

# What Really Matters: A Qualitative Study of Student Perspectives on Exceptional Teaching

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## Abstract

### Purpose

This study aimed to identify characteristics that define exceptional teachers and provide recommendations for teaching in medical education.

### Method

A total of 3,409 student narratives that described characteristics of exceptional teachers were curated from August 2017 to January 2022 at Penn State College of Medicine. Narratives were submitted voluntarily in response to a single, open-ended question: "Please tell us about what those teachers did that resulted in an exceptional educational experience and how it changed you?" Narrative lengths varied, with a mean (SD) of 78.4 (58.0) words (range, 2–776). A systematically selected subset ( $n = 872$ ) was analyzed using an inductive approach. After

codebook development, 3 independent coders analyzed data (pooled Cohen  $\kappa = 0.77$ ), organizing codes into themes and subthemes.

### Results

Three key themes (8 subthemes) were identified: (1) challenging and practical learning opportunities were embraced by students as a source of growth (being challenged with progressive complexity while simultaneously feeling supported, making the most of natural learning opportunities, and growing from judicious, actionable, and frequent feedback); (2) being included and valued as part of the team encouraged learners to contribute, to exercise autonomy, and to work alongside others as a colleague (being accepted and integrated as part of the team,

receiving guided autonomy in interactions and responsibilities with patient care, and feeling respected as a teammate and future colleague); and (3) demonstrating enthusiasm for teaching and patient care, combined with a humanistic approach to role modeling, was inspirational to students (witnessing passion for teaching and caring for students and drawing inspiration from authentic role-modeling).

### Conclusions

The study findings support 5 recommendations: (1) challenge students while maintaining psychological safety, (2) provide feedback that is frequent and specific, (3) give autonomy for growth, (4) make them part of the team, and (5) cultivate the trainee-to-teacher relationship.

The medical learning environment is significantly influenced by the residents and attending physicians who supervise and mentor trainees. Understanding the specific attributes that contribute to exceptional teaching presents a complex challenge. This study aimed to identify characteristics that define exceptional teachers and provide recommendations for teaching in medical education.

Despite numerous insights from medical students on the qualities that constitute

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*Acad Med.* 2025;100:1284–1290.

First published online July 17, 2025

doi: 10.1097/ACM.0000000000006172

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Supplemental digital content for this article is available at <http://links.lww.com/ACADMED/B751>.

an exceptional educator, precisely defining these traits remains challenging. Sutkin et al,<sup>1</sup> in their comprehensive review of 68 articles, identified 480 characteristics of good clinical teachers, organized into 49 themes across 3 categories: physician, teacher, and human characteristics. They further classify teaching characteristics as noncognitive (e.g., relationship skills, emotional states, personality types) or cognitive (e.g., perception, memory, reasoning, procedural skills). Notably, two-thirds of these themes were noncognitive, meaning students place value on the relational aspects of learning over traditional schemas of academic teachers (i.e., the sage on the stage). Overall, they determined that "excellent teaching, although multifactorial, transcends ordinary teaching and is characterized by inspiring, supporting, actively involving, and communicating with students."<sup>1</sup>

Among resident physicians, a study of 122 students and 60 residents found 4 characteristics of teacher effectiveness:

involve the learner in the learning process, communicate expectations for performance, stimulate the interest of the learner, and skillful interaction with patients.<sup>2</sup> Furthermore, respecting learner autonomy and fostering self-directed learning were crucial for effective ambulatory teaching. In 2016, Montacut et al<sup>3</sup> sought to provide an update to these findings with 115 written reflections from 28 medical students regarding what they valued in resident teachers. They described creating a safe learning environment, being a team member, receiving coaching and feedback, preparation, and creating a stimulating learning environment.<sup>3</sup>

Each of these studies describes characteristics that positively enhanced the learning environment and emphasizes the value students place on noncognitive themes. However, these studies lack practical examples of how exceptional teachers enact these behaviors (i.e., how do they help students become self-directed, inspire

students, and cultivate educational relationships).

