

## COMMENTARY

## Contemplating the future of competency assessment

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Early theories of job performance stated that one's professional performance is principally based on one's job knowledge, which in turn largely depends on cognitive ability.<sup>1</sup> We have long since moved towards more complex competency modelling to understand professional performance. That transformation, however, immediately introduced a definition problem by inducing ongoing debate about what a competency is. In this commentary, we will discuss two competing models of competency that might help further frame the complexity of competency-based assessment: universalist and particularist. We will also examine the implications of these models for health professional education and practice.

To do so, we follow Guion's<sup>2</sup> competency definition. He states that 'A competency is a learned ability to accomplish a complex task and do it well' (p. 114). In other words, a competency is complex, applicable to broad classes of tasks, and acquired. To date, many broad competency models have been developed that are relevant across occupations and professions. An example is Bartram's *great eight competency* model, which includes analytical (e.g., analysing and interpreting), action-oriented (e.g., organising and executing) and social competencies (e.g., supporting and interacting).<sup>3</sup> Each of these competencies breaks down into narrower components. For example, a component of supporting and interacting is 'adhering to principles and values', which in turn breaks down into subcomponents such as 'showing social and environmental responsibility'.

Such layering is reflected in this issue of *Medical Education* through ten Cate et al.'s<sup>4</sup> analysis of medical competence, which prompts (and deserves) further reflection on how assessment supports might enable productive evolution of health professional education. To further such consideration, we begin by outlining competing models of competency that might help to further frame the complexity of competency-based assessment.

Looking into the future, one could argue that the more universal and general a competency model is, the more sustainable that model will be—competencies that are most timeless and contextless, per definition, will remain most viable. A universalist view of competency, thus, assumes that there are some core competencies that are relevant across all professions and contexts, and that these competencies can be measured and assessed in a standardised way. This view has the benefit of simplicity and efficiency, but it may also overlook the specificities and nuances of different situations and domains. In line with such a universalist notion, Neubert et al.<sup>5</sup> argued that the most future-proof competencies are complex problem solving (CPS) and collaborative problem solving (ColPS). CPS concerns handling complex and opaque situations that do not have an obvious solution. ColPS concerns problem solving in group settings that need social skills next to the ones captured by CPS.

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In contrast to the universalist notion, a stream of researchers released the so-called O\*Net in 1998 (Occupational Information Net<sup>6</sup>). The O\*Net is a highly ambitious and meticulous taxonomic endeavour that aims to continuously update all existing professions in terms of their tasks, worker requirements (knowledge, skills and abilities), work context and worker characteristics (values, attitudes and personality). The authors' premise is that, due to changes in technology, employment and labour force patterns, professional requirements need to be constantly updated by observing, interviewing and, in other ways, sampling occupations on a regular basis. Their thinking, therefore, tends more towards 'particularism', referring to competencies relevant to particular times and local contexts. A particularist view of competency, in other words, acknowledges that each profession and context has its own unique requirements and challenges, and that these require tailored competencies and assessments. This view has the benefit of sensitivity and flexibility, but it may also entail a high level of complexity and variability. Such an outlook requires determining if and when some competencies should receive more or less weight within specific contexts. For example, an acute care nurse may need to prioritise active listening over critical thinking in some situations, while an anaesthetist may need to do the opposite in others.

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As alluded to above, ten Cate et al.<sup>4</sup> put forward a competency framework consisting of three hierarchical layers—generic, context-dependent and individualised—and, in doing so, raise questions about how to define and assess each layer. The generic layer includes knowledge and skills that every health professional should possess, such as understanding of physiology. From a universalist perspective and adhering to Guion's definition of a competency, this first layer, to our view, needs to not only include skills that especially health professionals should have, but also must include attributes that all working individuals require. Examples of such attributes are work ethos and vitality (mental and physical energy), which are much-needed competencies for all people at work. The context-dependent layer includes things like the ability and motivation to communicate with a specific new patient population. This layer reflects a particularist perspective, as it refers to the specific context in which a health professional is working. These competencies

are influenced, in other words, by factors such as the characteristics of the patient population, the type of health care setting, the availability of resources and the expectations of stakeholders. Finally, the individualised layer focuses on a professional's personalised competencies, referring to unique habits and convictions. This layer steps outside the competency-framework into a holistic view of an individual physician's personality, as these competencies are integrated with one's personal values, beliefs, attitudes and emotions. These competencies include one's personal style in providing health care and unique creativity. They are shaped by one's personal history, experiences, motivations and goals. In our view, the most interesting question about the authors' framework is how this final layer and the particularist competencies interact with each other. In other words, what does the *person-organisation fit*<sup>7</sup> tell us about competency-assessment?

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In line with Smith's<sup>8</sup> theory, we recently put forward a framework of three competency types: universals, occupationals and relationals.<sup>9</sup> This framework is similar in some respects to ten Cate et al.'s, but it also has some important differences and advantages that we will explain to show how it addresses some of the limitations and challenges of ten Cate et al.'s model. Universals are context-independent characteristics required by *all* working individuals and, therefore, per definition, also relevant to health professionals. As said earlier, examples of universals are work ethos and vitality (mental and physical energy), which are important for all working individuals.

Occupationals, in contrast, refer to characteristics required by certain jobs but not others and are, therefore, dependent on the task-related features of an occupation. Within this category, we distinguish between generic and specific occupationals. Generic occupationals are similar to the first layer of ten Cate et al.'s model as they are relevant to all health professions (e.g., understanding of physiology, anatomy, pharmacology and pathology). These characteristics enable individuals to cope with the demands and challenges in healthcare, including interacting effectively with patients and colleagues and engaging in lifelong learning. Specific occupationals are more relevant

to a particular medical specialty (e.g., surgical skills, diagnostic skills, or therapeutic skills). These characteristics are influenced by factors such as the nature of the medical problem, the type of intervention, the level of expertise, and the standards of practice. Finally, relationals are characteristics required in a specific organisational context with habitual ways of working together and include one's values and how these fit with the cultural context of a specific hospital unit. This category is best described as a combination (i.e., an interaction) between the second and third layers of ten Cate et al.'s framework, as it reflects both context-dependent and individualised aspects of competence. This category's premise is that behaviour is a function of the person in their environment. Relationals, therefore, focus on person-organisation fit, because fit is predictive of important outcomes, such as commitment to one's organisation, job satisfaction and turnover.<sup>10</sup> Barrick and Parks-Leduc<sup>7</sup> provide a valuable overview of the types of fit one could consider, such as one's values, personality, motivations, work goals and interests. The profile of a physician and the profile of a specific health organisation need to match in terms of these attributes. Iyer et al.<sup>11</sup> similarly give an example of how an organisation may be described in terms of its personality.

All in all, we believe a medical competency model that lacks universals important to all workers may miss several competencies vital to present-day society (e.g., vitality and agility), and a model that misses a focus on relationals (person-organisation fit) will preclude predicting key work outcomes such as turnover. This emphasis on fit implies the importance of assessing the individual physician but it also broadens focus by requiring consideration of the specific health unit or organisation in which the person is working, prompting reflection on the match between values, personality, motivations and work goals.

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## AUTHOR CONTRIBUTIONS

**Marise Ph. Born:** Conceptualization; Writing—original draft. **Karen M. Stegers-Jager:** Conceptualization; Writing—review and editing.

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**How to cite this article:** Born MP, Stegers-Jager KM.

Contemplating the future of competency assessment. *Med Educ*. 2024;58(1):17-19. doi:[10.1111/medu.15272](https://doi.org/10.1111/medu.15272)