Professional Social Competency Identification, Assessment, and Training

Robert Hubal, Jacqueline McLaughlin, UNC Eshelman School of Pharmacy

Introduction

In our school we focus heavily not just on job-specific capabilities for our students—clinical decision making, drug and disease state knowledge, healthcare delivery understanding, patient-centered care—but also on surrounding skills that include adaptability, collaboration, and communication. In this focus we mirror intelligence organizations, where such professional social skills are equally critical to an analyst's success. We describe evolving student recruiting processes and technology-enhanced training and assessment to address these needs.

Concept

Professional practice today demands individuals who can function effectively independently to solve problems and make decisions, as well as within interprofessional teams. In healthcare, between the professional and patient, communication skills are critical, as they facilitate the understanding and reasoning for a treatment regimen and, by engaging the patient, foster compliance. To accurately reflect the work environment, we seek to expose our students to the contemporary challenges in healthcare systems, such as the complexity of patient health records, an exponential increase in healthcare data, and continued growth in the complexity of health problems. In healthcare professional training, then, job-specific capabilities such as understanding disease states and medications are necessary but not sufficient. That is, in addition, students' professional social skills (e.g., adaptability, collaboration, communication, empathy, entrepreneurialism, integrity, motivation) are essential for success in the workplace.[1,2]

But these training challenges have direct linkages with other communities. For instance, the intelligence community, too, faces constant technological changes, vast quantities of data to scour and mine, and rapidly evolving, mission-critical analytic concerns. Aspiring professionals must develop, refine, and master the intellectual, interpersonal, and technical abilities required to make defensible decisions, thereby producing desirable outcomes for their consumers (whether patients or policymakers). The same is true in any field where the professional meets with others and seeks accord with them, including policing, stability and support operations, and intelligence.[3,4] Professionalism across these fields has a number of underlying components, including demonstrating responsibility, illustrating a commitment to excellence, showing respect for others, employing honesty and integrity, practicing care and compassion, maintaining self-awareness, and being adaptable.

Approach

The literature is full of research into and discussions regarding techniques such as problem-based learning, interactive testing and simulation, and individualized feedback, all of which have been shown to advance the development of students' critical thinking skills, decision making, and problem solving. The research often fails however, to specify the skills required and to delineate the instructional strategies that may be employed to improve those processes. In our school, we have identified core knowledge and skills that a specialist must possess to demonstrate critical thinking, good decision making, and problem solving, including content, communication, collaboration and influence, adaptability, initiative, curiosity or inquisitiveness, access to and analysis of information, and professionalism. These core skills feed into *entrustable professional activities*, an Association of American Medical Colleges term that encompasses professional practice tasks or responsibilities that students are trusted to perform, unsupervised, once they have achieved and demonstrated sufficient competence.

Our school has invested in understanding the role of job-specific and professional social characteristics in student selection and has developed strategies to identify students with the potential to excel in our program.

For instance, our admissions process has moved from a structured interview of prospective students to a multiple mini-interview (MMI).[5] The MMI involves six to eight stations each having a patient scenario and an interviewer. The intent at each station is to encourage the prospective recruit to reflect on the scenario at hand and address the interviewer's probing with reasoned responses. We have conducted validation studies of this approach and are persuaded by the results.[6] We are similarly investigating advanced technology to improve training and assessment of students, using game-based tools to portray virtual patients and employing cue-based methods to develop realistic scenarios and determine students' focus and data literacy.

One strategy is to gauge *belief structures* by presenting students with a series of competing scenarios. In each scenario they rate the better or less appropriate responses and outcomes (analogous to conjoint analysis[7]). By systematically varying scenarios along predefined parameters, over the course of many paired scenarios, it is possible to judge students' beliefs about the situation by their ratings. Another strategy is to judge *propensity to act* by presenting students with a series of interactive assessment scenarios. For each scenario, they demonstrate how they would behave in that situation (analogous to situational judgment[8]). Using this approach, we determine students' beliefs about what should be done in a situation but also get an indication of how they would act within that situation. The definitions of scenarios, and scenario variations generated by adjusting parameters, determine more or less appropriate responses to the different experiences within situations. In general, any single response must be considered indicative of behavior that may or may not be relevant in the given situation, but not wholly demonstrative. In aggregate, though, like responses to similar (in terms of parametric values) experiences suggest what the student believes and how s/he will tend to act. From these measures, we intend to determine readiness (i.e., when students demonstrate satisfactory responses to the belief structure and propensity to act scenarios, and is at an entrustable state).

Historically, a bottleneck for use of problem-based learning, interactive tests and simulations, and individualized feedback for training and assessment has been the resource costs of content development. Our use of adjustable parameters to define scenarios partly addresses this issue. In addition, in these methodologies another main concern is specifying the student actions to sufficient detail, and linking them to performance measures, such that error patterns are detectable.[9] In current work, we are investigating both the definition of scenarios and the capture of student activity within a learning environment; for both we are studying how to efficiently classify them with metadata (e.g., learning objectives), index them (e.g., marking instructionally meaningful begin and endpoints), and annotate them to overlay instructional information (e.g., text, graphics, highlighting).

Conclusion

Whether for healthcare or intelligence, our goal is to use the right means to most cost-effectively recruit, train, assess, and produce professionals who can handle the myriad complex situations they will encounter, with end-users and with colleagues, in a changing practice environment.

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