In 2016, Penn State College of Medicine (PSCOM) established the Office for a Respectful Learning Environment (ORLE) to tackle learner mistreatment. Initially focused on addressing complaints, the ORLE evolved after feedback surrounding underrecognition of outstanding teaching occurring at PSCOM, leading to the launch of the Exceptional Teacher Initiative.<sup>4</sup>

PSCOM learners were invited to submit narratives of teachers who positively impacted or influenced them. Although the program was created with modest intentions, the results have been impressive, having received 3,409 narratives in the first 5 years of the program, and the program continues today. Our team analyzed this dataset to answer the following questions: What makes someone an exceptional teacher in the eyes of the medical student and how do they do it? Instead of focusing on negative examples of what not to do, the information we gathered can be used to reinforce or modify teaching practices based on what trainees find exceptional.

## Method

### Setting and design

At PSCOM, all learners were asked for feedback on teachers they found exceptional. Feedback was collected in the form of voluntary narratives, without any motivational mechanism to encourage participation. Learners were invited to submit narratives at the end of all course and clerkship evaluations or directly through the ORLE website. The single, open-ended prompt asked, "Please tell us about what those teachers did that resulted in an exceptional educational experience and how it changed you?" The narratives were then sent via email to the named educator with copies to their educational and clinical leadership. Narratives were received by the director of ORLE (G.F.B.) and then entered into a Smartsheet, where student information remained anonymous. Responses varied in length, from a few words to a few paragraphs, with a mean (SD) word count of 78.4 (58.0) (range, 2–776). Narratives were collected between August 2017 and January 2022. Coding and analysis were conducted throughout 2022.

### Ethical considerations and review

The Exceptional Teacher Initiative was designed with voluntary narrative submission, ensuring equitable opportunity for participation. Risks to participants were minimal because all narratives were deidentified by removing names and dates before analysis. Data were stored securely and accessed only by study personnel. This study was reviewed by the PSCOM Human Subjects Protection Office and determined not to involve human subjects research as defined by federal regulations. Therefore, further review and approval by the institutional review board were not required.

### Qualitative data analysis

Review of the literature informed our inductive approach to developing the codebook (see Supplemental Digital Appendix 1 at <http://links.lww.com/ACADMED/B751>). From the total dataset ( $n = 3,409$ ), 20 narratives were randomly selected to pilot test the codebook. After satisfactory performance without further revisions, we systematically sampled every fourth narrative from the full dataset, yielding an additional 852 narratives. Given that the initial 20 narratives were coded under the same codebook as our primary sample set, these narratives were then added to this sample, resulting in a final total of 872 coded narratives.

The data were coded by 3 independent qualitative coders (W.O.-B., E.Y.W., H.C.) with DeDoose coding software (Sociocultural Research Consultants, Manhattan Beach, California). Interrater reliability was measured by calculating a pooled Cohen  $\kappa$ , which assessed pairwise agreement among coders and then averaged those comparisons into a single overall value.<sup>5</sup> The pooled Cohen  $\kappa$  in this study was 0.77, indicating substantial agreement.<sup>6</sup> Although below the traditional 0.8 benchmark for qualitative research, this value reflected the challenges inherent in coding larger datasets but remained within the acceptable range for substantial agreement.<sup>7</sup>

Using an inductive approach, we clustered codes and categories that were similar into initial themes and subthemes. To ensure that our analysis was undertaken systematically, we organized the codes under their corresponding

subthemes and checked for overall structural balance (i.e., were the codes spread evenly over the 3 key themes) and completeness (were all the codes used). We reviewed the themes to ensure there were clear and identifiable distinctions among the themes and iteratively worked with the wording of the themes until the researchers agreed that the codes and the data were reported meaningfully and represented the essence of the data.<sup>8</sup>

## Results

Our findings revealed 3 key themes: (1) challenging and practical learning opportunities were embraced by students as a source of growth; (2) being included and valued as "part of the team" encouraged learners to contribute, exercise autonomy, and work alongside others as a colleague; and (3) demonstrating enthusiasm for teaching and patient care, combined with a humanistic approach to role modeling, was inspirational to students. Each theme was characterized by supporting subthemes (Table 1).

### Challenging and practical learning opportunities were embraced by students as a source of growth

Experiencing challenges can help to improve growth and, in turn, applied learning. Students in this group appreciated opportunities to learn through difficult questioning and exploring the limits of their knowledge and skills. Three subthemes identified the ways in which challenge and novel learning opportunities were received from the students' perspective: being challenged with progressive complexity while simultaneously feeling supported, making the most of natural learning opportunities, and growing from judicious, actionable, and frequent feedback.

