

An Analysis of Doctoral Students' Perceptions of Mentorship During Their Doctoral Studies

Stephanie M. Mazerolle, PhD, ATC*; Thomas G. Bowman, PhD, ATC†; Joanne C. Klossner, PhD, ATC‡
*Department of Kinesiology, Athletic Training Program, University of Connecticut, Storrs; †Department of Athletic Training, Lynchburg College, VA; ‡School of Public Health, University of Maryland, Fulton

Context: Mentorship has been established as a key facilitator of professional socialization for athletic trainers into various professional roles. Understanding how current doctoral students are trained to serve in future faculty roles is critical, as there is an increased demand for athletic trainers to serve in this capacity.

Objective: Gain an understanding of the relationship that develops between a doctoral student and the athletic training faculty mentor.

Design: Qualitative study.

Setting: Universities with athletic training doctoral students.

Patients or Other Participants: Twenty-eight doctoral students (19 females, 9 males; average age = 28 ± 3 years) participated in our study. The doctoral students were certified for 6 ± 3 years and represented 5 different National Athletic Trainers' Association districts and 9 different universities.

Main Outcome Measures: One-on-one telephone interviews following a semistructured script were recorded with all participants. Upon completion, each interview was transcribed and analyzed using a thematic approach. Peer review, multiple analyst triangulation, and stakeholder checks ensured trustworthiness.

Results: Three themes emerged from our thematic analysis procedure: (1) The relationship between the student and the faculty mentor needs to be one that is supportive, yet viewed as yielding *autonomy* and *collaboration*; (2) the relationship between the student and the faculty mentor needs to include opportunities for professional development specifically related to *skill acquisition and development* related to a future academic role; and (3) the relationship between the student and the faculty mentor must demonstrate a mutual *investment* in the educational experience.

Conclusions: Mentoring is necessary to help ensure a quality experience for doctoral students preparing for future positions in higher education or research. Like previous research in socialization, doctoral students want autonomy in their roles, but value their mentor's feedback and support. Therefore, doctoral faculty mentors should demonstrate strong communication skills and provide doctoral students opportunities for diverse learning experiences.

Key Words: Professional socialization, terminal degree, professoriate

Dr Mazerolle is currently Program Director in the Athletic Training Program at the University of Connecticut. Please address all correspondence to Stephanie M. Mazerolle, PhD, ATC, Athletic Training Program, University of Connecticut, 2095 Hillside Road, Storrs, CT 06269-1110. stephanie.mazerolle@uconn.edu.

Full Citation:

Mazerolle SM, Bowman TG, Klossner JC. An analysis of doctoral students' perceptions of mentorship during their doctoral studies. *Athl Train Educ J*. 2015;10(3):227–235.

An Analysis of Doctoral Students' Perceptions of Mentorship During Their Doctoral Studies

Stephanie M. Mazerolle, PhD, ATC; Thomas G. Bowman, PhD, ATC; Joanne C. Klossner, PhD, ATC

INTRODUCTION

Discussions regarding mentorship within athletic training have exploded, particularly as research¹⁻⁵ has suggested it is critical for socializing athletic trainers into various roles that are often deemed new to them (ie, student, preceptor). Globally, mentoring has gained increased attention as its benefits are far reaching, including improved retention rates in higher education, improved academic performance, and the development of healthy skills and behaviors that are needed to succeed professionally.⁶ Fundamentally, mentoring is beneficial because it provides the individual being mentored the chance to feel connected, integrated, and eventually legitimized into their role,^{1,7} whatever that may be.

Definitions of mentoring vary, but at the core, it is viewed as a partnership that develops between more experienced and less experienced individuals.⁸ When viewed on a continuum, mentoring can be naturally occurring (informal) or intentional and structured (formal).⁹ Most mentoring relationships are informally developed, yet both forms offer support (emotional and physical), coaching, guidance,¹⁰ and the construction of future goals.¹¹ For athletic trainers, mentorship provides all of the aforementioned attributes, as well as allows for the development of appropriate behaviors and attitudes that will help them succeed professionally.¹² Although most mentoring occurs in the clinical education setting between a preceptor and a student, academic mentoring can occur between faculty members and students,^{12,13} as they navigate academic advising requirements and other items related to professional development. The development of these relationships is important and is often a fundamental aspect of the socialization process as experiences possessed by the preceptor can help the student navigate the road to knowledge and skill acquisition.^{4,5,12}

