

Doctoral Students as Teaching Mentors for Preservice Physical Education Teachers

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Abstract

Physical education teacher education is most successful when it includes several field experiences that are closely supervised and focus on reflective practice. Drawing upon attachment theory, the purpose of this study was to understand a mentoring program in which doctoral students served as mentors for preservice teachers during a methods course and early field experience. Participants included 15 preservice teachers (10 males, 5 females) who were completing their first secondary early field experience, and six doctoral students (3 males, 3 females) who served as their mentors. Data were collected through interviews with the doctoral students and preservice teachers, reflective writing, and observations of teaching. Data were analyzed using a combination of inductive and deductive analysis as well as constant comparison. Results highlight the importance of the emotional side of mentoring in building trust. Preservice teachers learned by observing their mentors and by receiving timely, relevant feedback. In some cases, challenges were noted in developing productive relationships and related to a lack of feedback stemming from mentor inexperience.

Keywords: Teacher education, Attachment theory, Reflective practice, Early field experiences

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Despite exposure to innovative teaching practices during physical education teacher education (PETE), scholars have questioned the effectiveness of teacher education in overcoming recruits' initial impressions of what it means to be a physical education (PE) teacher that are developed during their time as children in schools (Curtner-Smith, Hastie, & Kinchin, 2008; Richards, Templin, & Gaudreault, 2013). Many beginning teachers revert back to these initial beliefs rather than implement pedagogical approaches learned through PETE (Richards, Templin, & Graber, 2014). Programs are, however, more likely to be effective when early field experiences (EFEs) are integrated with closely supervised methods courses (Wright, Grenier, & Channell, 2015), when there is a shared technical culture among instructors (Graber, 1996), and when reflective practice is taught and reinforced (Tsangaridou &

O'Sullivan, 1997).

There is a need to develop new programs that embrace reflective practices and provide support through field-based learning to help preservice teachers (PSTs) question and challenge their initial beliefs about PE (Richards & Gaudreault, 2017). One strategy that has gained attention in PE and sport contexts is mentoring (Banville, 2015; Dodds, 2005; Jones, Harris, & Miles, 2009; Wright et al., 2015). Mentors have the potential to provide PSTs support during field experiences while reinforcing appropriate practices and encouraging reflection (Kell & Forsberg, 2014). In some contexts, students seeking a doctorate in PETE (D-PETE) can serve as mentors for PSTs, which can also help them develop as future faculty members (Richards, Sinelnikov, & Starck, in press). In this study, attachment theory (Bowlby, 1988) is used as a lens through which to understand the influence of D-PETE students mentoring on PSTs in a methods course and EFE.

Overview of Mentoring Relationships

Mentoring describes a relationship between two individuals in which the mentor is seen as someone who has expertise gained through experience and education relative to the protégé (Allen, Eby, Peteet, Lentz, & Lima, 2004). Mentoring relationships were traditionally informal arrangements (Kram, 1985), but became more formalized as organizations realized the potential for mentoring to positively impact both mentor and protégé (Ehrich, Hansford, & Tennent, 2004). Effective mentors support and assist their protégé in a nurturing environment that encourages continuous reflection leading to professional growth (Jones et al., 2009). Long (1997) further explained effective mentoring should include: "(1) emotional and psychological support, (2) direct assistance with career and professional development, and (3) role modeling which is focused on achievement of skills and knowledge within the organizational context" (p. 116). Mentoring is, however, best conceptualized as a reciprocal process as it reflects an chance for the mentor to grow professionally and develop leadership skills (Awaya et al., 2003).

Undergraduate mentoring programs on university campuses include faculty-student mentoring (Campbell, 2007) and peer mentoring (Sanchez, Baur, & Paronto, 2006). Faculty-student mentoring programs have been found to increase students' study skills, motivation, and academic and personal adjustment (Jacobi, 1991; Redmond, 1990). Students in these programs have been shown to have a higher GPA, more units completed per semester, and a lower drop out rate than their peers (Campbell & Campbell, 1997). In contrast, peer mentoring programs pair underclass students with upper division peers who help in the transition to college through social and emotional support (Hall & Jaugietis, 2011). Peer approaches also remove the status difference present between faculty and students, increasing the likelihood protégés will trust and commit to the mentoring relationship (Holland, Major, & Orvis, 2011). Peer mentoring can increase students' satisfaction,

commitment, and retention to graduation (Sanchez et al., 2006), and help mentors develop leadership and communication skills (Hall & Jaugietis, 2011).