**Being challenged with progressive complexity while simultaneously feeling supported.** Students indicated a preference for instructors who built on previous experience and current knowledge: "[Doctor] takes into consideration our strengths and weaknesses when teaching us, which provides a more tailored approach" (student [S] 1583). After establishing a base, these educators apply "progressively increasing levels of complexity in clinical reasoning" (S1592).

Table 1

**Themes and Supporting Behaviors of Exceptional Teachers in Medical Education, Penn State College of Medicine, 2017 to 2022**

Theme	Subthemes
Challenging and practical learning opportunities were embraced by students as a source of growth	<ul style="list-style-type: none"> <li>• Being challenged with progressive complexity while simultaneously feeling supported</li> <li>• Making the most of natural learning opportunities</li> <li>• Growing from judicious, actionable, and frequent feedback</li> </ul>
Being included and valued as part of the team encouraged learners to contribute, exercise autonomy, and work alongside others as a colleague	<ul style="list-style-type: none"> <li>• Being accepted and integrated as part of the team</li> <li>• Receiving guided autonomy in interactions and responsibilities with patient care</li> <li>• Feeling respected as a teammate and future colleague</li> </ul>
Demonstrating enthusiasm for teaching and patient care, combined with a humanistic approach to role modeling, was inspirational to students	<ul style="list-style-type: none"> <li>• Witnessing passion for teaching and caring for students</li> <li>• Drawing inspiration from authentic role-modeling</li> </ul>

Exceptional teachers pushed students to reach beyond their current potential. Teachers fostered an environment where students felt challenged but “comfortable to get answers wrong and to ask questions” (S1566). As several students note, exceptional teachers struck a balance between pushing their students and not pushing them over the edge:

[Doctor] encouraged me to work at my maximum capacity continually referring to the sub-I experience as a ‘safe place to stretch.’ (S1222)

In a respectful way and a friendly learning environment, she truly pushed me out of my comfort zone and taught me how to think about the bigger picture while paying attention to small details. She was more than my attending, she was a mentor. (S1901)

[Attending] had high expectations of me as a student which required me to be better with each patient encounter .... She was teaching me how to truly be a doctor not a medical student. She challenged me, and I have grown immensely from our handful of sessions together. She is a remarkable educator, and I am thankful to have been assigned her as my preceptor. (S738)

**Making the most of natural learning opportunities.** Exceptional teachers found learning opportunities with real patients and in real time, which could be challenging for students because real patients do not always model the textbook. These teachers treat “every aspect of the day [as] a potential teaching moment” (S1126). They taught in the space before, during, or shortly after a patient encounter while the experience

was fresh. Trainees describe the effect of learning through real patients helped them understand “their whole clinical picture so that we could better integrate concepts we had learned previously with new clinical knowledge” (S1566). As one trainee stated,

[Resident] made a point of teaching (and reinforcing) new clinical skills and/or knowledge to all the students on the service each day and stood out as a leader in creating an atmosphere of active instruction and learning from patient encounters. (S1402)

Trainees preferred educators who linked theoretical knowledge, “info I needed to know for the test,” with practical applications, “things I needed to know clinically” (S1136). One student described appreciation when challenged to not just know the information but also take the next step: “[He] consistently pushes us to learn the material we need to know and apply our knowledge in novel situations” (S1566).

**Growing from judicious, actionable, and frequent feedback.** Students in this study were receptive to receiving feedback and appreciated instructors who were willing to “point out what we are doing wrong and correct accordingly” (S978). Compared with less forthcoming educators, exceptional teachers stood out because they were “not afraid to give accurate honest feedback which I find some residents shy away from” (S1003).