The mentor role is focused on a commitment to advancing the mentee's professional goals through interpersonal engagement founded on sharing advice, guidance, and experiences.¹¹ The mentoring relationship is multifactorial, whereby there must be trust and personal interactions.¹⁴ Effective mentoring happens when there is effective communication between the mentor and mentee, which includes appropriate and timely feedback, active listening, and advice for personal and professional growth.¹⁴ The mentoring relationship between the doctoral student and their academic advisor can be impactful, as it can support the student's development in research activities, publications and speaking engagements, teaching and instructional styles, as well as grant writing.¹⁴ In athletic training, students often identify their preceptors and supervisors as mentors¹⁴; thus, it is likely that athletic training doctoral students recognize their faculty advisors as their mentors. Mentoring, in fact, is often seen as a critical aspect to being an effective athletic training educator.¹³

While information regarding the role of mentoring, the development of the relationship, and the impact it can have on professional development for the athletic trainer is

growing, there is little research from the perspective of the athletic trainer preparing to become an athletic training educator. As Payne and Berry¹⁵ suggest, in order for our profession to continue to grow and gain recognition, we must properly train the athletic training educator to succeed. Providing future athletic training faculty with the most appropriate educational experiences and training can facilitate future success as an effective educator. Since mentoring is a critical socializing agent during the educational process,¹⁴ it is important to understand the role mentorship plays in the development of future athletic training faculty as confident and capable educators. Therefore, the purpose of this paper was to capture the experiences of graduate students completing doctoral programs in relation to professional socialization for their future roles. Specifically, we explored their perceptions of the relationship formed between themselves and their academic/faculty mentor.

METHODS

Research Design

We utilized a qualitative paradigm to investigate the experiences of athletic trainers currently completing doctoral programs. One-on-one telephone interviews were completed to gain access to a geographically diverse group of participants and allow for continual discourse between the interviewer and interviewee. While the semistructured format provided a flexible platform for the interviewer to engage in casual conversation with the participant to increase rapport, the structure maintained consistency between all interviews for credibility purposes. Moreover, the telephone interview is convenient, yet allows the interviewee to be more spontaneous in their responses than paper surveys, often leading to a more honest, reflective response.¹⁶

Participants

Capitalizing on professional networking, we purposefully recruited doctoral students who were enrolled in full-time academic programs with an assistantship. We required participants to have completed a minimum of 1 year of academic coursework and hold an assistantship position. Our intentions were to examine the perceptions of those athletic trainers who were entrenched in their future role as a faculty member in higher education through employment at their respective institutions. Our participants were considered full-time students enrolled in doctoral programs (with varying program types—exercise science, rehabilitation sciences, etc.) and varying assistantship responsibilities (strictly research, teaching, clinical, etc.). After review of the National Athletic Trainers' Association (NATA) Web site, which presents the doctoral programs in athletic training, we determined the majority of doctorate granting programs provide assistantships, with the exception of 1 program. We also sought to have relative distribution between second-, third-, and fourth-year doctoral students to gain a representative understanding

Table. Individual Demographic Data

Academic Year	Pseudonym	Age	Sex	Years Certified	NATA District	Concentration
5	Isabella	28	Female	7	1	Education, curriculum and teaching, coaching and PE
4	Annie	26	Female	5	4	Education
4	Ashlyn	31	Female	10	9	Biomechanics
4	Bob	26	Male	5	3	Sports medicine
4	Brayden	28	Male	6	3	PE
4	Erica	27	Female	6	4	Motor control
4	Mark	28	Male	7	1	Kinesiology specialization in exercise science
4	Michael	27	Male	6	8	Human movement science
4	Rylan	34	Female	12	4	Education
3	Elizabeth	32	Female	8	4	Health and rehabilitation science
3	Janelle	36	Female	14	9	Rehabilitation sciences/biomechanics
3	Jessica	28	Female	6	4	Exercise science
3	John	27	Male	4	2	Rehabilitation science
3	Kimberly	31	Female	10	2	Rehabilitation science
3	Mary	30	Female	8	1	Kinesiology; concentration in exercise science
3	Pam	28	Female	5	4	Kinesiology
3	Steve	29	Male	6	4	Health and rehabilitation science
3	Susan	26	Female	4.5	3	Human movement science/behavioral learning
3	Terry	27	Female	6	2	Athletic training
2	Jamie	26	Female	4	4	Motor development
2	McKenna	25	Female	4	9	Rehabilitation sciences/biomechanics
2	Nate	30	Male	7	3	Sports medicine/athletic training
2	Paisley	30	Female	8	1	Sport management and leadership
2	Paul	26	Male	3.5	3	Human movement science
2	Pete	25	Male	3.5	2	Kinesiology, athletic training, and neuropsychology
2	Zoey	25	Female	4	1	Exercise science
1	Kelsey ^a	25	Female	3	1	Kinesiology; concentration in exercise science
1	Robyn ^a	30	Female	9	2	Rehabilitation science

Abbreviations: NATA, National Athletic Trainers' Association; PE, physical education.

