

## **The Formation of Professionalism in Medical, Nursing, and Engineering Education**

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My paper will no doubt be quite different from the others. I don't plan to talk much about research or theory in psychology. Instead, I want to share some observations about higher education – especially professional education for professionalism and professional ethics and identity – from a very practical perspective, the perspective of someone who works at an education think tank, not a university psychology department. I hope you might consider these descriptions to be “data” of a sort and help me make sense of them with respect to what you know about moral personality.

The main reason I decided to do it this way is that I have come to believe that if you want your ideas and theoretical formulations to be seriously useful for strengthening education, it helps to begin by learning from educational practice rather than always beginning by formulating theory and conducting research and then applying the research conclusions to practice. It is common for “implications for education” to be tacked on at the end of a research report. I want to go in the other direction and get your help in seeing whether a close look at education raises any interesting questions for research and theory and whether your research can illuminate these observations of educational practice.

The observations I will be talking about come from the Carnegie Foundation's Preparation for the Professions Program, of which I am co-director. This is a series of very applied observational studies of professional education in five fields (law, clergy, engineering, nursing, and medicine). Each study involves intensive site visits in a set of professional schools chosen to represent geographic and institutional diversity. In these visits, we interview administrators, faculty, and students; conduct focus groups; collect course syllabi, accreditation reports, and other documents; sit in on classes; and make other observations outside the classroom. These studies explore the pedagogical strategies and approaches specific to each field of study and look comparatively at issues that cut across the disciplines. The central goals are to illuminate the ways in which students seem to be well prepared for professional practice and to identify notable gaps between professional education and the needs of graduates. The studies document innovative approaches to addressing those gaps and offer recommendations for strengthening professional preparation in the five PPP fields.

One of the cross-professional lenses we have found useful is a metaphor that represents universal goals or strands of professional education as a three-fold apprenticeship:

- intellectual training to learn the academic knowledge base and the capacity to think in ways that are important to the profession;
- a skill-based apprenticeship of practice; the craft know-how that marks expert practitioners of the domain; and
- an apprenticeship to the ethical standards, social roles, and responsibilities of the profession, grounded in the profession's fundamental purposes

These dimensions of professional apprenticeship reflect contending emphases within all professional education, and as such provide a point of comparison across the different fields. The metaphor of a three-fold apprenticeship also forms the basis for a normative analysis, providing a framework against which to evaluate the adequacy of preparation for professional work. For this reason, the framework has helped us to describe tensions and shortfalls as well as strengths of professional education in each field.

But the apprenticeship metaphor can also be misleading, so I need to be clear at the outset that the three strands often don't map onto separate components of the curriculum or other discrete educational experiences. In fact, it is somewhat arbitrary to separate them even for the purposes of discussion, and we believe that ideally the three apprenticeships – intellectual grounding, skills of practice, and professionalism and purpose -- should be fully integrated in the training of professionals. I also want to stress that the metaphor does not mean to imply that students are apprenticing to an individual, a course, or even the curriculum as a whole. It is more useful to think of students as apprenticing to the whole experience of professional education in that institution, including what is unspoken as well as spoken in the classroom, in settings of professional practice, and in the campus culture.

Each field of professional education has a distinctive pattern of emphasis among the three apprenticeships and different degrees and kinds of integration among them. In some fields, the integration is fairly tight, while in others professional education is decomposed into three quite separate dimensions. In our writing about professional education, we are highlighting creative teaching practices that successfully integrate the three, noting in each case how typical or atypical those integrative teaching strategies are in that field.

Clearly, the third apprenticeship, professionalism and purpose, is the one that is most relevant to this symposium, so I will focus mostly on that one and talk about the others to the extent that they have implications for the third. In the time I have available at the symposium I will not be able to talk in detail about any of the fields, let alone all five, so I will focus mainly on nursing, medicine, and engineering, with only brief references to the others. I have chosen these three because all are grounded in science and yet they provide a distinct contrast in the degree to which the third apprenticeship is integrated with the second, with important consequences for the way the third is understood and taught.

Among the five professions we have studied, contemporary medical and nursing education place the strongest emphasis on the apprenticeship of practice (the second apprenticeship) and show the most thorough integration of the three apprenticeships. Both fields rely on a combination of classroom and clinical teaching, most of which involves supervised practice in an associated hospital or clinic. In medical education, after the first two years of coursework (now often organized as problem-based learning or organ systems approaches), students spend their time in clinical clerkships in a standard set of specialties. The training of nurses is more diverse in institutional form but always involves both classroom learning of such topics as pharmacology and pathophysiology and extensive supervised clinical practice.