Trainees described exceptional teachers who played a longitudinal role in their development by delivering an evolving

form of “effective, actionable feedback at the conclusion of each session” (S738). Feedback was frequent, and the educators consistently delivered. As one student noted,

[Doctor] was so mindful of my growth as a trainee over the course of the four weeks. She actively gave productive feedback, and we reassessed our goals from week to week to ensure that I continued to develop increased autonomy and skills over the course of the rotation. (S2229)

**Being included and valued as part of the team encouraged learners to contribute, exercise autonomy, and work alongside others as a colleague**

Experiential learning was a potent catalyst for growth and development. Narratives highlighted how exceptional teachers consistently weaved students into the team’s fabric from the onset. Three subthemes demonstrate how the learning experience is enhanced through inclusion: being accepted and integrated as part of the team, receiving guided autonomy in interactions and responsibilities with patient care, and feeling respected as a teammate and future colleague.

**Being accepted and integrated as part of the team.** Narratives described the positive impact of being part of the team. Exceptional teachers demonstrated a propensity for early team integration of students. “From day one, she made me feel like a part of the team and she actively made time for my education by encouraging me to present on rounds and help with routine tasks in patient care” (S887). Exceptional teachers sometimes initiated contact before the clerkship started. This helped students navigate multiple unknowns. As one student said,

[She] sent an email before I began on the service with where I should go, when, and what cases I would be in the [operating room] for. She also told me what cases I would be presenting at a case conference. (S1327)

Exceptional teachers delegated tasks that encouraged participation that directly contributed to patient care: “He gave the student meaningful tasks and fully involved the student in patient care” (S863). Trainees recalled the effect of being included in team responsibilities as feeling like “a contributing member of the team, instead of a lost new third-year medical student” (S863).

Narratives depict instructors who created a culture of inclusivity: “[Resident] went out of his way to involve me and entrusted me with a lot of responsibilities and tasks. Made me feel like I was part of the team” (S1112). One student described a resident whose exceptional trait was simply “[including] the med students in discussions with attendings and patients” (S633).

**Receiving guided autonomy in interactions and responsibilities with patient care.** Exceptional teachers facilitated guided autonomy. Narratives described educators who encouraged students to independently “see patients and present them on rounds,” “take a history and perform an exam,” and “call consults” (S629). Even routine aspects of patient care provided an avenue for trainee contribution: “He allowed me to function as an intern, putting in orders, writing notes, carrying the pager for consults” (S941). As one student noted,

She tried her best to involve me in the care of patients by asking me to run to pharmacy, prepare IV sets, prepare fluids, and many more ways. I really enjoyed the time spent in the [operating room] with her. (S1836)

In addition to feeling like part of the team, exercising autonomy allowed students to practice skills—“to both soar and stumble all while in a safe environment to do so” (S1399). Trainees learned from mistakes and improved through cycles of practice and reflection: “[When calling consults] I learned the importance of a brief but detailed [history and physical examination] when reporting to other physicians of other disciplines” (S926).

**Respect shown for students as a teammate and future colleague.**

Trainees emphasized the positive effect on learning when viewed as an equal. As a contributing team member, students felt valued as a future colleague: “[She] paid attention to my presentations, especially my assessment and plans, made me feel very supported and like I was operating on the level of a resident” (1006). Another student said,

[Doctor] has created a human connection with me as a student such that I feel more like a junior colleague than a mere nuisance or ‘tag along.’ I am grateful for his continued service both to my education and the community that we are blessed to care for. (S1399)

Support for the student as a team member also took the form of ensuring emotional well-being. Exceptional teachers showed this by regularly checking in with the learner: “When she checks in with us about how we’re feeling, I know that she genuinely cares and isn’t just asking to check something off her list” (S1586). Another student commented,

We saw quite a few tough situations during the rotation, and she routinely debriefed with me to ensure that I was handling it all okay and gave me suggestions on how she has learned to cope with similar experiences. (S894)

Moreover, support was sometimes more modest, yet profound: “he treated me like a person” (S1352).

**Demonstrating enthusiasm for teaching and patient care, combined with a humanistic approach to role modeling, was inspirational to students**

Beyond acquiring clinical knowledge, students were continuously processing experiences with exceptional teachers and subsequently sculpting nascent professional identities. Two subthemes emerged that characterized how trainees were inspired by exceptional teachers: witnessing passion for teaching and caring for students and drawing inspiration from authentic role-modeling.