^a Completed all coursework in first year of doctoral studies, but had not begun second year of work at time of interview.

of the mentoring relationship between faculty advisors and doctoral students. We sent individual e-mails to known faculty advisors of doctoral students to gain access to the potential participant pool. We obtained individual e-mail addresses from the advisors and sent recruitment letters to students meeting the aforementioned criteria. Data saturation was established at 28 participants, as we believed additional data would not uncover new themes.

Twenty-eight doctoral students (19 females, 9 males) with an average age of 28 ± 3 years participated in our study. The doctoral students were certified for 6 ± 3 years and represented 5 different NATA districts and 9 different universities. Of the 9 universities, 6 were recognized as very high research activity, and 3 were classified as high research activity.¹⁷ Most of our participants had teaching ($N = 8$) or research ($N = 9$) assistantships. The remaining participants reported a split between teaching and research ($N = 5$), clinical responsibilities ($N = 4$), and administrative tasks associated with undergraduate education requirements and accreditation standards ($N = 2$). Demographic data is presented in the Table. While time has not been found to be a mitigating factor

for the development of mentoring relationships, it is important to note that 2 participants included in the study had only completed their first year of coursework, which could impact experiences with their mentors.

Instrument

A semistructured interview guide was developed to provide basic structure for each interview session. We purposefully selected a semistructured format to allow natural dialogue to develop between the interviewer and participant without completely sacrificing consistency between each interview session. The interview began with basic demographic questions, including age, sex, years of experience, degree program, and previous educational experiences. Next, participants were asked a set of open-ended questions to explore their relationship with their advisor and overall professional development as a doctoral student. The questions were developed using the socialization framework^{4,5} and previous experiences of the authors as doctoral students and advisors of doctoral students. A peer review of the instrument was completed prior to data collection. The peer review consisted

Figure. Interview guide.

1. Why did you decide to pursue your specific area of study? Why did you select your current program/institution for your doctoral degree? Please explain.
2. Did anyone or anything in particular influence your decision to pursue a terminal degree? If so, who or what influenced this decision?
3. Who, if anyone, has significantly impacted your professional development since beginning your doctoral work. Please explain.
4. Please describe your level of satisfaction with the way in which your doctoral studies prepared you:
 - a. In the theories and methods of teaching?
 - b. As a future researcher in the field?
 - c. In your ability to provide your institution/profession with service.
 - d. Relevant to your clinical skill set?
 - e. Specific to other roles and responsibilities you may have such as program administration and/or serving as a preceptor.
5. During your doctoral studies, what other experiences did you have that have impacted your professional development (e.g., attending professional conference, workshops, etc.)?
6. If you could improve upon your experience as a doctoral student, what would you change? Why? Please explain.
7. What aspects of your doctoral studies did you enjoy the most? Why?
8. What aspects of your doctoral experiences did you enjoy the least? Why?
9. In what ways have your doctoral studies impacted your:
 - a. Professional growth in the field overall?
 - b. Future career path?
10. What advice would you give to:
 - a. Other ATs who are considering the pursuit of a terminal degree?
 - b. Educators who are mentoring AT doctoral students?

of instrumental content analysis, grammatical edits, and suggestions for improved flow of the interview questions by 2 athletic training educators with substantial educational research experience who have been trained in qualitative methods during their graduate studies. The final questions are presented in the Figure.

Procedures

After obtaining institutional review board approval, the authors piloted the study with 1 doctoral student fitting the inclusionary criteria. The pilot study allowed us to determine the flow of the interview and the interpretability of the responses. The pilot study confirmed the interview guide structure, and the pilot participant's interview was included in the final analysis. Each participant completed a 45–60-minute interview session with 1 of the authors, which was transcribed verbatim prior to data analysis.

Data Analysis and Credibility

We followed a thematic analysis approach as detailed by Guest¹⁸ to record the most recurrent patterns within the data

and allow the larger picture to materialize. A theme was established if a minimum of 50% of the participants described the phenomenon. The 6-step process began with a general analysis of the data, where we became familiar with the transcripts to visualize the developing patterns. The second phase included developing initial codes to describe the developing patterns' meaning. Next, the codes were grouped into overarching themes to better articulate the overall emerging theme. In the fourth phase, we examined the codes for interconnectedness and how they were linked to specific research questions. Those themes that spoke directly to the research questions and were supported by 50% of the participants were retained. In phase 5, the retained themes were defined conceptually. Finally, we completed the analysis by conducting a stakeholder check (ie, member check). The member check allowed 3 randomly selected participants to verify their transcripts, our analysis, and the presentation of the results by comparing it to their individual experiences.