Teaching for professionalism begins in the first year of medical school, in what are often called doctoring courses (introduction to patient care), and even in basic anatomy, where in many medical schools respect for the donors of the cadavers is represented in memorial services and other ways. Professionalism seminars often accompany the third and fourth year clerkships, allowing students to reflect on their clinical experiences from a moral point of view. Professionalism is even assessed at many points along the way, through the use of standardized patients played by actors or feedback on practice from supervising physician-teachers.

Nursing education also pays significant attention to the third apprenticeship. The director of our nursing education study, Patricia Benner, has written widely about the importance of “skillful ethical comportment” for nurses. Skillful ethical comportment includes such things as preserving the dignity and personhood of patients, serving as a patient advocate, and carefully documenting any mistakes. These abilities and habits are instilled through coaching in the context of hospital practice and through scheduled times in which students meet to reflect together on their clinical experiences – often on a daily basis.

In contrast, for engineering (and legal) education, the first apprenticeship, rather than the second, clearly dominates. Engineering science, with its attendant mathematics and technical laboratory work, lies at the heart of education in that field. Although all engineering students take at least a capstone course in engineering design and some schools are introducing design experiences more pervasively in the curriculum, learning the complex skills of practice is given much less emphasis than learning the scientific, mathematical, and technical grounding of the field. Beyond their design courses, which are undertaken in the university setting, engineering students do not typically get much practice experience and seldom have any contact with clients or the real contexts of professional work.

The third apprenticeship is visible in engineering education as a very pervasive awareness of the importance of public safety, which is often raised in engineering science courses by reference to iconic historical cases such as the Challenger disaster or the Hyatt walkway collapse. But these are mostly rather fleeting references to this important engineering value. Formal education for the third apprenticeship is usually provided through separate modules in design courses or through moral philosophy courses taken outside the school of engineering, which tend to focus on classical ethical theories.

As I have said, the three apprenticeships of professional education are not independent of each other. They interact, and each is influenced by the overall pattern of emphasis and integration across the three. Because the first apprenticeship drives engineering and legal education, the third apprenticeship in those fields is very much shaped by the priority given to intellectual matters. Because of the central place of clinical experience in medicine and nursing, professionalism in those fields is shaped by the context of practice.

I want to turn now to what I think are four important ways that knowledge-driven and practice-driven professional education differ in the ways they construe what is important in professionalism or ethics and in their approaches to supporting its development. I will start

by running through the four areas of contrast for the practice-driven fields of medicine and nursing and then go through the same points in the knowledge-driven field of engineering.

First, in the practice-driven fields, the third apprenticeship, encompassing professionalism in a broad sense, is seen to matter. There is an understanding among both faculty and students that the professional formation of nurses and physicians needs to be addressed. It is telling that when asked about the most memorable learning experiences in their training as a whole, both medical and nursing students often mention events that bring home in an emotionally compelling way their responsibility for patients' welfare, like significant mistakes they have made in caring for patients.

Second, in medical and nursing education, the third apprenticeship is enacted, not learned in the abstract. This means that it involves the development of habits (a kind of virtue theory approach) and judgment in real situations rather than moral argument about hard cases (an analytic approach).

Third, professional formation is embodied in nursing and medical education. In both fields, role models students encounter have great salience for both educators and students and are thought to be central to the development of students' professional identity. Role models are understood to embody professionalism or its absence to a greater or lesser degree, and students often refer to teacher-clinicians they are inspired by and want to be like and teacher-clinicians they hope they won't be like.

Fourth, professionalism in these fields takes on a quality I call "dailiness." It is less likely to focus on large scale cataclysmic events or quandary ethics – the difficult-to-resolve conflicts among competing goods that interest analytic moral philosophers – and more likely to focus on things like being highly responsible and respecting the dignity and autonomy of the patient.

Turning to engineering education, we see quite a different picture. Let's run down the same four issues I talked about in medical and nursing education – *how much the third apprenticeship seems to matter* to faculty and students, and the qualities of *enactment*, *embodiment*, and *dailiness*.

Although medical faculty and students are not immune from skepticism about the third apprenticeship, this attitude is more pervasive in engineering education. As one engineering student said, "Our degree is about the technical stuff. Someone on the job will tell us if something is ok to do." Most faculty seem to share this view. Both faculty and students believe moral character is all that matters for ethical practice in engineering and that by the time students reach college it is too late to affect their character. (By the way, law school faculty and students say this too.) Because the third apprenticeship in engineering is framed as engineering ethics, which is seen by faculty as a specialized field, most feel unqualified to teach it. This also affects the salience of the third apprenticeship, since for most faculty, it is not something they are likely to address except in connection with the pervasive issue of safety.