**Witnessing passion for teaching and caring for students.** Exceptional teachers exhibited a strong passion for education and demonstrated this by investing extra time with their students: “[Resident] also took time each day to go over imaging and other neuro topics we would see throughout the day” (S696). Students recognized this time investment as a commitment to their education. Moreover, trainees perceived investing time in the student as a sign that the educator cared. One trainee wrote, “I greatly appreciate how much time he spent teaching us. He clearly cares a lot about medical student education and our professional development” (S1566).

Narratives described exceptional teachers who were “incredibly kind ... welcoming” (S911); “always comforted us, supported us, and genuinely cared for us” (S922); and continually “ensuring that each student has the best future possible” (S884). As one student expressed, the impact of an educator who routinely invests in each

student can result in a strong bond: “She fosters our development in education and careers and is the one person I can rely on to consistently care about my experiences and learning in medical school” (S978).

Additionally, narratives frequently emphasized that simple gestures like “work[ing] hard to know us each by name” (S1482) were recognized, respected, and highly valued by trainees. One student noted, “When I approached him for the first time to ask a question and he knew my name it was evident he really cared about the course and making sure we were actually learning” (S905).

**Drawing inspiration from authentic role-modeling.** Narratives demonstrated that students were highly attuned to the professional socialization occurring around them. As they learned the norms, customs, and unwritten rules of the medical profession, exceptional teachers served as authentic role models: “He is extremely thoughtful to everyone around him (colleagues, residents, students, patients, etc.) and he is a wonderful role model for me!” (S973). Students describe that the personalities of exceptional teachers set up the scaffolding of their future professional identities: “He is a very skilled and talented physician/surgeon, but he has a very unique way of dealing with patients and is 100% empathetic, patient-centered, and is exactly the type of physician that I have always envisioned of becoming” (S1352).

Beyond collegiality and bedside manner, narratives also emphasized the importance of being allowed to see and share vulnerability:

[Attending] took the time each morning to sit with him and explain the next steps to try to work him up for a liver transplant as quickly as possible. The patient, however, suddenly died in the [surgical intensive care unit]. Watching [Attending] speak with the patient’s family reminded me of the importance and impact of good bedside manner in helping patients and their families go through hard times. She also reminded me that physicians are human and shedding a few tears over the loss of a patient is part of the healing process. (S1238)

[Attending] opened about times when she ‘failed’ and her being able to come out and share her down moments was extremely inspiring for me and actually really motivated me to be a student and a future physician who can do the same. (S1106)

## Discussion

This study analyzed narratives of exceptional teaching from the perspective of the medical trainee. These narratives represent a curation of positive learning experiences, shedding light on various techniques, behaviors, and attitudes that contribute to exceptional teaching. The outcomes of this analysis are consistent with existing research and underscored the substantial value trainees place on the noncognitive attributes exhibited by medical educators.<sup>1-3</sup> Our study is distinguished as the largest qualitative analysis of student perspectives on exceptional teaching to date. Additionally, we intentionally examined how exceptional teachers embodied these traits, enhancing the potential for practical application of our findings. Five recommendations were developed by integrating existing knowledge from the literature and novel insights from our findings regarding the practice of these qualities.

### Recommendation 1: Challenge students while maintaining psychological safety

One of our primary findings runs counter to a prevailing concern of many clinical faculty: the fear that pushing learners will lead to adverse outcomes.<sup>9,10</sup> Conversely, Sutkin et al<sup>1</sup> expressed surprise that none of the 68 articles in their review mentioned characteristics such as “challenging,” despite personal reflections of this behavior being exhibited by their favorite teachers. Our study revealed that trainees placed a high value on educators who offered challenging experiences, provided they experienced a sense of psychological safety. In other words, students were more inclined to take risks when they felt secure in their learning environment. Our study contributes to the increasing body of evidence supporting the role of psychological safety as a critical component of effective medical education.<sup>11,12</sup> Moreover, our study expounds on how educators provide challenging experiences without compromising psychological safety.

Exceptional teachers first assess the trainee’s baseline ability, then gradually apply progressive complexity. This approach facilitated the construction of knowledge through incremental steps, allowing students to operate at the forefront of their capabilities while also illuminating their limitations. In this way, the student continually functioned at the

horizon of what they could and could not do.<sup>13</sup> Iterative feedback sessions played a vital role in gauging readiness for progression toward challenging tasks, thereby preventing learning plateaus. Additionally, these check-ins created opportunities for clarification, fostered stronger trainee-teacher relationships, and nurtured psychological safety.

