

# Defining the Engaging Learning Experience from the Athletic Training Student Perspective

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**Context:** Clinical experiences are an integral part of athletic training education and are where students gain the hands-on, practical knowledge and skills necessary to provide quality patient care in the field. However, some clinical education experiences may not allow athletic training students to become clinically integrated.

**Objective:** To explore athletic training students' perspectives on their clinical learning experiences, specifically as they relate to an engaging learning environment.

**Design:** Qualitative study.

**Setting:** Commission on Accreditation of Athletic Training Education accredited undergraduate programs.

**Patients or Other Participants:** Twenty-one athletic training students (6 juniors; 15 seniors) with an average age of 22 years (20–23 years) from 4 National Athletic Trainers' Association districts volunteered to participate in our study.

**Data Collection and Analysis:** Participants responded to a series of open-ended questions by journaling their thoughts and opinions through the secure website QuestionPro. Data were analyzed using open coding that was guided by a general inductive procedure. Data credibility was established through peer review, interpretative member checks, and multiple analyst triangulation.

**Results:** Our cohort identified an engaging learning environment as one that allowed active learning and participation as an athletic trainer and included communication between the student and preceptor, patient interactions, and instructor feedback regarding development and application of skills and knowledge.

**Conclusions:** Athletic training students prefer a more active learning style and value observing their preceptor engage in patient care, but they also want the opportunity to practice their athletic training skills to gain competence and confidence.

**Key Words:** Professional socialization, experiential learning, authentic learning

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## INTRODUCTION

Clinical education is the foundation of athletic training programs (ATPs), as it provides athletic training students the opportunity to gain the necessary skills to succeed as an entry-level professional. It is during this experience that students begin the socialization process and learn the roles of and expectations placed on athletic trainers through firsthand experiences and mentorship by a clinical preceptor. It is estimated that more than half of athletic training students' educational experiences are spent in the clinical setting,<sup>1</sup> and intuitively we know that the athletic training student values the time engaged in patient care and learning in an authentic setting.<sup>2,3</sup> Clinical experiences are an integral part of athletic training education, as they should be the place where students gain the hands-on, practical knowledge and skills necessary to provide quality patient care in the field. Despite understanding the need for authentic learning, athletic training students' perspectives regarding its value and the aspects included in the engaging experience are unclear.

The National Athletic Trainers' Association (NATA) and the Executive Committee for Education are steadfast in their mission to maintain educational standards that promote learning experiences that allow athletic training students to provide optimal care to their patients. Educational reform has been a major contributor in the mission to help ensure quality educational experiences to enhance students' knowledge and skills. Athletic training programs, as outlined by the 2012 Commission on Accreditation of Athletic Training Education (CAATE) Standards,<sup>4</sup> must provide clinical education that promotes autonomous practice; provides authentic, real-time opportunities to engage in clinical practice; and fosters clinical competence by allowing decision making and critical thinking. Furthermore, the 2012 CAATE standards<sup>4</sup> require that ATPs provide a variety of clinical opportunities in terms of both settings and patient populations, which prepares students to function in an assortment of settings.<sup>2</sup> However, not all sites offer the same learning potential, and exposure to diverse populations sometimes comes at the expense of hands-on, interactive learning. Therefore, programs should provide as many opportunities as possible for athletic training student knowledge integration and skill application throughout the course of their clinical education to ensure appropriate professional development.

While students do not express a dominant learning style preference, most are identified as action-orientated, practical, or hands-on learners.<sup>5</sup> They appreciate learning by doing<sup>5,6</sup> and value the opportunity to observe clinical practices.<sup>5</sup> While observation helps students understand appropriate skill application, physical practice develops comprehension and competence. Students' desire to both observe and do are reflected in Kolb's<sup>6</sup> student learning template, where they are described as being either a "reflective observer" (values the chance to observe and watch) or "active experimenter" (appreciates practical learning). To date, there is little evidence

regarding the extent to which students experience either reflective observation or active engagement during their clinical education or how these different learning styles impact overall competence and socialization. Since the student must be an active participant in an authentic learning experience to achieve the greatest benefit,<sup>7-9</sup> our purpose was to explore students' perspectives on what makes a learning environment engaging.