We established data credibility through 3 distinct mechanisms: peer review, multiple analyst triangulation, and stakeholder checks. Our peer review was conducted in 2 steps: (1) review and feedback of the methodology as presented previously, and

(2) evaluation and confirmation of the data analysis process. Upon analysis completion, we shared our themes and their definitions, supporting textual data, and coding sheets with the peer. We asked the peer to confirm the themes as described and the labels assigned during the analysis process. The peer who has educational training in qualitative analysis, experience with conducting qualitative research, along with a strong scholarly record, supported the themes presented in the next section. The first 2 authors completed independent coding of the data prior to reviewing the findings. Each shared their conclusions regarding the data, and then discussed the presentation. Complete agreement was made prior to presentation to the peer and stakeholders. Upon completion of the data analysis process, we shared our findings, including our coding schematics, with those participants who agreed to do so. The participants who completed stakeholder checks all confirmed that our final analysis represented their experiences as doctoral students in regards to their mentor and academic advisor. Our member checks followed guidelines established in previously published work as well as descriptors provided regarding interpretative checks.¹⁹

RESULTS

Coding and subsequent analysis of the interview transcripts revealed the following themes in regards to the mentoring relationship within the doctoral students' experiences:

1. The relationship between the student and the faculty mentor needs to be one that is supportive, yet viewed as yielding *autonomy* and *collaboration*.
2. The relationship between the student and the faculty mentor needs to include opportunities for professional development specifically related to *skill acquisition* and *development* with regards to their future academic role.
3. The relationship between the student and the faculty mentor must demonstrate a mutual *investment* in the educational experience.

The aforementioned themes materialized from the interview transcripts and were identified as important aspects of the mentoring received during the doctoral experience. All doctoral students identified having a mentor and directly acknowledged their academic faculty advisor as that mentor. Moreover, all participants but 1 acknowledged that the relationship forged with their mentor was positive.

Autonomy and Collaboration

The relationship between students and faculty mentors needs to be one that is supportive, yet viewed as yielding autonomy and collaboration. The first theme can be summarized by a quote from Isabella as she described the relationship mantra she had with her faculty advisor who she believed was her mentor. She said, "[W]ork together as a team, collaborate together." Our participants spoke about the need to be treated on the same level, someone who was viewed as a copilot in the academic and research environment. Elizabeth shared her advice to faculty mentors saying, "[T]reating them [doctoral students] as an equal as much as you possibly can would be my advice." Elizabeth felt the ideology of an "equal" allowed for professional growth and the development of confidence in skills. Our participants, like Elizabeth's experiences, wanted to be viewed as peers, as doing so in their opinion allowed for the

building of confidence and skills to succeed in the future. For example, John said,

Approach doctoral students as peers and treat them more like peers instead of students. I feel like that helps you build confidence as an independent investigator; knowing that this person sees you as a peer and someone involved in research.

The importance of being treated like a peer or colleague was a means to foster independence and readiness to practice as a future educator and scholar. Paul, highlights the importance of collegiality saying,

Treat them like a colleague, as much as you can. Try not to focus on them being your student and doing what you want them to do or guiding them too much because it's not going to be long when they have to be totally on their own and be independent.

Our participants wanted their faculty mentors to give them experiences, but the freedom to explore how to complete those tasks and responsibilities. Terry shared what she needed from her faculty mentor, "[D]on't micromanage, make sure they are given some freedom to do what they want to do." Another participant highlighted the delicate balance between support and autonomy. Pam said,

Work with your doctoral students. Your doctoral advisor can give you enough to do and leave you alone and just throw you out and see if you are going to sink or swim, but if you don't know what you are supposed to do, you still need guidance and help deciding what to do.

Communication and support also emerged as a necessary component to the independence they needed to grow professionally. Susan reflected,

I think what is most important and been the most helpful for me is just constantly being able to rely on my mentors for advice but also still getting that autonomy so I am not reliant on them that I am still able to think on my own, create my own ideas, troubleshoot, and I think that is how you can best learn. Having open lines of communication, where I can let them know what I have going on, if I might need to adjust a deadline around or getting feedback regarding a methodology for a study or teaching, that can be helpful.

The development of the relationship between the mentor and doctoral student needed to be founded on trust and communication as illustrated by 1 participant,

I think it is important to have a good relationship where you can trust your students because I think being able to give them autonomy is something that is very powerful for their own growth because just being told what to do does not really let you explore your own interests, so I think having a good relationship where you trust your students and give them the opportunity to have autonomy.

Paisley again demonstrated the need for open communication and how that can facilitate independence and support simultaneously as the doctoral student navigates their experiences in their role,

I would say it is important to maintain an open line of communication because I think that is what has been most helpful for me. It is great to constantly be able to rely on my mentor for advice but still have the autonomy, so I am not reliant on my mentor. I am still able to think on my own,

create my own ideas, trouble shoot, and I think that is how you learn best. So just having that open line of communication and being available is key.