Cross-division mentoring in which graduate students mentor undergraduates can be considered an extension of peer mentoring. In particular, graduate students can serve as mentors to undergraduate students engaging in early research (Dooley, Mahon, & Oshiro, 2004; Merkel, 2003). Dooley and colleagues (2004) found that outcomes of such a partnership included learning to work collaboratively, gaining a better understanding of research, and the completion of the research projects. Beyond research mentoring, graduate students can also mentor undergraduates in teaching environments, such as the case with PSTs completing methods courses and EFEs. This arrangement can increase personalized support for PSTs, while providing D-PETE students with opportunities to practice the role of teacher educator (Richards et al., in press). Mentoring relationships can be further framed through attachment theory.

Attachment Theory as a Theoretical Foundation

Attachment theory examines connections that develop between people (Bowlby, 1988). The term attachment refers to a predictable, safe, and affectionate bond with a person who is believed to provide support and security (Allen, Shockley, & Poteat, 2010). Children will, for example, seek out a playmate when in good spirits, but an attachment figure when under stress (Bowlby, 1988). Individuals feel safe and secure when near an attachment figure, but anxious when they are in need of support and that figure is not present (Holmes, 2014). Through early relationships with caregivers, children develop an 'attachment state of mind,' which includes cognitive rules applied when reviewing attachment emotions and memories (Weiss, Parkes, Stevenson-Hinde, & Marris, 1991). *Secure attachment* involves a sense of protection and appropriate level of dependence on others (Bowlby, 1988). Individuals with *preoccupied attachment* may seek assistance in an overwhelming manner, whereas those with *dismissing attachment* avoid engagement in relationships and withhold emotional investment (Bernier, Larose, & Soucy, 2005). Anxious attachment is characterized by feeling distant or disconnected from the attachment figure (Fraleigh, Miedenthal, Marks, Brumbaugh, & Vicary, 2006).

Bowlby (1988) saw an individual's attachment state of mind as continuing throughout life and the dependency that may develop through attachment as something that can be projected on others. Toward this end, the theory has been extended to a variety of relationships, such as caregiver-child, romantic, interpersonal, and psychotherapeutic interactions (Holmes, 2014). Applications of attachment theory in university settings have indicated that one's family attachment experience influence social relationships (Kenny & Donaldson, 1991), and that social self-efficacy mediates the relationship between attachment and feelings of depression (Wei, Russell, & Zakalik, 2005). College students who experience anxious attachment are more likely to commit academic misconduct (Kurland & Siegel, 2013).

Miles (2011) argued that mentoring could be considered as a type of caregiving, in that it provides supervised support, and can thus be examined through attachment theory. Mentors can function

as alternative or secondary attachment figures, providing a secure base of support from which protégés can make crucial social and cognitive strivings (Rhodes, Spencer, Keller, Liang, & Noam, 2006). Effectively matching mentors and protégés can enhance their relationship and reduce difficulties and stress (Miles, 2011). Evidence indicates that, when the mentor is committed to the relationship, the protégé expresses greater self-efficacy and reports a more positive experience and increased learning (Lejonberg & Christophersen, 2015). However, if the mentor is not committed, anxious attachment can occur. This is particularly the case in student-faculty mentoring relationships given that faculty members often serve in a parental role (Noe, Greenberger, & Wang, 2002). When faculty mentors provided less feedback, doctoral students were more likely to have anxiety in the attachment relationship, and it is the frequency rather than the quality of feedback that is associated with doctoral student scholarly productivity (Allen et al., 2010). Subsequently, Poteat, Shockley, and Allen (2015) found that doctoral students' perceptions of faculty mentor commitment and their own commitment mediated the relationship between anxious attachment and mentor feedback.

While mentoring has been explored in education (Jacobi, 1991; Sanchez et al., 2006) and through attachment theory (Rhodes et al., 2006), less is known about how mentoring can facilitate PE PST development. This is particularly true in regards to cross-division peer mentoring, such as when D-PETE students mentor PSTs. Additional research is warranted in this area, given that mentoring has the potential to support PSTs development by forging a more intimate connection than in traditional EFEs taught by a single instructor (Kell & Forsberg, 2014). As such, the purpose of this study was to understand the influence of mentoring provided by D-PETE students on PSTs' experience in an EFE. Specific research questions included: (a) what types of support do D-PETE student mentors provide protégés through the EFE? (b) how does the mentor-protégé relationship evolve as the EFE progresses? and (c) how do protégés view the mentoring relationship as influencing their development?