### Recommendation 2: Provide feedback that is frequent and specific

Feedback is an indispensable component of medical education because it enables learners to identify their strengths and weaknesses, gain insight into their performance, and receive guidance on how to improve.<sup>14</sup> Therefore, it is imperative that providing feedback not be restricted solely to end-of-rotation evaluations.<sup>15</sup> Prior studies have established that feedback is highly valued by the trainee.<sup>1,16</sup> Our findings elaborate on trainee preferences regarding feedback frequency and specificity.

First, feedback should be frequent. Similar to the findings of Irby et al,<sup>2</sup> exceptional teachers in this study outlined practical goals, then reliably followed up at short intervals. Trainees who received daily or weekly feedback described increased engagement because they were self-aware of their own progress. Second, feedback should be specific. Exceptional teachers delivered feedback that was thoughtful, actionable, and frequent. Interestingly, trainees in this study identified the willingness of exceptional teachers to give critical or negative feedback as desired and even admirable, describing residents who do so as “not afraid” or noting a deviation from the tendencies of other educators. Additionally, narratives in this study are also concordant with positive associations of immediate corrective feedback to refine technical skills.<sup>17</sup> In this way, feedback continually evolves to meet the learner where they are in their development.

### Recommendation 3: Give autonomy for growth

Medical trainees build and refine schemas from experimentation and reflection.<sup>18,19</sup> Our findings resonate with previous studies<sup>16,20</sup> that highlight the importance of educators who create an autonomous and supportive climate. We know that students report higher engagement levels when they feel a sense of ownership and

responsibility for their tasks.<sup>20</sup> Exceptional educators nurture learners’ intrinsic motivation and self-determination.<sup>16</sup> Our study provides insight into exactly how exceptional teachers give autonomy and the spectrum of responsibility that students found meaningful.

Exceptional teachers encouraged students to see patients independently, hold and respond to pagers, call consultations, and prepare medications for procedures. Even routine responsibilities recasted trainees from passive observers into active participants and provided purpose to their roles on the team. Moreover, autonomy profoundly increased the trainee’s proximity to organic learning opportunities with real patients. A pervading element of narratives that describe autonomy was a seemingly universal desire for purposeful contribution. Exceptional teachers facilitated this contribution through reliable inclusion.

### Recommendation 4: Make them part of the team

Trainees in this study preferred exceptional teachers who offer apprenticeship over observership. Even before entering the clinical environment, our data described that trainees carry an understandable level of anxiety from unknowns (i.e., where to go, who to talk to, what to do). We found that early inclusion as part of the team was valued and helped to ameliorate fears of “being a shadow,” “in the way,” or feeling like a “lost new third-year medical student.” Although our data focused on exceptional teachers, we know from previous research that these feelings may stem from past experiences of being excluded from learning opportunities.<sup>21</sup> Moreover, our study aligns with prior research that students’ learning is enhanced by not only being told they are part of the team but also participating as part of the team.<sup>22,23</sup> Our findings illustrate how exceptional educators support a student’s role on the team.

Exceptional teachers integrated students into their ranks through a variety of methods. In this study, enthusiastically welcoming the student to the team established a sense of belonging. McClintock et al<sup>24</sup> found that students diagnose an environment as safe or unsafe within the first day. Early acknowledgment and genuine enthusiasm played a large role in setting a

durable foundation for the remainder of the rotation. Moreover, exceptional teachers readily delegated responsibilities to the trainee that directly contributed to patient care. Importantly, a real contribution to patient care was paramount because it provided validity to the trainee's position on the team. In juxtaposition, excessive redundancy undermined the significance of tasks and nullified the student's role. Bates et al<sup>23</sup> describe that team contribution provides students with "a sense of progress derived from their increasing responsibility for patients and acceptance into the health care community." As a result, trainees who played a meaningful role felt valued as colleagues and reported increased trust, camaraderie, and communication within the team.