Professional Development

The relationship between students and faculty mentors needs to include opportunities for professional development. Our participants spoke about the need for autonomy to gain experience and confidence with skills necessary for their future jobs, but they also spoke about the need for the chance to engage in roles that will allow them to gain a full appreciation for faculty member responsibilities. This really was focused on the responsibilities of teaching and service, and less about the research process, as many felt that they were given ample exposure to the demands placed on faculty members in the area of research. When asked what advice he would give to faculty regarding mentoring doctoral students, Michael said,

I would let advisors [mentors of PhD students] know to give as many opportunities in all realms of what the student is going to be doing eventually. Everything seems to always be focused on research, which is great, but being able to give them opportunities to learn how to teach, experience teaching, and then learning more administrative things will give them a more broad knowledge base on the whole process and not just research because there are eventually more than just research expectations.

Comparably, Kelsey also encouraged faculty to provide diversity in learning experiences for doctoral students, as it could provide a realistic viewpoint to the complexity of the roles associated with a position in higher education. Kelsey said,

Just make sure that you are giving them the whole picture as far as the responsibilities and expectations, so it is not just teaching them how to be a great teacher, clinical coordinator, but it is also how to balance this with your family, and how do you maintain your hobbies, stay in touch with your friends. So I would definitely emphasize [to mentors] that PhD students need help working through conflicts, working through prioritization, and that can be just as influential as teaching them how to properly teach a class.

Experiences outside of research appeared to be a concern for our participants, as they wanted their faculty mentors to educate them about professional development opportunities available on campus or elsewhere and what other roles could be expected in the future. John, when asked about his advice for faculty mentors, said,

I guess the advice I would give is being able to give as many opportunities in all the realms of what the students are going to eventually be doing. Everything always seems to be focused on research, which is great, but like we've talked about with teaching, being able to give them opportunities to learn how to teach and also experience in teaching, then also learning more administrative things, being able to give them [students] a more broad knowledge based on the whole process and not just research because, in their eventual profession, once they finish their doctoral degree, it's going to be more than just research, mostly likely, unless they're in the independent research field.

Pete, like John, wanted his mentor to provide information and chances to obtain skills in other areas of athletic training and

the faculty role. He said, in regards to advice to faculty mentors, "I would encourage mentors to guide their students more. I would tell them to share with their students about getting involved at the committee level or higher within the NATA." Pete's comments were reflective of his understanding that faculty would be expected to engage in service-type activities, but he was not completely aware of what would fulfill that expectation and looked to his mentor to share his experiences and thoughts.

Engaging in all aspects of higher education, as previously demonstrated by the aforementioned quotes, was a key aspect to the doctoral experience and relationship between the faculty mentor and student. Our participants recognized the importance for gaining an understanding of the roles and responsibilities associated with higher education and academic-based positions and were cognizant that their faculty mentors played a role in providing exposure to those possibilities. Furthermore, the relationship between students and faculty mentors must demonstrate a mutual investment in the educational experience.

Mutual Investment

Our participants described the relationship they had developed with their faculty mentors as one that was reciprocal, such that they shared the same passion for research and learning. For example, Kimberley shared,

The relationship has to be a 2-way street. So, I feel like the mentor has to be interested in the direction the student wants to take as much as the student has to be interested in the direction the mentor is taking.

Erica, when reflecting on her experiences, felt the most important aspect of her doctoral program was her relationship with her faculty mentor, which was encouraging and communal. She said,

I think the relationship that you have with your advisor, your mentor, is the most important aspect of your doctoral experience. That is why I came to [institution name] because of [mentor name]. She has been supportive of my goals from day 1, and that is what someone should look for. You want to be somewhere that is going to be supportive of you and try to help you to reach the best of your ability.

Another doctoral student also highlighted the importance of finding a faculty member who shared the same values and research interests, as without that commonality, the experiences may not support professional development as needed. McKenna said,

Find an advisor who fits you well. If you end up at a program where you and your advisor do not get along or you don't feel as though you are gaining stimulation or opportunities, then you will become discouraged and probably are not going to enjoy what you are initially setting out to do.

Brayden also discussed the importance of a complementary relationship, as without it, the doctoral experience may not work. He said,

It needs to be easy to work with them [advisees]. If they [the mentor and student] have differing views, it will not work

well. If they don't complement one another, it will not work. You need to work together as a team and collaborate.

Compatibility was important in the relationship between the faculty mentor and the doctoral student, whereby both were invested in providing mentorship and being mentored.