Method

Participants and Setting

The participants in this study included both PSTs and D-PETE students at a doctoral institution with high research activity¹ in the Southeastern US. There were 15 PSTs (10 males, 5 females) who enrolled in a one semester methods course and EFE. The average participant was 20.67 year old ($SD = .98$) and had completed 2.6 years of post-secondary instruction ($SD = .91$). All were, however, in their first semester of the PETE program. The 6 D-PETE students (3 male, 3 female) were in their first ($n = 4$), second ($n = 1$), or third ($n = 1$) year in the program. Three of the students had initial teacher certification, and three had completed a post-bachelors' degree focused on PETE. Two of the D-PETE students had been inservice PE teachers prior to enrolling in their current program. The D-PETE students' were on average 26.83 years old ($SD = 2.40$). Table 1 provides complete demographic information for both the PSTs and the D-PETE students.

Table 1. Participant Demographic Information

Preservice Teacher	Gender	Ethnicity	Age	Matriculation	Mentor		
Sandra	Female	Caucasian	21	2	Hwan		
Ray	Male	Caucasian	20	3	Amanda		
Francis	Male	Caucasian	20	3	Henry		
Rebecca	Female	Caucasian	20	3	Tom		
Bill	Male	Caucasian	21	2	Tom		
Aretha	Female	Caucasian	20	3	Kim		
Glen	Male	Caucasian	22	4	Henry		
Blue	Male	African American	20	2	Tom		
Lisa	Female	African American	19	1	Amanda		
Roost	Male	Caucasian	22	4	Stacey		
Red	Male	Caucasian	22	4	Henry		
Liz	Female	Caucasian	21	3	Hwan		
Derek	Male	Caucasian	20	2	Stacey		
Junior	Male	Caucasian	22	3	Stacey		
Ward	Male	Caucasian	20	2	Kim		

Doctoral Student	Gender	Ethnicity	Age	Matriculation	Cert	PE Masters	Teach
Stacey	Female	Caucasian	26	3	No	Yes	3
Hwan	Male	Asian	31	1	Yes	Yes	0
Tom	Male	Caucasian	26	1	No	No	0
Henry	Male	Caucasian	26	1	Yes	No	0
Amanda	Female	Caucasian	24	1	No	No	0
Kim	Female	Caucasian	28	2	Yes	Yes	3

Note. All names are pseudonyms, Matriculation = number of years completed toward current degree, Cert = certified to teach physical education through an initial bachelorette degree program, PE master's = a physical education focused master's degree, Teach = years of teaching experience prior to pursuing a PhD.

The Methods Course and Early Field Experience

The PSTs began the semester participating in a six-week secondary methods course. The focus of the methods course and EFE was on effective secondary PE instructional practices and models-based instruction (Metzler, 2011). The main focus was on the multiactivity (MA; Metzler, 2011) and sport education (SE; Siedentop, Hastie, & van der Mars, 2004) models. Following the completion of the methods course, the students engaged in an EFE at a local middle school. The middle school was racially and culturally diverse, and 57% of students qualified for free and reduced lunch. The purpose of the EFE was to put the lessons learned through the methods course into practice while teaching in a school setting. The PSTs taught soccer for two consecutive classes that met twice a week for nine weeks. The first class was taught using a 13-lesson MA unit, and the second with a 13-lesson SE season. The MA unit focused on the skills and strategies of soccer through practice tasks, drills, and small-sided games. The instructor for both the EFE and the methods course was an associate professor of PE with 13 years on the faculty and eight years of experience teaching this course.

The Role of the Doctoral Student Mentors

The six D-PETE students who served as mentors were enrolled in a course focused on the instruction design of PETE. The purpose

of the course was for D-PETE students to work with a PETE faculty member and gain experience teaching PSTs and supervising field experiences. On the first day of the methods course, the instructor asked the D-PETE students to introduce themselves and provide an overview of their background (e.g., prior teaching experiences). Then, throughout the methods course, the D-PETE students formally (e.g., short presentations) and informally (e.g., engaging through small group discussion) interacted with the PSTs during the methods course so the two groups could get to know one another and build rapport leading up to the EFE. The PSTs were encouraged to approach the D-PETE students with questions about course content, and to prepare for quizzes and examinations.

