced. One of the biggest problems has always been teaching (and assessing) technical skills to students and junior practitioners. In many ways, the competency-based approach is excellent for dealing with this. Many technical procedures can be easily demonstrated, easily taught, and easily observed. We can set standards that must be reached before someone is recognized as being technically competent. The procedure can be broken down into a series of steps. These steps can be separated out from each other, one at a time. Many technical procedures can also be performed in simulation settings. Learners can be observed and tutored as they do the various steps. It is relatively easy to judge if the steps and the standards have been met.

A simple example is drawing blood for lab tests. Do the learners correctly identify the patient and introduce themselves? Do the learners correctly identify the site for drawing blood? Do they identify a suitable vein? Do they adequately prepare the site? Do they use the correct tube for the appropriate test? Do they take enough blood? Is the paperwork correctly completed? As teachers, our job can be to break down a task into these constituent steps and set standards for each one. Teach them and observe the learners' performance. We can mark a checklist as the learner goes through the procedure. By using a standardized approach, we can also reassure ourselves that all learners are being taught the same way and all learners are being assessed to the same standard, no matter who is doing the assessment. This allows us to remove some subjectivity from the processes of education, particularly in assessment, where objectivity and standardization are

clearly important. We can be sure that assessments are fair and that those observed to be attaining the standards are indeed competent. So far, so good.

The Weaknesses of Competencies

The issue is that the undoubted usefulness of this approach for many technical procedures is seductive. If we can break down seemingly complex tasks into a sequence of standardized steps to follow, then we might be seduced into thinking this can apply to everything we need to teach in a professional practice. This is not the case. The problems begin with more complex technical tasks. Simple technical tasks, like drawing blood, are the job of a technician. We can train technicians to do these tasks and we can train them to do them well, but many of the technical procedures done by professionals are more complex and deal with more uncertainty than simple technical tasks, despite the superficial similarity. A good example is colonoscopy. Fish [1] describes in telling detail the contrasts between two different approaches to teaching a colonoscopy. One is the competency-based training approach and the other is a more demanding educational approach. A competency-based approach simply aims "to inculcate in the learner the ability to do X…." This is in sharp contrast to an educational approach where the aim is "to enable the learner to do X and develop the abilities of doing, thinking, knowing and critiquing the doing of X as a professional doctor/healthcare practitioner" (p. 200). There is a world of differences in these statements.

The competency-based approach is based on a number of questionable assumptions. One is that medicine (and medical education) can be viewed simplistically and reduced to procedures that follow set recipes. There may be a great many of these procedures but the thinking goes that, in principle and with enough effort, we can reduce professional practices to a collection of technical procedures that almost anyone can follow. Another related assumption is that the behaviorism that underpins the competency-based approach can work in all settings. Behaviorism assumes we cannot know what goes on in people's minds. All we can do is focus on the right (training) inputs and check for the right (behavioral) outputs. This approach ignores the fact that behaviorism has been largely abandoned as an adequate philosophy to explain how either medicine or education functions. Medical students and doctors are not rats in mazes waiting to be stimulated to go in the right direction and do the right behavior. They can think for themselves. As teachers, we can explain to people why we do particular tasks and why we do them in particular ways and we can encourage our learners to understand the reasons for doing certain tasks. We can also ask learners if we want to find out *what they are thinking* and *why* they perform tasks the way they do. This more interactive and humanistic approach is characterized by the more educational approach, advocated by Fish and others [e.g., 1, 2].