DISCUSSION

Exploring how future faculty are being prepared to assume roles in higher education is of critical importance as illustrated by some of the recent scholarly discourse.^{20,21} Preparing a future faculty member inevitably begins during graduate education, often when the student assumes the role of the graduate assistant. The graduate student often fulfills a need for both a current faculty member and the host institution, typically serving as a teaching or research assistant. Our findings demonstrate that faculty mentoring is occurring during the doctoral student experience. We know that mentors can play many roles in a young professional's development, including as teachers, guides, advisors, trusted confidants, and a person who can nurture another individual because of their knowledge and previous experiences.^{11,22,23} Effective mentors offer support, patience, and enthusiasm, while educating and guiding their mentees.^{11,22,23} This was particularly true for our participants, as they described supportive mentors who provided opportunities for professional development by collaborating, allowing for independence, and being mutually invested in the relationship.

Autonomy and Collaboration

Mentoring has gained popularity as a fundamental tool to enable individuals to gain understanding of their selected future roles. It is a relationship that is formed between 2 individuals to work towards a common goal (ie, scholarly productivity). Two foundations of this relationship are trust and skill development.¹⁴ Like the work of those examining the importance of role transition,^{23,24} the need for skill development through real experiences was important to our participants. They believed it was critical to be given the opportunity to participate in activities that advanced their skills as future faculty members, but also to be given guidance and feedback. Open lines of communication were a primary facilitator for the mentor relationship, and as often illustrated in the mentoring literature¹⁴ or in mentoring programs, this was key to facilitating an effective experience. Moreover, the autonomy and collaboration between the mentor and mentee in our study supported the idea of advancing professional knowledge and attitudes, a key finding in the mentoring experience for undergraduate athletic training students.¹⁴

The importance of autonomy permeates all levels of athletic training education. As a part of the professional socialization process, autonomy provides individuals the chance to learn new roles by engaging independently while supported informally by a more experienced peer or supervisor.^{4,5,23} Payne and Berry¹⁵ encouraged athletic trainers who planned to enter an academic role to be aware of the tenets of higher education (teaching, research, and service), as they are demanding and unlike any other set of expectations in the workplace.²⁵ Mentors, in this case, have the chance to help educate doctoral students on these unique expectations and provide real experience in managing them.

In a review of the NATA's recent job postings, many higher education and academic appointments are seeking employees who have experience with a record of "interprofessional collaboration in teaching/learning and research." Based on this likely job requirement, it is imperative that recent graduates of doctoral programs have experience in teaching and research as the foundation required to succeed as they transition into full-time faculty roles. Thus, in addition to their research expectations and service-related activities, faculty advisors and mentors must provide students opportunities to develop as educators. They also need to help mentees establish the skills necessary to address the needs of future employers' expectations regarding publication and grant funding through collaboration with others. Faculty mentors, as highlighted by our findings, provide not only the freedom for doctoral students to obtain these skills and the confidence to succeed independently, but also help mentees flourish by appreciating professional collaboration. Similar to other such mentor-mentee relationships outside of formal education, hopefully the mentoring relationship between faculty advisors and their doctoral students will flourish into a lifelong partnership aimed at advancing knowledge and clinical practice through research. In the future, longitudinal studies should reexamine the relationship formed between the doctoral student and faculty member for future collaborations beyond the doctoral experience and the impact of the mentorship relationship for the mentee.

Professional Development

Fundamentally, a mentoring relationship is founded because mentors bring a set of experiences and knowledge beyond what mentees or protégés have, and therefore, they can communicate this information to their mentees. Our participants shared that they wanted their faculty mentors to guide their professional development and educate them regarding their future in the academe. As recently stated by Payne and Berry,¹⁵ athletic trainers who enter into an academic appointment have a multitude of requirements to meet, ranging from academic advising and teaching, mentoring research projects and conducting research, to engaging in service roles to the profession, university, and the community. Despite the expectations for faculty members to be multifaceted, the focus on role preparation is likely research based. This is necessary, as with most tenure-earning positions, developing and maintaining an independent line of research^{22,26} will be an expectation.

Our participants appeared very aware of the research and scholarship demands associated with higher education and tenure-earning contracts; however, they were honest about wanting to have a comprehensive doctoral experience that included teaching and service activities. Teaching effectiveness is developed through pedagogical training and engagement in classroom instruction and course development. Like graduate athletic training students transitioning into clinical practice for the first time,^{23,24} doctoral students must have the chance to develop autonomously as educators too. Furthermore, a realistic doctoral experience likely provides a stronger role inductance for athletic trainers preparing for a career in higher education. Ultimately, a more comprehensive preparatory experience and thorough socialization process improves job readiness, competence in the role, and improved quality of life. However, the main focus of a doctoral program is often to

prepare the next line of researchers. Although the ability to conduct effective research is a valuable and much-needed skillset, it is important to remember that many jobs will not be housed in universities and colleges where research expectations match their doctoral experiences. Instead, many athletic trainers in the professoriate have a teaching- and service-intensive load,^{22,27} illustrating why the recent doctoral graduates must be prepared to succeed in all 3 areas of higher education.