Toward the end of the methods course, the instructor and D-PETE students met to divide the PSTs into mentoring groups. The group sought to make compatible pairings based on PSTs and D-PETE students' responses to the value orientations inventory (Ennis & Chen, 1993), and D-PETE students' perceived compatibility with the PSTs. Each D-PETE student was assigned two or three PST protégés who they mentored throughout the remainder of the semester. The groups had time to meet informally before the EFE began. During the EFE, the doctoral students actively observed their protégés teach every lesson, assisting and engaging with the middle school students on a limited basis, and provided emotional and instructional support. Feedback and dialogue between the

D-PETE students and PSTs was formative, occurring before, in between, and following lessons taught at the middle school, and on going throughout the EFE. The D-PETE students also filmed all lessons so the PSTs could self-assess their teaching performance, and evaluated all course materials (e.g., unit plans, lesson plans) submitted by their protégés. While the D-PETE students provided evaluative feedback on course materials, the faculty instructor was responsible for assigning all grades in the course.

Procedures and Data Collection

The Institutional Review Board at the investigators' university and the local school district approved all research procedures data collection strategies. Data were collected from both the perspectives of the PSTs and the D-PETE students. The PSTs completed *critical incident reflections* (CIRs; Curtner-Smith & Sofo, 2004) following the completion of each lesson in which they commented on the most meaningful experience they had during that lesson. Toward the end of the EFE, PSTs participated in *stimulated recall interviews* (SRIs; Lyle, 2003), which were facilitated by their mentors. The mentor played pre-selected film extracts of the PSTs' lessons to highlight both effective and ineffective teaching situations. The PSTs were asked to comment on lesson segments, and to explain their thoughts and actions while teaching. After the EFE, PSTs participated in one of three *focus group interviews* (FG; Patton, 2015). Questions encouraged the PSTs to consider their development through the course and the mentoring relationship.

The D-PETE students contributed to the dataset by maintaining *reflective journals* (RJs) throughout the methods course and EFE. They were asked to use these journals to make notes about relationships with their protégés, and how they viewed the development of their protégés' instruction. The D-PETE students also conducted *non-participatory observations* (NPOs) of PSTs during course meetings and teaching episodes. After the EFE, the first author conducted individual *doctoral student interview* (DSIs) with each D-PETE student. Interviews proceeded in a semi-structured format that followed a common interview guide while allowing for deviation to follow topics introduced by D-PETE students (Patton, 2015). Questions focused on the D-PETE students' approach to mentoring the PSTs, and their reflections on the course more generally.

Data Analysis and Trustworthiness

Data were analyzed collaboratively by the first and second authors using a combination of inductive and deductive analysis and the constant comparative method (Patton, 2015). Data focusing on how the mentor-protégé relationship evolved, nature of the relationship from an attachment theory perspective, and how the mentor assisted the protégé's development were identified. This process drew on the constant comparative method (Lincoln & Guba, 1985) to code data into meaningful categories and themes. Deductive analysis was used by interpreting the data through the lens of attachment theory, but the process retained an inductive element as the analysts sought findings that refuted or extended theory (Richards & Hemphill, 2017). Trustworthiness was established through methodological decisions aimed at enhancing the credibility of the research design (Patton, 2015). The collection of data from multiple sources and from PSTs and D-PETE students

facilitated data triangulation, and multiple analysts facilitated researcher triangulation. An audit trail was maintained through a shared researcher journal during data collection and analysis, and a peer debriefer was asked to comment upon emerging themes before they were finalized for inclusion in the results.

Results

Textual analysis of qualitative data revealed that, in line with attachment theory and mentoring more generally, PSTs experienced both a functional and emotional side of the mentoring relationship. Further, while there were noted positive elements of the mentoring relationships, some important challenges were also articulated.

The Emotional Side of Mentoring

Both PSTs and D-PETE students were clear about the role of relationships in mentoring, and spoke at length about the importance of building trust with one another. The D-PETE students facilitated the development of trust by investing time and energy in the mentoring role.