Education vs Training

In the educational approach to teaching a colonoscopy, the teacher focuses more on using principles, both in the procedure being done and the educational approach used to teach it. Educational and medical principles are used and adapted to the context. For example, if the procedure is not going well, then both teacher and learner can focus not only on the technical details but also on what the procedure is trying to achieve and if there may be other ways of achieving the goal. In an educational approach, the teacher tries to find out the thinking of the learner. How are they thinking through the immediate problem and how are they thinking through how the immediate problem relates to the overall situation of the patient? A purely competency-based approach looks only at how to do the procedure. A more educational approach includes this but also looks at why the procedure is being done at all, and why it is being done this way at this time and in this place for this person. The context becomes important and relevant. The reality of medical practice is that because of changes in the context, things often do not go according to plan. A frail, elderly patient may need a totally different management compared to someone who is young and fit, even though they may have the same diagnosis. Our technical procedures may need to be adapted "on the run," and our graduates need to be equipped with the ability to adapt the procedures they do and to adapt them thoughtfully, critically, and ethically in the full knowledge of how and why they are adapting them. The competency-based approach does not do this. However, there is further bad news. The competency-based approach is often applied to other aspects of medical education that go beyond technical procedures.

There is a trend to apply competency-based thinking to settings where it does not belong, such as the clinical encounter between patient and doctor. Beginners might be advised to start with protocols for communicating with patients and families but soon learn that they need much more if they are to be good communicators. Unfortunately, a competency-based approach sees clinical encounters as simple and simplistic exchanges of information. This is sometimes called an instrumental approach, i.e., there is a focus simply on the tasks to be done. Indeed this instrumentalism is reflected in contemporary official documents, which see the clinical encounter strictly in terms of competencies. For example, the Association of American Medical Colleges [3] refers to "interpersonal and communication skills that result in effective and efficient exchange of information and teaming with patients, their families, and other health professionals" (p. 20). Even the mention

of teams invokes the instrumentalism of modern medicine, with teams usually made up of health professionals who can efficiently and effectively coordinate their activities to bring about a speedy end to a clinical problem. It seems that patients and their families are now to be co-opted on to such teams in order to make the teams even more efficient and effective. There is an (impoverished) attempt here to capture some of the complexity of the clinical encounter, but the attempt is flat and two-dimensional. There is much that is missing from such an account. What is missing, above all else, is any sense of the complexity that underlies the clinical encounter such as sensitivity to the emotional dimensions of healing relationships [4]. A competency-based approach obscures the complexity of the healing relationships that doctors have to develop. As Svenaeus said:

> Doctors in the clinic do not meet with agents who evaluate their pain and take a rational stand upon what they want to have done with their biological processes, but with worried, help-seeking persons, who need care and understanding … [5] (pp. 173–174).

If our students become preoccupied with the efficient and effective transfer of information, then this sensitivity to the worried, help-seeking persons before them is in danger of being lost or ignored.

Alternatives to Competencies

The problem is that a professional practice like medicine is not simply the ability to perform a collection of technical procedures. Medicine is not just a collection of competencies. The professional practice of medicine is so much more. It includes the values underpinning a profession. These values include professionalism, criticality, reflexivity, ethicality, and more. But even these values are frequently mis-described as competencies. This is to distort their nature. We want medical graduates who not only know about these values but who have made these values their own. We want graduates who embody these values [4]. These values inform everything they do. They are not technical skills to be marked off on a checklist. We need to go beyond competency-based thinking and there are well-established options for doing so. Entrustable Professional Activities (EPAs) have been devised as a way to go beyond competencies.

The advantage of EPAs is that they do have more of a practice focus, on the work to be done, whereas competencies can be seen as more abstract and generalized [6]. Unfortunately, the ways in which EPAs are articulated frequently reveal that instrumental thinking is still dominant. EPAs may be a step in the right direction, but we need more insightful ways to articulate the professional practice of medicine (and medical education). Fish [7] has spoken of competence, as in the overall competence of a professional practitioner. Like professionalism, competence in this sense is always singular. Competence is a holistic notion and can include competencies. We can speak of someone who is a wholly competent doctor meaning someone who can "conduct him/herself and his/her work in different ways on different occasions according to what the situation demands (thus engaging in sound thinking) and *being* a good doctor as well as having the required skills and knowledge" [7] (p. 128 emphasis in original). This accepts the need for technical proficiency but goes much further. There is emphasis on the clinical judgment required in practice and the need for dealing with complexity and uncertainty. A major implication of all this is the urgent requirement to rethink our assessments, especially in the clinical years. The mention of being a good doctor also brings out an aspect of medical education that is frequently ignored. It is ignored because the competency-based approach does not have the vocabulary to deal with it.