## METHODS

We used an asynchronous online interview method to collect data regarding students' clinical education experiences. The benefits of this increasingly popular technique are well understood and help remove the distance barrier, provide a confidential medium for sharing thoughts and ideas, and eliminate issues regarding scheduling interview times.<sup>8</sup> Using the internet to collect and store data also improves participant recruitment and retention, since millennial students are well versed in, used to communicating through, and typically have constant access to technology.<sup>9</sup>

### Participants and Participant Recruitment

Since there is currently no accessible database available to reach students in educational programs, we capitalized on professional relationships with CAATE accredited programs to identify and recruit participants (convenience sample).<sup>10</sup> Faculty contacts and professional colleagues at 7 CAATE programs were e-mailed and asked to forward our study information to any student meeting the following inclusion criteria: (1) formally enrolled in a CAATE accredited undergraduate program; (2) has completed a minimum of 2 clinical education experiences; and (3) has had both on- and off-campus (not at the university/college formally enrolled) clinical education experiences.

Our initial subject pool included 18 athletic training students. Initial data analysis determined that saturation had been reached.<sup>10</sup> However, an additional 3 students completed the study prior to website closure. Responses from 21 athletic training students (6 juniors; 15 seniors) with an average age of 21 years (range: 20–23) from 4 NATA districts and 5 distinct CAATE ATPs were analyzed. These students had experience with either National Collegiate Athletic Association Division I or Division III athletics and were engaged in clinical education experiences for an average of 23 hours per week (range: 16–35 hours).

### Data Collection Procedures

Our qualitative study used QuestionPro, an online data tracking website designed to provide asynchronous, in-depth interviews for research purposes. Online interviewing, particularly journaling, has become popular, as it allows the researcher to provide potential participants with a convenient, confidential means to partake in a research study. Comfort

**Table. Interview Guide**

1. How would you describe your personal learning style as a student?
2. Drawing on your previous clinical experiences, please describe an ideal learning situation or environment that you have been a part of.
  - a. Why is this your ideal learning situation or environment?
  - b. Which style do you feel this is most similar to—"reflective observer" or "active and engaged"? Please explain.
3. In your own words, how would you define "reflective observation" learning?
4. In your own words, how would you define "active or engaged" learning?
5. Have you had clinical experiences in which you felt "hands-on" or very engaged in patient care/responsibilities of athletic trainer? Please describe your experience in the clinical placement(s) in detail.
  - a. Did you feel as though this was a good learning environment?
  - b. Did it help or hinder your professional development?
6. Have you had an experience in which you felt more of an "observer", where you were hands off? Please describe your experience in the clinical placement(s) in detail.
  - a. Did you feel as though this was a good learning environment?
  - b. Did it help or hinder your professional development?
7. Which style do you feel is most helpful for your learning style? Why?
8. Do you feel that the clinical experiences you have had so far have matched your learning style as a student? Why or why not?
  - a. Please describe in detail your previous clinical education experiences thus far in your academic preparation and how well they have matched your learning style as a student.
9. Have you been satisfied with your experiences at your clinical placement sites relative to their effectiveness in maximizing your learning and professional development? Please explain in detail your response.
10. What would you change about your clinical education experiences that would have made them a better learning experience? That could have furthered your professional development?

and rapport are key elements when conducting an interview but may be difficult to establish during a telephone interview. Using an online interface increases the participant anonymity, likely enhancing their shared responses and details. Online interviewing also allows the participant to complete the interview at their lesiure, and this flexibility is particularly appealing to college students balancing the academic and clinical responsibilities associated with athletic training.