Developing a trusting bond. Trust was a central topic of discussion across data sources. For some, trust was slow to develop and required an intentional investment by both mentor and protégé, but with trust in place the relationship took on new meaning: "I had to get comfortable with my mentor to ask questions and that took time...once it happened, I knew she was always there for feedback and answers" (Lisa, FG). Rebecca grew to rely on her mentor as someone she could always turn to for assistance: "today, the most meaningful thing I learned was to be confident in my teaching, and if I am unsure or have a question, my mentor, Tom is there for me" (CIR). The idea of trust was also articulated in the D-PETE students' comments. Stacey "wanted to make [my protégés] feel safe and I wanted to be perceived as approachable" (RJ). Tom felt "good about my relationship with the PSTs," and believed his proximity in age to his protégés facilitated trust: "I am coming from a similar place. I just had my first field experience four or five years ago, and I am close to their age so I can connect with them culturally" (DSI).

The PSTs were also asked to consider whether they would have preferred to change mentors part of the way through the semester rather than staying in the same groups the entire time. While some explained that they would have liked diversity to "get another opinion about my teaching" (Ray, FG), most believed that staying in the same group presented benefits in terms of building their relationship and capitalizing on that trust. Rebecca explained, "eventually, it kind of clicked, so I think having the same mentor and them seeing what you may struggle with, that was definitely helpful" (FG). Liz explained how having a mentor who knew her helped improve her instruction: "My mentor understood...I had a few students that were rough and she gave me good advice on new things to try, so that was helpful" (FG). Junior's relationship with his mentor grew over time, which would not have been possible if they switched mentors:

As the time went on I got to know [my mentor] better, she got to know me better too...she was always nice about giving me feedback and going over it with me in person and whenever I was doing something wrong (FG).

Investing in the mentoring role. Several of the D-PETE

students noted that they cared deeply about their protégés and sincerely wanted to help them improve. For Stacey, the role of mentor went beyond instructional support and took on a very personal quality: "the whole experience made me really maternal. I would wake up in the morning and think oh I wonder how they are going to get on today; I hope they are alright" (RJ). She had to temper her enthusiasm so not to overwhelm the preservice teachers: "I feel like there is still so much I want to teach them, but I have to keep reminding myself that I have lots of time to do that. They will be in the program for two years" (RJ). Other D-PETE students, such as Kim, described a sense of pride in their students: "I am so proud of them; they are really listening and doing so well" (DSI).

Hwan provided an example that illustrates how seeing his protégés succeed was reaffirming. He noted, "I was so proud of them interacting with students and running the stations. I received a nice email from one of my protégés after the event. It made me feel good about what I do" (DSI). Tom provided a similar example, explaining, "for me it's been really good to see them succeed" (RJ). He viewed mentoring as a way to "share my own experiences with the preservice teachers that I was working with, and I was excited about that" (DSI). Stacey explained that she "really enjoyed working with [my protégés]. I can't put my finger on it, I just felt really protective over them and felt like I really wanted them to do well" (DSI). Some of the PSTs recognized the D-PETE students' commitment noting, "I could tell that my mentor really cared about my success" (Francis, FG), and "I think you were a great mentor... you were always there for me and I appreciate that" (Blue, SRI).

The Functional Side of Mentoring

The D-PETE student mentors helped the PSTs improve their instruction and pedagogy, primarily through feedback. Subthemes focused on PSTs learning to view mentors as role models and providers of instructional support, and the role of mentor accessibility and consistency in facilitating PST growth.

Vicarious learning through mentors who were role models.

The D-PETE student mentors were often viewed as knowledgeable experts from whom the PSTs could learn through the methods course and EFE. Derek made this point by noting, "the [D-PETE students] have been there [in schools] and understand the strategies we need to learn to become effective" (CI). While some of this perceived legitimacy was granted based on the position that the D-PETE students occupied and the experience they were presumed to have, it was also earned through the relationships they built with their protégés. Bill's mentor "didn't approach feedback in a way to entitle himself or like he was above me. The relationship was very comfortable, but professional" (FG). Derek confirmed this point and noted "I liked it when my mentor said, 'this is what worked for me [teaching strategies] it might not work for you, but you can try it and fine tune it to make it work for you'" (SRI). Some of the D-PETE students, such as Kim, connected with their protégés by sharing experiences: "I connected by sharing my struggle and... by letting them know that I was in their shoes once and that things would be okay" (DSI).

