Learning to Learn and Teaching to Learn

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Abstract

Medical training is notoriously difficult, and the motivation to learn and teach can decline with time. Building from the principles of self-determination theory, we provide reflections of a trainee, a trainee and supervisor, and a faculty supervisor on the role of promoting autonomy, relatedness, and competence in motivating learners to learn and teachers to teach. This active approach to learning and teaching can be an empowering practice to ultimately improve clinical experience and performance.

Keywords: Self-determination Theory, Motivation

The Trainee (Jia Zhu)

"What would you like to do?" the attending physician asked the medical team during morning rounds. Overwhelmed with excitement, I shuffled through my notes to find the name of the antibiotic I had looked up the night before.

"How about clindamycin?" my supervising resident suggested after a brief pause, just as I found my neatly written assessment and plan.

I felt the overwhelming rush of defeat. Despite hours of reviewing my patient’s chart and mulling over the best antibiotic options, I could not get my answer out fast enough. I shrugged it off and followed the team to the next patient’s room.

The journey to become a physician is notoriously difficult. As a medical student, I expected the challenge of balancing long hours with self-directed learning and social engagements. But, that was not it. It was something less tangible, what I perceived to be an unspoken culture that often left me feeling dependent, incompetent, and outcasted in the very profession I had longed to be a part of.

Beyond the explicit learning objectives of clinical rotations, there is a hidden curriculum of culture that is foreign to the medical trainee who predominately operates at the civilian level of social behavior (Hafferty, 1998). The most
striking difference is the medical hierarchy. On my first day on the wards, I was introduced to my team, which included the attending, residents, and interns, as well as the larger care team of nurses, medical assistants, and the many other individuals necessary to care for pediatric patients. As a trainee, I was often an outsider, rotating in and out with no long-term commitment to the patients or staff. I quickly learned that I had to earn the trust and respect of every individual to achieve my goal present from day one: To learn.

Learning requires not only an understanding of content but also a desire to invest effort in the study of the content itself. Despite my passion for medicine, I could feel my effort dwindling after just a couple of months of clinical training. As much as I cared about my patients and wanted to be a great doctor, my intrinsic motivation to do so was constantly being challenged.

Self-Determination Theory (SDT) teaches that motivation, and the desire to learn, is based on the fulfillment of three basic psychological needs: autonomy, competence, and relatedness (Deci, 1985). When medical trainees enter into the hierarchy, they are dependent on others (not autonomous), lacking in practical clinical knowledge (not competent), and an "outsider" (lacking in relatedness).

Despite a rough start to the clinical world in medical school, I found myself at ease as an experienced fourth-year medical student. At first, I thought I was just a better clinician, seasoned with an entire year of experience and knowledge. My supervisors frequently elicited my assessments and trusted me to lead family meetings and help with documentation. They even invited me to join them for team lunch or social activities on the weekends. Over time, I found myself reading at night to learn about my patients and looking forward to presenting on morning rounds with my team. At the end of my pediatrics rotation, I felt like I had finally found my place in pediatrics. What I had failed to consider was that my success was not necessarily because I was better, but rather because my teachers were better.

Resident and attending supervisors are under tremendous pressure to take care of patients. Often times, teaching is placed on the back burner for more pressing clinical demands. At such times, trainees are left to dwindle in the background, often resenting their lack of a perceived role in the clinical environment. Reflecting on my experiences, I realized that my own clinical growth was grounded in the SDT principles, which my supervisors supported to ultimately motivate me. The more I felt related to my team, autonomous as a caretaker, and competent as a physician in training, the more motivated I was to learn. Motivation, I realized, was bidirectional. When I graduated from medical school, I wondered how I could apply these tenets to motivate my future supervisors to teach and trainees to learn.

The Trainee and Supervisor (Jia Zhu)

I embarked on my pediatric internship with a vow: To stay motivated and to motivate the next generation of trainees. I made a conscious effort to get to know my entire team as individuals rather than hospital staff, including my medical students. When the service was busy, I volunteered to take on clinical duties for my team of co-residents and supervisors in addition to caring for my assigned patients. When my supervisors got to know me as a person and saw me as a true "team player," they granted me more autonomy to take care of patients. More autonomy translated into more opportunities to learn from my clinical decisions, both successes and mistakes, which boosted my clinical competence.