Participants were asked questions to ascertain demographic information, clinical education experiences, and learning preferences. The open-ended questions were derived from previous literature on student learning, clinical education, and Kolb's Learning Inventory.<sup>5,6,11</sup> The instrument was peer reviewed by an educator with clinical education expertise for clarity, content, and flow. The final version was edited for grammar and question order, as suggested by this peer (Table). Additionally, the study was pilot tested by 2 athletic training students meeting the aforementioned criteria, and although no changes were made to the data collection process or interview guide after the pilot study, these data were not included in the final analysis.

### Data Analysis

Data were analyzed by incorporating principles from open coding and general inductive analysis.<sup>12</sup> The process was guided by looking for trends in our data regarding preferred learning style and/or environment. The first step in our process was to examine all transcripts closely for similarities. On the second data evaluation, conceptual labels/tags were assigned to frame the key points and trends. On the third data reading, we grouped and organized the key points into themes, which reflected the operational definition of the dominant theme. The 2 primary authors completed the coding independently. Upon completion, they discussed their individual findings and reached consensus regarding the final

themes, definitions, and codes. Furthermore, the authors agreed that only codes containing responses from a minimum of 50% of the participants would be included in the final analysis and that the content of the code was paramount over the label assigned to it.

### Credibility

Data credibility was established by employing a peer review, interpretative member checks, and multiple analyst triangulation.<sup>10</sup> An athletic training scholar completed the peer review of the interview guide to establish rigor of data collection. Three randomly selected individuals reviewed the final themes to confirm the analysis and secure the interpretative member check. Multiple analyst triangulation was completed by the 2 lead authors as described in the "data analysis" section.

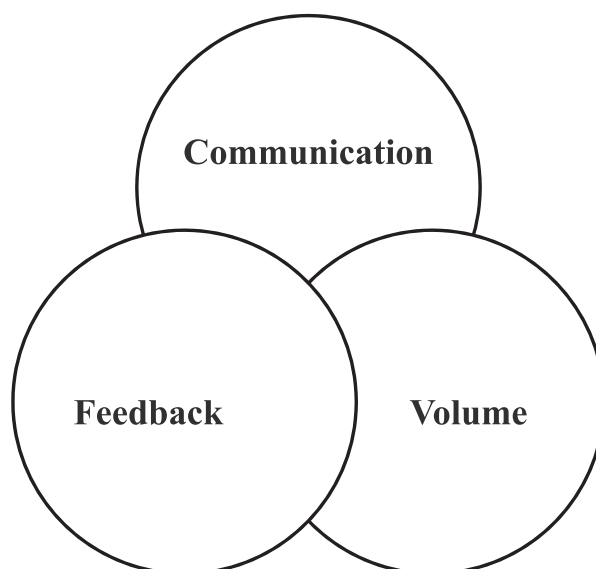
### RESULTS

Our general inductive analysis of the textual data revealed that our group of athletic training students perceived that they learned best when being engaged with hands-on learning. They defined active engagement as learning opportunities that were *guided by communication between the student and the preceptor*, could support chances for multiple *patient interactions*, and provided *feedback and legitimization* regarding skill and knowledge application and development (Figure). These themes are identifiable and distinct yet overlap slightly.

### DISCUSSION

The literature lacks consensus on student learning preferences, and often researchers suggest they are diverse learners who cannot be classified by 1 dominant learning style.<sup>13,14</sup> However, 1 trend that appears to be consistent is that the athletic training student has a strong affinity for authentic

**Figure. Elements of an active engagement learning experience.**



learning.<sup>14–16</sup> Investigations on athletic training student learning styles and preferences rely heavily on the Kolb Learning Style Theory and Inventory, which was developed on the premise that learning emanates from experience and application of that experience.<sup>6,17</sup> Athletic training students are also identified as convergers,<sup>14</sup> a learning style which favors problem solving, usefulness, and application of information.<sup>6</sup> Convergers learn best when allowed to think about their experiences and then are given the opportunity to transfer that experience into knowledge through practical application. Our student cohort was no different, identifying the need to be actively involved in their learning by applying their knowledge in clinical education experiences. Our findings support the existing literature but also expand on the types of authentic learning experiences students value. For example, previous work<sup>5</sup> identified the importance of hands-on clinical experiences but had yet to determine which aspects contribute to an engaging, authentic experience.