As a result of the perceived legitimacy and the relationships developed, many of the PSTs came to view their mentors as "role models we can learn from. They have a lot to teach us" (Blue,

CIR). Several recalled instances in which they learned vicariously by watching their mentors teach lessons. Ward explained, "my most meaningful experience was watching Kim model teaching lessons with us...I feel like I learned a lot from her" (CI). Colin added that his mentor "would greet my students at the door as we walked out of the gym...towards the end there I tried doing the same thing and the kids were actually smiling and happy" (FG). In a similar vein, Lisa explained that her mentor, Amanda,

Really helped me with student issues. There was one student [who was violent] and didn't want to participate... but Amanda would get the kid's mind off of whatever he was doing wrong [by engaging with him on a personal level]... and that rubbed off on me, so towards the end I was able to do that myself and kind of keep him in line (FG).

Mentor feedback and accessibility improved teaching. In addition to viewing their mentors as role models, many of the PSTs came to appreciate the feedback their mentors provided. Liz explained, "the most helpful thing was the feedback you gave me. I can definitely see how to make my lessons more successful now" (SRI). For Red, "the feedback [from my mentor] was a confidence booster, and I definitely feel like I am a more capable teacher now" (FG). Derek took it further: "everything I learned came from my mentor. Looking back at my first lesson compared to my last, there was day and night difference. I credit that hugely to Stacey" (FG). This feedback was most often targeted at improving instruction, and was given at the school and immediately following the PSTs' lessons. The immediacy of the feedback allowed PSTs to make changes to their teaching between lessons. "Getting feedback from Kim on how to improve my feedback given to the students in the first lessons helped me in the second lesson" (Aretha, CIR). For Blue the small mentoring groups created space for the D-PETE students to observe and give feedback to all of their protégés during the same lesson:

There are only three people for the mentor to observe. So when he comes around to you he is not just seeing a small portion. He can actually tell you "hey, this is going on, this is going on." With him standing right between the two teaching groups he can give me feedback right away and help me improve (FG).

It was not just teaching feedback that was perceived as important, but also receiving feedback on assignments in a timely manner so that it was still relevant, and could be used for future improvement. This was particularly the case when it came to lesson plans. Liz praised her mentor, Hwon, for "always providing timely feedback...He got my lesson plans back in a reasonable time. So I appreciate that and the critique, which made this a positive learning process" (FG). Junior affirmed this point and expressed gratitude for his mentor, Stacey, who "was very fast and efficient at grading my lesson plans and getting back to me." He went onto praise Stacey for making herself accessible outside of class time: "she would email our whole group saying I am going to be here at the office between this time and this time if you want to come by and talk about your lesson plan or teaching" (FG). Hwon made a conscious attempt to "encourage [the PSTs] to ask questions, and students emailed me, even late at night. I was happy to answer those questions" (DSI). In a few isolated instances, however, the D-PETE students felt overwhelmed by the preservice teachers'

expectations for immediate communication. Stacey lamented how "one of the PTs would email me in the early hours of the morning and constantly have questions about the next day...it became overwhelming" (DSI).

Threats to the Development of Mentoring Relationships

While both mentors and protégés described positive experiences related to the emotional and functional sides of mentoring, some challenges were noted as negative cases to these main themes. Some of the PSTs seemed to lack a connection to the assigned mentor. There was also a concern among some of the PSTs related to not receiving feedback in a timely and relevant manner, which was associated with a lack of mentor experience and preparation.

Lacking a connection to the assigned mentor. While many of the PSTs described a deep and meaningful connection to their assigned mentor, some noted that the relationship never really developed, or as if the mentoring they received was overbearing. Roost was most vocal in expressing these concerns. He felt "like me and my mentor never connected...I would try to be nice, and then I would get the exact opposite. I was like 'ok, I guess it is just a fact that we are not going to get along.'" He went on to explain how he felt as if his mentor, Stacey, was overbearing and "down my neck the entire time. Derek and I were teaching together and she was always around me the whole time" (FG). Interestingly, Stacey was one of the most invested mentors and expressed on numerous occasions that she cared deeply about her protégés, which highlights a mismatch between the expectation for the experience and the one held by Roost. She recognized that things were not going well with Roost, explaining that "I need to find a better way to connect with him" (RJ), but despite her efforts, the experience never fit Roost's preference for a more hands-off approach to mentoring.