Now halfway through my intern year, I realized that the best supervisors were the ones who made me feel like a valuable team member and motivated me. As a budding supervisor, I aim to do just that. I tried a variety of things from simply making sure to say hello to my student in the morning before rounds to highlighting their role as a
caretaker and advocate in front of the patient and the medical team. Though I am still working out the kinks, I can definitively say that this “active” approach anchored in the principles of SDT has at least made my medical training journey much more rewarding as a learner and a teacher.

"What do you want to do?" the attending physician asked the team during morning rounds.

I look at the new medical student on our team and his neatly written assessment and plan. I smile and say, "Actually, our medical student John has a great plan."

His eyes light up, and he begins, "Amy is a 2-year-old…"

The Supervisor (Daniel Schumacher)

In one sense, the medical student experience described in Dr. Zhu's initial clinical experiences is part of the enculturation, learning, and professional identity development of trainees as they enter the clinical years. In another sense, the anecdotes she relays tell a story of supervisors who sometimes find the marginalization of trainees too easy and convenient. As a pediatric emergency medicine attending, I have witnessed the uncomfortable tension of a student starting a shift in the ED and the attending who is not sure where to place him to be "out of the way."

Students should take control of their learning experience, an effort Dr. Zhu describes in her training experiences. However, those supervising medical students, residents, and fellows should also overcome potential barriers to engaging trainees. Attending to the principles of SDT can engage trainees of varying levels of personal motivation, and small efforts can go a long way.

To promote a sense of relatedness, I talk with trainees about their lives outside of work – what they enjoy doing, what they are interested in, and details about their children if they have any. This seems basic because it is. However, it is also powerful. It lets them know that I care about them as individuals and view them as valued colleagues in our joint profession.

To promote a sense of autonomy, I allow trainees to make reasonable care decisions that may differ from my own. Though this may be challenging for many supervisors, it is a critical component of supervising trainees. Sending pertussis testing in a child I believe may have a viral respiratory illness is low stakes and low cost. Sometimes these illnesses can look similar. Offering empiric treatment for gonorrhea and chlamydia, while test results are pending, when I have a lower suspicion for one of these pathogens is not unreasonable if the clinical presentation could be consistent. My goal is not to endorse any and all suggestions in the care of patients I co-manage with trainees. Rather, it is to be comfortable enough with the range of appropriate management that I can allow flexibility where appropriate, provide input on what I would do differently when relevant, and allow trainees to make reasonable decisions when they provide fitting justification. Without this latitude, trainees do not have the opportunity to learn from their decisions and optimally advance their clinical reasoning and patient management skill development.

Finally, to promote a sense of competence, I am honest about my mistakes and gaps in knowledge that I had during my training and still have today. There are, and always have been, a plethora of things I do not know. Some of these things are common knowledge to others in the specialty, especially when I was in training with a steep learning curve for diseases and procedures that were new to me. Relaying these current and previous deficiencies promotes a sense of competence for residents through both normalizing the developmental process and shining light on things that I do not know and they can teach me.
Working to facilitate the desire to learn in my role as a supervisor arises from indelible experiences I had with supervisors who did this well while I was in training. I still remember the urology residents who shared their closet-sized workroom with me as a student (sense of relatedness), the otolaryngology residents who let me spend most of my time with the pediatric attendings as a student (sense of autonomy), and the hospitalists who praised my contributions to care in front of the family as a resident (sense of competence). These and countless other individuals during my training years provided wonderful role modeling for what we all should do as supervisors – motivate even the intrinsically motivated trainees.

Take Home Messages

Notes On Contributors

Dr. Jia Zhu is a pediatrics resident at Boston Children's Hospital.

Dr. Daniel Schumacher is an Assistant Professor at the University Of Cincinnati Department of Pediatrics, Chair of the Education Research Group, and a member of the Pediatrics Milestone Project Working Group.

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Appendices

Declarations

The author has declared that there are no conflicts of interest.