According to Kolb,<sup>6</sup> experiential learning is concerned with how learners transform their experiences into knowledge and skill. Viewed on a learning continuum, learners will process information by being involved in a new experience, watch others to develop their own impressions, create a theory to explain their observations, and solve problems and make decisions by implementing their knowledge. Kolb<sup>6</sup> also proposed that not all learners employ all 4 processes and often prefer 1 style to the others. Our participants classified themselves as “hands-on” and “active” learners who wanted to be engaged in their clinical skills while in their clinical education experiences. Shelby, a junior, shared, “I learn best with hands-on experiences. It really drives the ideas into my understanding because I have been able to witness the ideas and then make the connections while implementing them.” Tim said, “[clinical] is a good learning environment because I am able to apply what I have learned in my classes [in a realistic situation].” Draper and Coker, in separate studies, found similar results where athletic training students were recognized as kinesthetic or practical learners.<sup>14,18</sup>

Students viewed an engaging learning experience as “actively participating in learning (Tim),” and, “hands on and being

actively involved while learning (Shelby).” It was also classified as being “more than just lectured to (Leigh),” or, “watching, without doing (Mike).” A junior level student, Sarah, shared this assessment of her learning style saying,

*I always excel in the practical and lab portions of classes. At clinical, I learn more by taking what I have learned in the classroom and applying it to real situations presented by [my] athletes.*

Other common responses regarding learning preferences included, “I learn best when I am engaged (Jake),” “hands-on learner (Laura),” and, “hands-on learning is very important to me (Amy).” Our findings are supported by the earlier work of Mensch and Ennis<sup>5</sup> who found that athletic training students value hands-on learning, as it allows things to “make sense” and benefits material retention. Simply observing may help with cognitive understanding, but practical application allows students to make the connection between knowledge and skill. Similarly, experiential learning<sup>19</sup> helps medical students learn and retain important skills, such as intubation, a parallel which can be made to athletic training students learning the many skills necessary to be a successful clinician.

All 21 participants identified themselves as hands-on learners who prefer to be actively engaged during their learning experiences. Our participants described hands-on learning and active engaged learning as synonymous. For example, junior student, Laura, said, “I do really well with hands-on learning activities.” She then defined active or engaged learning as, “a way to work directly with an athlete/patient. A way of practicing [my skills] and not simply understanding concepts.” Another junior student, Jake, shared, “active or engaged learning is hands-on learning.” Our cohort is similar to the literature which describes the millennial student as craving interactive learning, which is realistic and linked to real life.<sup>9</sup> Berry<sup>7</sup> further highlights the concept of authentic learning, which is linked to real-world application, in which his athletic training students challenged him to provide them with meaningful learning. Not all authentic learning has to be hands-on or practical, but it is important for it to include meaning and match professional practice. Active learning was



important for this group of students to grasp the fundamentals of clinical practice and was demonstrated by 3 factors that facilitate a positive, successful engaging learning experience: guided communication between the athletic training student and the preceptor, repetition due to an adequate volume of patients (patient interactions), and adequate feedback to help foster skill improvement (Figure).