Other PSTs explained how they connected better with D-PETE students other than their assigned mentor. Lisa noted she did not always get what she hoped for when approaching her mentor, Amanada, with questions: "I felt that sometimes it was kind of hard to talk to my mentor because I would ask for feedback and she would tell me I was doing well, but then my grades would not reflect that" (FG). However, she did "receive a lot feedback from Kim. She wasn't my mentor, but I went to her with questions." Red, who felt as he had built a positive relationship, agreed that sometimes it was helpful to get feedback from someone else: "I branched out on occasion to ask questions. When we had to teach inside because of the rain, I talked to Stacey and she gave me feedback. That was helpful" (CIR). Blue indicated he would have liked to have some voice in the process of selecting mentors. Rather than being assigned someone, he thought, "we should have had an idea who would fit us best and been able to make a choice."

Limited feedback related to a lack of mentor preparation. Another negative case concerned the timeliness of D-PETE students' feedback. While many of the PSTs felt as if they received immediate feedback from their mentors, others noted they did not get feedback quickly enough to make meaningful changes, particularly in relation to their lesson plans. Lisa made this point when she lamented, "I worked my ass off on this lesson plan and Amanda turns it back like two weeks later...that makes it hard for me to learn" (FG). Red elaborated on this point and explained, "the

last lesson plan that I received was lesson five, and we finished lesson 12. I understand [the mentors] are busy, but it just felt like there were points where the feedback never came" (FG). Ray provided a similar example of how he wanted feedback to improve his lesson planning, but did not receive it in a timely manner: "I asked Amanda outside of class to email me some personal feedback on my lesson plan. To this day I still haven't gotten personal feedback...I texted her again, but she never responded" (FG).

While lesson plans were the most common concern related to feedback, other PSTs explained that they wanted more specific information on how to improve their teaching. Red voiced this perspective: "I kind of felt like sometimes I wanted more corrective feedback. I know my lesson was bad, and I know my lesson plan was worse. Give me some real feedback. Tell me I really didn't do this well" (FG). On the other hand, Rebecca expressed concern related to the lack of positive reinforcement she received from her mentor who was "telling me every day to give our kids positive feedback, but he never gives it to me. How am I supposed to be positive every single day that I come here while you are being completely negative?" (CIR).

Amanda, who was questioned most with regard to her provision of feedback, opened up about her insecurities related to providing feedback. She had not taught in schools and did not have a previous degree in physical education, which left her feeling unprepared in her role: "I'd never done a lesson plan, so I felt it was unfair for me to grade them on something that I had never done" (RJ). She went on to explain how she relied on another D-PETE student who "has a lot more experience than I do... I didn't know exactly what to say or how to handle a situation, he would help... that made me feel a lot more comfortable" (DSI). While Amanda likely felt least prepared for her role, other D-PETE students acknowledged, "we did not receive any training before beginning the mentoring" (Tom, DSI). As a result, many defaulted to their previous teacher education or experiences working with children when thinking about their role: "I tried to model my mentoring from those who have mentored me in the past" (Henry, DSI).

Discussion

The purpose of this study was to understand the influence of D-PETE student mentoring on PSTs' experiences in a methods course and EFE. The results of qualitative data analysis indicate that mentoring relationships developed between D-PETE students and PSTs that included interconnected functional and emotional components. More specifically, the D-PETE mentors were viewed by PSTs as being most effective when they fostered a trusting relationship and provided meaningful feedback and modeling (Long, 1997). Generally, this finding aligns with previous research related to mentoring and attachment theory that has highlighted the importance of building relationships between mentor and protégé when considering more functional outcomes (Lejonberg & Christophersen, 2015). It also highlights the importance of mentor fully investing in the experience (Jones et al., 2009). Interestingly, while the importance of mentor investment was clear in the data, the role of protégé investment was less apparent. It is possible that this because the protégés viewed the relationship as more of a means to an end in helping them advance toward course outcomes. Regardless, mentoring in the context of the EFE required an

emotional component, or an attachment state of mind (Poteat et al., 2015).

The development of the emotional side of mentoring has particular relevance to attachment theory (Bowlby, 1988). As has been advocated elsewhere (Rhodes et al., 2006), the D-PETE students became secondary attachment figures by providing a secure base of support for PSTs. This is of particular importance for PSTs in initial EFEs where they are still learning what it means to be working in schools and interacting with children. Toward this end, many of the PSTs in the current study valued the feedback and support they received from their mentors, and grew to admire the skills and qualities their mentors brought into the relationship. Such an arrangement lent itself to feelings of secure attachment whereby the protégés relied on their mentor, but not in an overwhelming or intrusive manner (Bowlby, 1988). When the mentoring relationships ran smoothly, both the mentors and protégés trusted one another, and the protégés learned both vicariously by observing their mentors, and through the feedback and support their mentors provided. As such, the mentor was positioned as someone who could assist in the protégé's development in a supportive and nurturing environment (Allen et al., 2004) by reinforcing appropriate practices (Kell & Forsberg, 2014). In particular, PSTs were more likely to espouse feelings associated with secure attachment when they received feedback regularly and felt that their mentor cared about them (Allen et al., 2010; Poteat et al., 2015).