Barnett and Coate [8] have spoken of the three axes of higher education, and this includes professional education, such as medical education. The three axes are knowing, doing, and being. Most educators have no problem with knowing and doing but avoid the third item, being. As noted, just above, our education should aim to produce doctors who are professional, critical, ethical, etc. These values are qualities of being. So how can we talk about values sensibly in educational terms that avoid the contortions and distortions of the competency-based approach? The first thing is to be honest and admit that this is not easy. In addition to epistemological approaches that focus on what doctors know, we need ontological approaches that focus on what doctors are. Luckily, there are discourses and vocabularies that can open up our thinking in these ways that come from the humanities and social sciences. For example, neo-Aristotelianism is exciting growing interest [e.g., 9]. This school of thought places emphasis on phronesis, defined as the disposition to act wisely. Phronesis cannot be taught, but we can provide opportunities for our students to develop it by allowing them to have practice experiences that challenge and stretch them, where conventional textbook knowledge is not enough, where the technical procedures they have learned may not go quite according to plan.

Taking our earlier example of a colonoscopy, if a learner is experiencing difficulty, then the teacher can help the learner think through the reasons why this might be, the other options that may be open, and help the learner to make a wise judgment about the best course of action, with the learner fully understanding the principles used to make the decision. This more thoughtful approach predisposes learners to develop practice wisdom. This is a disposition to make good decisions based on their ability to learn reflectively from their own past experiences and to integrate this reflective knowledge with the best available evidence and *become* better doctors. This

practice wisdom is a large part of what makes up the holistic competence referred to earlier. It is the capacity to cope with the uncertainties, the complexities, and the ambiguities that make up so much of medical practice. Ideas such as phronesis and practice wisdom can further our thinking about medical education that go beyond the ideas of the competency-based approach. But there are other dangers of a purely competency-based approach.

Competencies are closely related to the managerialism that has come to dominate so much of higher education. In an age of the so-called massification of higher education where universities are being expected to "turn out" larger numbers of new graduates with the same resources and numbers of faculty and staff as we have in the past, then this poses a serious problem. This may be why managerialism and the competency-based approach are so popular. They provide a false promise of generating new professionals at a low cost. This is a current and future trend that engages, and will continue to engage, and challenge medical educators for some years to come. To provide our students with the opportunities to start developing practice wisdom and become the professionals we want them to be, then we need to interact closely with them, especially in the clinical years. We need to be role models and mentors for them. Role modeling and mentoring are intensive and demanding, and they need low faculty/student ratios as well as educators who know how to be good mentors and role models. As educators, we need to accept this and stand up for this position. There can be no low cost road to becoming a true professional, especially in the health professions.

If we really want to improve medical education, then we need much more interdisciplinary thinking where we can integrate behaviorist ideas such as competencies with ideas from other disciplines such as the humanities and social sciences. This is because medicine (and medical education) is a professional practice demanding a sophisticated and nuanced integration of scientific knowledge and technical procedures with the uncertainties of the real world where small changes in context can require big changes in practice. There is a growing interdisciplinary literature on professional practice and practice-based education that is now exploring these issues [e.g., 4].

Conclusion

Competency-based thinking dominates the current discourse of medical education. There is much that is commendable in the competency-based approach, but there is much of which to be wary. The commendable is mostly limited to establishing fair, objective, reproducible, and reliable ways of ensuring technical skills really are attained. The issue is that medical practice is too complex to be reduced to a set of competencies. We need a wider and richer range of ideas (new thinking tools) to inform medical education that go beyond competency thinking. As educators, we need to educate ourselves so that we have more interdisciplinary ways of thinking and talking about medical education and practice. Examples of new thinking tools, more interdisciplinary ways of conceptualizing medical education, include those introduced above, holistic competence, practice wisdom, attention to underlying values, adaptability to context, and awareness of how our education helps people to become, and *be*, doctors.

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