Mutual Investment

Drawn from our data, the definition of mentoring is a collaborative relationship between 2 individuals which supports a student's career and professional development during the educational process. This definition clearly resonates with the findings from our study, as the participants discussed the reciprocal nature of their relationship with their faculty advisors. Like the early work of Pitney,¹⁴ an effective mentoring relationship must boast reciprocal communication, in which initiative is taken by both parties to communicate frequently and openly. Moreover, the mentor and mentee must both perceive the other as approachable. Our participants encouraged future doctoral students to find faculty advisors who would be invested in their professional development and who shared similar research and professional goals. Previous research has demonstrated that doctoral candidates want more attention given to regular mentoring and advising, as it could help them negotiate their way through the challenges of graduate education and formulate a true understanding of the academe.^{28–30} Furthermore, similar to Klossner's¹ finding that athletic training students need validation related to their role performance to develop competence, mentoring relationships help doctoral students gain acceptance of and confirmation into their future role. The concept of reciprocal learning between students and preceptors has also emerged as a means to foster professional development and lifelong learning.^{31,32} Although we did not explore learning per se, the ideas of collaboration and mutual investment were important in the development of the mentoring relationship.

When examining effective mentor-mentee relationships among faculty members of health care professions, Strauss et al³³ found that reciprocity, mutual respect, clear expectations, personal connections, and shared values facilitated successful outcomes. Although the study examined relationships between junior and tenured faculty, both their study and ours showed that both members of the mentoring relationship need to be committed and invested in the process. For example, 1 university³⁴ publishes guidelines and recommendations for new faculty regarding mentoring which recommend selecting a mentor who demonstrates good listening and communication skills, is committed, and wants to help new colleagues succeed in their professional development.

Limitations and Future Research

Since our study presents the experiences and opinions of doctoral students only, and does not include those of their mentors, our findings cannot confirm if the 2 groups' perceptions align. Therefore, future studies may include both mentors and mentees simultaneously in order to triangulate the findings within our study. A mentoring relationship can be

either formal or informal, yet we were unable to determine which type of mentoring occurred within our sample group of doctoral students. Although our participants identified their faculty advisors when asked if they had mentors, we did not at the outset intentionally try to examine the relationship between doctoral students and their mentors. Formal mentoring often includes planned and ongoing mentoring sessions, whereas informal mentoring, uses a more flexible, unplanned type of format. Gaining this information could help develop future initiatives to stimulate professional growth and successful transition from the doctoral students into faculty or academic roles. Finally, we believe the selection process of a mentor is worth studying for those athletic trainers seeking doctoral education.

We also recognize that we solicited the opinions of only those athletic trainers with formal assistantships, which excludes students who may be enrolled in online or other types of programs which are designed to accommodate working professionals. The development of a mentor relationship in these other situations may be different due to limitations related to daily contact and other factors not found in our study. Due to the growth of doctoral programs that allow for the continuation of life roles, it is important to study athletic trainers who complete these programs and then continue onto faculty roles in higher education. This information could then allow for a comprehensive understanding of faculty needs (such as resources, knowledge, etc.) once they have transitioned into higher education as well as help administrators of doctoral programs, traditional and nontraditional alike, better prepare their students for success postgraduation.

CONCLUSIONS

Mentoring is necessary to ensure a quality experience for doctoral students preparing for a future in the professoriate or in research positions. Like previous research in socialization, doctoral students want the chance to practice autonomously in the roles that will be expected of them, but value feedback and support from their mentors. Faculty mentors should demonstrate strong communication skills and provide diverse learning experiences for their doctoral students. Providing students with experiences in all aspects of the professoriate will develop doctoral students' understanding of faculty roles and responsibilities and ultimately improve career preparation.

REFERENCES

1. Klossner J. The role of legitimation in the professional socialization of second-year undergraduate athletic training students. *J Athl Train*. 2008;43(3):379–385.
2. Mazerolle SM, Bowman TG, Dodge TM. Athletic training student socialization part I: socializing students in undergraduate athletic training programs. *Athl Train Educ J*. 2014;9(2):72–79.
3. Mazerolle SM, Bowman TG, Dodge TM. Athletic training student socialization part II: socializing the professional master's athletic training student. *Athl Train Educ J*. 2014;9(2):80–86.
4. Pitney WA. Professional socialization of certified athletic trainers in high school settings: a grounded theory investigation. *J Athl Train*. 2002;37(3):286–292.
5. Pitney WA, Ilsley P, Rintala J. The professional socialization of certified athletic trainers in the National Collegiate Athletic Association Division I context. *J Athl Train*. 2002;37(1):63–70.