**Preceptor and Student Communication.** Interpersonal and communication skills are essential preceptor standards<sup>20,21</sup> which allow them to effectively mentor students during their clinical education experiences. Clinical education is a critical component of athletic training students' professional development, since they spend more than half of their time learning in that environment.<sup>1</sup> Quality clinical education is also crucial because it allows students to engage in authentic learning, something that helps them realize their role<sup>22</sup> and gain affirmation as a future athletic trainer.<sup>23</sup> Our findings appear to indicate that the relationship between the athletic training student and preceptor enhances authentic learning and is an important aspect of an engaging experience. For example, our athletic training students suggested, "[h]aving a preceptor who was very open to answering questions and great at challenging me can be a huge help [in creating an engaging learning situation] (Mike)."

Athletic training students want preceptors who are professional, demonstrate enthusiasm for teaching, and who invest in their development by engaging them during their clinical education experiences.<sup>24</sup> As described by Renzulli et al,<sup>25</sup> the student must be an active member of the learning team where the preceptor serves as a mentor, rather than an instructor, encouraging them to be engaged. Role playing is an engaging method of instruction that provides legitimization of the athletic training student's role as an athletic trainer.<sup>23</sup> A senior athletic training student's summary of engaging learning highlights the importance of communication between him and preceptor:

*Active learning is a very experimental process. For instance, instead of being told what history questions need to be asked when completing an evaluation, a preceptor would allow the student to think for themselves and formulate questions. Then afterwards, if the student forgot any important questions, the preceptor can chime in and ask the questions. There then needs to be a discussion about what the student forgot and why those questions were important. In simplistic terms, active learning is learning through personal experience, not through observation (Tim).*

Discourse and clinical questioning are ways preceptors engage students,<sup>11</sup> as demonstrated by this senior athletic training student's comment, "[m]y preceptor always made time at the end of the day to answer my questions, even if time during the day was hectic or crazy (Shelby)."

Another student illustrated the importance of frequency in communication with her preceptor as she discussed an ideal learning situation. She shared:

*[Ideally for me], when you are able to practice under their supervision. I think it is helpful when the preceptor pulls you aside to explain things or is able to answer questions about how to improve or do something differently (Jen).*

Our findings align with the existing literature on effective preceptor characteristics and highlight the importance of demonstrating interest in athletic training students' professional development as a means to provide an engaging learning environment. Facilitation of this type of environment can also foster professional commitment and enthusiasm<sup>26</sup> and persistence to graduation.<sup>22,25</sup>

**Patient Interactions.** Clinical education experiences are critical in student professional socialization, as it allows them to learn ethical and legal practice, cultivate clinical competence, and develop clinical decision making and confidence in clinical practice. It is suggested that, as an athletic training student becomes more integrated into the role of a health care professional, they develop more passion and commitment to the profession,<sup>26</sup> and integration is often gained when the experience is interactive, engaging, and diverse.<sup>27</sup> We also know that clinical integration can positively influence an athletic training student's decision to persist in their degree programs for athletic training.<sup>22</sup> Patient interactions reflect the student's need to be continually engaged in learning, mostly due to skill application to real patients, which allows them to feel prepared for professional practice. A senior, Jen, described her ideal learning environment as one that is high volume. She shared:

*My ideal learning situation would be where there are multiple opportunities to learn something or do something in a given day. For example, being at the high school setting, you have multiple chances, many different sports coming in to receive care. You are able to think on your feet and apply what you know to their specific needs/sport.*

Another senior, Shelby, also described her ideal learning experience as her current rotation because it had "plenty of athlete interactions, [which] provided many opportunities to try things out myself, and therefore it helps me learn more effectively."

A junior student, Chase, described being currently in his ideal situation because the experience, as structured by his preceptor, was hands-on. His experiences were stimulated by the preceptor, but rooted in engagement in actual patient care. He said:

*My rotation is great now. My preceptor has provided me with ample opportunities to make decisions on treatment plans. The preceptor is very good at letting me be the active engaged learner I relate to.*

As presented by Renzulli et al,<sup>25</sup> the instructor, or in this case the preceptor, must be willing to mentor the student during authentic learning to allow for learning to occur and be realistic.