Second, learning about engineering ethics is not usually enacted. The central pedagogy for engineering ethics modules and courses is the case study. This brings students closer to practice and can be very engaging but doesn't ask them to enact their understanding or develop habits of professionalism or professional judgment in the contexts of practice. Ethics courses outside the school of engineering are even less connected to practice.

Third, for the most part, engineering students are not seeing and interacting with practicing engineers who can be experienced as models of the kind of professional they might aspire to be or fear becoming. We heard comments about models all the time in medical and nursing schools, but never did in engineering schools.

Fourth is the quality of dailiness: As I said, the most common approach to teaching engineering ethics is the case study. What are these most likely to be cases of? Many focus on cataclysmic events like the big historical cases I mentioned earlier. These cases are important, but this kind of event is less likely to come up in practice than more mundane issues like honesty about the limits of one's expertise or conflict of interest.

We saw some very thoughtful efforts to foster professionalism, professional identity and ethics in engineering education. These almost always involved a stronger integration with practice, more enacting, more embodiment, and more dailiness. They include some very powerful service learning programs, engineering ethics cases that focus on issues of routine practice, and design courses that fully integrate concerns for environmental sustainability and human welfare.

We believe that integrating the second and third apprenticeships is a powerful approach to teaching professionalism. But there are downsides as well as advantages to embedding professionalism in practice without sufficient reflection and intellectual framing. Clarity of thought about professionalism and ethics is important and may not happen if students don't step back from practice for a more analytic view.

Important aspects of ethical-professional understanding can get lost when attention is too narrowly focused on relationships with particular patients, for example. Grappling with issues of daily practice may not give students a clear sense of civic professionalism, including the ability to make sense of and take part in deeply consequential questions such as today's debates over health care provision. At a few medical schools, we heard faculty talk about the importance of conveying a strong understanding of and concern for social justice in health care but that concern was far from pervasive in medical or nursing education. Lack of attention to these big picture issues can hobble students' development as citizens of their professional communities. I like to call the third apprenticeship the apprenticeship of professionalism and purpose, and it is important to make sure that the larger sense of public purpose is not lost in the dailiness of professionalism in practice.

### Tentative Questions for Discussion

1. Professionalism, professional responsibility, and professional ethics are understood differently in different fields, but in all fields they include some basic qualities that could reasonably be understood as aspects of moral personality or character – things like honesty, sense of responsibility, willingness to place their responsibility to patients or clients ahead of personal self-interest when these conflict, and so on. There is a widespread belief among professional educators and students that character is fixed early in life and that it cannot be influenced by higher education. In what ways do we believe that these people are right, in what ways do we believe they are wrong?

2. In our view, establishing a sense of professional identity that is grounded in moral values should be a key aspect of the preparation of professionals. Different professions pay differential degrees of attention to this goal. Given the importance of moral identity in current thinking about moral development, how could professional educators best support the development of ethically grounded professional identity in their students and how does professional identity relate to moral identity in a more general sense?

3. One conclusion we are drawing across the five studies of the PPP is that the programs that seem to do the best job in the 3<sup>rd</sup> (ethical/professional) apprenticeship are those that integrate it fully with the 2<sup>nd</sup> (apprenticeship of practice). This means that if the 2<sup>nd</sup> is seriously underrepresented in the training, as we believe it is in legal education, it will be hard to robustly represent the 3<sup>rd</sup> even though law schools require courses in legal ethics (often called “the law of lawyering”), in which students discuss ethical dilemmas for lawyers, often concerning conflicting responsibilities. What do you make of this? After all, many familiar efforts to foster moral development are closer to the 1<sup>st</sup> than the 2<sup>nd</sup> apprenticeship – cognitive, intellectual, rather than practice-oriented. (It is probably worth bearing in mind here that Kohlberg’s own efforts to promote moral growth turned from moral discussions to just community schools, which in essence concern morality in a practice setting.)

4. Does the apparent value of integrating support for professionalism with the learning of professional practice point to a central role for moral emotion in professional ethics?

5. One big question all professional education faces is the role played by the strong press of the context on the moral conduct of practicing professionals. In most professions, the contexts of practice (large, market-driven law firms; busy hospitals; corporate settings for engineering work) don’t support moral conduct very well. If we had Phil Zimbardo here, he would probably say that the press of the context is really the only thing that matters. If that is true, there isn’t a lot that professional educators can do to protect students from later environments that press for unethical behavior. But I wonder if there are ways to teach students how to resist those pressures, in part maybe by making them aware of how those corrupting environments work. What do you think? Does your research or research you know about suggest ways to prepare students so they will later be less vulnerable to contextual presses? Could professional educators provide some kind of inoculation against morally toxic contexts?