6. Schlosser LZ, Knox S, Moskovitz AR, Hill CE. A qualitative examination of graduate advising relationships: the advisee perspective. *J Couns Psychol.* 2003;50(2):178–188.
7. Young A, Klossner J, Docherty CL, Dodge TM, Mensch JM. Clinical integration and how it affects student retention in undergraduate athletic training programs. *J Athl Train.* 2013;48(1):68–78.
8. Garvey B, Alred G. An introduction to the symposium on mentoring: issues and prospects. *Brit J Guid Couns.* 2003;31(1):1–9.
9. Rhodes JE, Grossman JB, Resch NL. Agents of change: pathways through which mentoring relationships influence adolescents' academic adjustment. *Child Dev.* 2000;71(6):1662–1671.
10. Grossman JB, Rhodes JE. The test of time: Predictors and effects of duration in youth mentoring. *Amer J Commun Psychol.* 2002;30(2):199–219.
11. Miller A. *Mentoring Students and Young People: A Handbook of Effective Practice.* London, England: Kogan Page; 2002.
12. Pitney WA, Ehlers GG, Walker SE. A descriptive study of athletic training students' perceptions of effective mentoring roles. *Internet J Allied Health Sci Pract.* 2006;4(2):1–8.
13. Burningham DS, Deru L, Berry DC. What traits make for an effective athletic training educator and mentor *Athl Train Educ J.* 2010;5(4):183–186.
14. Pitney WA, Ehlers GG. A grounded theory study of the mentoring process involved with undergraduate athletic training students. *J Athl Train.* 2004;39(4):344–351.
15. Payne EK, Berry DC. From graduate student to professor: reflection on the transition and tips for those who follow. *Athl Train Educ J.* 2014;9(2):87–93.
16. Creswell JW. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches.* Thousand Oaks, CA: Sage Publications; 1998.
17. The Carnegie Foundation for the Advancement of Teaching. The Carnegie Classification of Institutions of Higher Education. <http://classifications.carnegiefoundation.org/>. Accessed January 5, 2011.
18. Guest G. *Applied Thematic Analysis.* Thousand Oaks, CA: Sage; 2012.
19. Pitney WA, Parker J. *Qualitative Research in Physical Activity and the Health Professions.* Champaign, IL: Human Kinetics; 2009.
20. Berry DC. Teaching and learning: how well do we know how to teach? *Athl Train Educ J.* 2010;5(1):38–39.
21. Craig DI. Athletic training instructors: a needs assessment of teaching methodology knowledge and self-perceived competence. *Athl Train Educ J.* 2006;2(1):28–37.
22. Austin AE. Creating a bridge to the future: preparing new faculty to face changing expectations in a shifting context. *Rev High Educ.* 2002;26(2):119–144.
23. Mazerolle SM, Eason CM, Clines S, Pitney WA. The professional socialization of the graduate assistant athletic trainer. *J Athl Train.* 2015;50(5):532–541.
24. Thrasher AB, Walker SE, Hankemeier DA, Pitney WA. Supervising athletic trainers' perceptions of professional socialization of graduate assistant athletic trainers in the collegiate setting. *J Athl Train.* In press.
25. Starkey C, Ingersoll CD. Scholarly productivity of athletic training faculty members. *J Athl Train.* 2001;36(2):156–159.
26. Bowman TG, Klossner JK, Mazerolle SM. The professional socialization of doctoral students seeking careers in athletic training [abstract]. *J Athl Train.* In press.
27. Gaff JG. The disconnect between graduate education and faculty realities. *Liberal Educ.* 2002;88(3):6–13.
28. Austin AE. Preparing the next generation of faculty: graduate school as socialization to the academic career. *J High Educ.* 2002;71(1):94–122.
29. Baldwin RG, Blackburn RT. The academic career as a developmental process. *J High Educ.* 1981;52(6):598–614.
30. Golde CM. *At Cross Purposes: What the Experiences of Today's Doctoral Students Reveal About Doctoral Education.* Philadelphia, PA: Pew Charitable Trusts; 2001.
31. Bowman TG, Mazerolle SM, Dodge TM. Mentoring and personal relationships are perceived benefits of serving as an athletic training preceptor. *Athl Train Educ J.* 2013;8(3):35–40.
32. Dodge TM, Guyer MS, Mazerolle SM, Bowman TG. Frequency and perceived value of reciprocal learning among preceptors and athletic training students during clinical education. *Int J Athl Ther Train.* In press.
33. Straus SE, Johnson MO, Marquez C, Feldman MD. Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Acad Med.* 2013;88(1):82–89.
34. Educational Excellence. Ball State University Web site. <http://cms.bsu.edu/about/administrativeoffices/educationalexcellence/resources/facultymentors#MentorVS>. Accessed October 7, 2014.