Other common responses, highlighting the importance of patient interactions, included, "I am currently in an ideal learning situation. I am constantly allowed to be hands-on with the athletes (Laura)," "repetition is key to learning [for me] (Mike)," and, "the large number of athletes I was exposed to gave me the opportunity to practice the skills I needed to, this was ideal (Chase)." Athletic training students want the chance to engage in clinical practice, as noted by Mensch and Ennis.<sup>5</sup> They appreciate and favor clinical education experi-

ences over classroom and laboratory learning because they can apply their knowledge and skills to real patients and situations. Take, for instance, this comment from Sarah, “[a]t clinical, I learn so much more by taking what my teachers have lectured about in class and applying it to real situations presented by athletes.”

Our findings also highlight the need for engaging experiences that facilitate learning. Monotonous experiences, which do not offer diversity or volume, can leave the athletic training student disenchanted or frustrated<sup>28</sup> and limit clinical integration, an important aspect to professional socialization, persistence in degree programs, and readiness to enter the workforce as an athletic trainer.<sup>2,22</sup> Volume was mostly expressed as opportunity to engage in patient care, but it was also mentioned as the prospect to interact frequently with their preceptor for learning and feedback on performance, overlapping the other 2 themes from our study. One athletic training student illustrates this importance sharing:

*I am very engaged in patient care [currently]. My preceptor allows me to be actively involved, conducting the evaluations and treatments on my athletes, which she oversees. I communicate with her daily about every one of them. I am engaged in my learning, and I do get feedback, which [helps] me make improvements [on my performance] (Will).*

Patient volume, or opportunities to engage in clinical practice, is an important aspect for engaging learning experience. Many instructional techniques exist to help facilitate authentic learning in the classroom, such as role playing and case scenarios; however, our athletic training students indicated the need for realism through patient care as immensely important for learning. Equally as important are frequent interactions between the preceptor and the athletic training student for feedback and legitimization. Despite previous literature<sup>2</sup> indicating the need for diversity in clinical education experiences, our athletic training students did not mention the importance of diversity. However, we believe this is because they did benefit from clinical placement diversity, as many had at minimum 2 varying experiences. So, although diversity was not mentioned, it may have been assumed that they valued it because it allowed them to engage in learning. Our participants had completed more than 1 clinical educational experience, with a different preceptor in each experience, thus the basis for our assumptions. This theory can be further investigated.

**Feedback and Legitimation.** Feedback is information that a preceptor provides their student to help them improve their performance and should be constructive and affirmative.<sup>29</sup> Feedback can also help athletic training students develop graded and guided autonomy. As they become more confident in their skills, the preceptor can begin to provide more freedom with their experiences. Sexton et al<sup>30</sup> and Levy et al<sup>31</sup> suggest feedback can improve an athletic training student’s performances and encourage independent, critical thinking and practice. Feedback is also an important tool to facilitate learning, especially for the millennial student.<sup>9,32</sup> For example, 1 athletic training student supported the importance of feedback to create an engaging learning environment while fostering confidence as well as competence by saying:

*I like being given the opportunity to be doing a lot of hands-on skills and deciding what to do. I like to be allowed to learn by*

*doing through real life feedback from patients and preceptors. I can gain confidence but also important skills (Laura).*

Another student, Sarah, discussed her preferred learning style as, “[my clinical education] has allowed me to be an active learner. I have someone who can make suggestions or point out mistakes before I am practicing on my own.” Feedback has the ability to not only provide indicators on performance, but also facilitate legitimization as students seek approval and acceptance into their future role.<sup>23</sup>

A positive relationship between students and preceptors has been cited as bolstering an authentic, but positive learning environment,<sup>16</sup> which also fosters commitment to the ATP and encourages students to persist to graduation.<sup>22</sup> Preceptors commonly use feedback to promote their athletic training students’ learning,<sup>11</sup> and it appears that our cohort feels as though it also engages them in clinical practice and helps them feel more integrated into their role and learn actively. One student illustrated the need for feedback, sharing,