### **Recommendation 5: Cultivate the trainee-to-teacher relationship**

Multiple studies consistently emphasize the significance of the relationship cultivated between the trainee and teacher as a highly valued noncognitive behavior.<sup>1,2,16</sup> Our study corroborates with the literature because the importance of an evolving relationship is a pervasive thread interwoven among each of the aforementioned recommendations. Whether it be psychological safety, feedback, autonomy, or camaraderie, a bidirectional exchange of trust was paramount. Our study isolated the positive contributions exceptional teachers make to the social exchange and how that deposit was interpreted by the trainee.<sup>1</sup> For example, we found that students in our study viewed an exceptional teacher's passion and time investment as a deliberate choice, signifying a deep commitment to their education and to them personally.

Moreover, narratives in this study emphasized the trainee's preference for educators who shed hierarchy in favor of humanism. Exceptional teachers modeled vulnerability by displaying emotion or sharing times of failure. Situated among the multitude of studies on role-modeling in medical education, our findings illustrate that role-modeling vulnerability has a profound impact on the trainee and may influence professional identity formation going forward.<sup>25-28</sup>

Finally, our analysis identified small but impactful behaviors that contribute to the

cocreation of the trainee-teacher relationship. Trainees emphasized the importance of being acknowledged and having their name remembered. This finding echoes commentary from a study on psychological safety by McClintock et al,<sup>24</sup> where the authors noted that such simple behaviors are often absent in many learning environments. On the surface, this recommendation may appear intuitive. However, if our narratives describe exceptional teachers whose most exceptional traits were the ability to remember names and kindness, how often are trainees experiencing the opposite?

### **Strengths**

This study has several strengths. First, narratives in this study describe experiences from the perspective of the student and are specific to what the trainee valued. Moreover, their narratives provide specific anecdotal examples of how exceptional teachers exhibit exceptional qualities. Second, our dataset was curated organically in the time shortly after the experience, rather than a distant retrospective account. Third, the size of our dataset was robust and larger than any earlier reports.

### **Limitations**

Several limitations should be considered when interpreting these findings. First, the data were collected from a single institution, PSCOM, which may limit the transferability of findings to other academic settings. Institutional culture, curricular structure, and teaching norms vary across academic settings and could influence how exceptional teaching is perceived.

Second, the narratives were submitted voluntarily in response to a single open-ended prompt, introducing the potential for selection bias. Students may have been more inclined to share particularly memorable or emotionally resonant experiences, potentially overemphasizing standout moments while underrepresenting more routine but highly effective teaching practices.

Third, although some narratives described personal growth, these were subjective reflections. This study cannot determine whether the identified behaviors translate into measurable educational outcomes. Prior research suggests that psychologically safe, inclusive, and

engaging learning environments enhance learning, motivation, and performance in medical education. However, although the literature supports this association, our study does not empirically evaluate whether the perceived qualities lead to improved performance.

### **Conclusions**

With appropriate consideration of this study's limitations, we believe the study provides valuable insight into how medical trainees perceive exceptional teaching. Among the 5 aforementioned recommendations, the desire to be challenged stands out as a distinctive finding. Clinical educators may worry that pushing learners could be perceived negatively. However, our data suggest that trainees not only welcome a challenge but also view it as a hallmark of exceptional teaching—when grounded in psychological safety. The value of this study lies in its exploration of how that balance is achieved in practical application.

The remaining recommendations reflect qualities more familiar in the existing literature: providing frequent and specific feedback, granting autonomy, fostering team inclusion, and cultivating humanistic relationships. This study builds on that foundation by offering context-rich examples that reveal the complexity behind these seemingly straightforward traits. By illustrating how such behaviors are enacted in day-to-day clinical practice, it adds depth to our understanding of exceptional teaching. This study describes the nuance between being "on the team" and being "part of the team." Similarly, it highlights the difference between autonomy in name only and autonomy that equips trainees to contribute meaningfully.

Although the data reflect perceptions rather than measured outcomes, the narratives reveal what matters most to trainees. Taken together, these findings offer a practical, learner-informed framework to guide faculty development, elevate teaching practices, and support the next generation of medical educators.

*Funding/Support:* None reported.

*Other disclosures:* None reported.

*Ethical approval:* This study was approved as exempt by the Penn State College of Medicine Institutional Review Board, March 24, 2021, STUDY00017348.

*Data:* Data were collected purely from internal sources at PSCOM through the ORLE. No outside data sources were used.

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