*[m]y preceptor would review my performance with me and tell me what I should do/add and what was done well. By the end, I knew he was confident in my abilities, as I was likewise (Tim).*

Preceptors are an important socializing agent for students; not only do they provide the athletic training student with learning opportunities, but they also provide feedback on their performance to help them gain legitimization on their future role.<sup>23</sup> Klossner<sup>23</sup> found that second-year athletic training students seek performance affirmation as it helps them gain an understanding of where they stand in the skill acquisition necessary to succeed as an athletic trainer. A junior athletic training student highlights this sentiment:

*The athletic trainers [at my clinical site] are there to allow me to do the best that I can do on an evaluation or treatment, whatever it may be, and then later tell me what I could have done better. If I were doing something wrong they would help me along the way but never take over. They made me feel very comfortable at my clinical rotation, which helped me feel more confident in my decisions and development (Joe).*

Our athletic training students wanted an engaging clinical experience to help them learn, and these experiences require the preceptor to provide performance feedback to legitimize their formal role preparation. This socialization into the profession requires a time of formal role preparation, during which the undergraduate athletic training student engages in the learning environment and is provided performance feedback by their preceptor.<sup>33</sup> Additionally, feedback should be timely and clear,<sup>11</sup> which aligns with strategies to reach and teach millennial students.<sup>9</sup>

Communication skills were also an important part of an engaging learning experience to our athletic training students and were mediated by the manner in which the preceptor was able to interact with them. It is important to highlight that the theme of communication reflected the manner in which the athletic training student and preceptor interacted and encompassed being approachable with frequent discussion opportunities. Additionally, many of our students described an effective, engaging learning experience as one where the

preceptor was welcoming, non-judgmental, and approachable. The idea of approachability was also important in the way the preceptor shared feedback for improvement. Take, for example, this comment by Mary, a junior athletic training student, about 1 of her clinical experiences:

*I felt very comfortable and welcomed at [College Name]. Not only were the [athletic trainers] nonjudgmental, the student-athletes did not laugh or think differently of me if I got an answer wrong. That was definitely my favorite part about being there, that I was comfortable to answer any question without worrying if I would get it wrong. Everyone [all preceptors] was very encouraging and made sure I understand the correct answer or technique.*

Athletic training students want preceptors that demonstrate a humanistic orientation and who enjoy teaching.<sup>24,34</sup> There is also evidence that preceptors, when supervising athletic training students, try to promote learning by being approachable but still provide challenges and support independence,<sup>11</sup> which supports our findings.

## LIMITATIONS AND FUTURE DIRECTIONS

Our findings represent a small cohort of athletic training students. Despite using data saturation as our guide and sampling from several ATPs, our results do not represent all athletic training students' experiences. A larger sample size would provide additional support to our findings. Another limitation is that online interviewing is devoid of interactions between the interviewee and interviewer. Although the method has documented methodological rigor, we did not have the chance to follow up or redirect the line of questioning with our sample group of athletic training students. Future studies could use other means of data collection, including telephone interviews or survey methodology. Our results are also based on student perceptions only and do not include those of their preceptor. Future studies could include data source triangulation between these 2 groups.

## CONCLUSIONS

Athletic training students value the time spent in clinical education, as it allows them the opportunity to gain an authentic learning experience. The clinical education experience needs to be engaging, which as indicated by our results, incorporates frequent communication between the athletic training student and the preceptor, sufficient opportunities to implement clinical skills and make decisions, and feedback that affirms the athletic training student's professional development, including strengths and weaknesses. Athletic training educators, when training their preceptors, should encourage them to provide their students opportunities for clinical practice and timely and constructive feedback. Furthermore, it is important to ensure that clinical education experiences provide sufficient patient interactions and hands-on learning experiences, as this is also important to facilitate an engaging, rewarding learning environment.

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