The additional support provided by the mentors goes beyond what is feasible for a single course instructor, and allows for closer supervision and stronger reinforcement of reflective practice, which has been highlighted as a key component of effective PETE (Graber, 1996; Tsangaridou & O'Sullivan, 1997). This consistent attention and reinforcement represents one additional way to combat the tendency for PSTs to use field experience to reinforce rather than question initial impression of physical education developed prior to PETE (Richards et al., 2014). The reinforcement of values is particularly important given that the protégés were closer in age and peer-status to their mentors than the course instructor, which has been found to facilitate more positive mentoring experiences in previous research (Hall & Jaugietis, 2011).

In addition to implications for PST training, mentoring programs such as the one described in this study have implications for D-PETE. Concerns related to D-PETE student development, particularly related to teaching, have been expressed elsewhere (Ward, 2016). These concerns have given rise to recommendations for intentionally preparing D-PETE students for the teacher education function of the faculty role (Richards et al., in press). While this study focused on the mentoring relationship primarily from the perspective of the PSTs, it was clear that the doctoral students invested in their role as mentors, and recognized that there were reciprocal benefits to serving as mentors (Awaya et al., 2003). Serving as a teaching mentor during EFEs could be one component of a larger, progressive approach to inducting D-PETE students into the role of teacher educator (Richards et al., in press). The implications of such an experience should be examined in future research.

While evidence indicates that the mentoring relationship was viewed as successful by many of the participants, there were

also instances in which the relationships among the PSTs and D-PETE students did not develop as intended. Some of the D-PETE students felt they invested more in the mentoring relationship than their protégés. At times this manifested as dismissing attachment whereby the protégés failed to invest the mentoring process (Bernier et al., 2005). In other instances, however, there were signs of anxious attachment whereby the PSTs articulated that they felt disconnected from their assigned mentor (Fralely et al., 2006). One important contributor to the different types of attachment exhibited by the PSTs was the D-PETE students' level of preparation for the mentor role. The six D-PETE students had varying levels of comfort and experience teaching PE in schools and working with PSTs (Lee & Curtner-Smith, 2011), which impacted their confidence and ability to provide meaningful, timely feedback. Those D-PETE students who did not have first-hand teaching experience felt less prepared to mentor their protégés, which impact the type and frequency of pedagogical interactions they had with their protégés. In contrast, those mentors who had taught in schools long, and who were more advanced in their doctoral studies (i.e., Amanda and Stacey) tended to provide better support. This situation frustrated some of the PSTs and led them to seek assistance from other mentors, and highlights challenges that arise when individuals transition into D-PETE without first teaching PE in school environments (Boyd, Harris, & Murray, 2007).

Effectively pairing mentors and protégés is an important step in the mentoring process, but there is not consensus on the best way to approach it (Campbell, 2007). In the current study, mentoring groups were made, in part, based on responses to the value orientations inventory (Ennis & Chen, 1993). Mentors and protégés could also be paired based on the results of an inventory that identifies relational style and preference (Bernier et al., 2005). Alternatively, PSTs could be allowed to choose their mentors, or be provided greater flexibility in changing mentors should an initial pairing not work. This study highlights the importance of considering D-PETE students' prior experience in the development of mentoring relationships (Fletcher & Mullen, 2012). An important question relates to the D-PETE students' preparation and capacity to serve as mentors, which is related to their previous experiences working in schools.

While prior teaching experience is viewed favorably by many PETE hiring committees (Woods, Goc Karp, & Judd, 2011), not all individuals pursuing D-PETE degrees have taught previously in schools (Russell, Gaudreault, & Richards, 2016). The varying levels of prior experience and comfort led some D-PETE students to struggle both in building relationships and providing instructional support to their protégés. When this occurred, the protégés disconnected from their mentors and sought assistance elsewhere. It is, therefore, important that mentoring relationships be developed around the needs of the PSTs and the skillset possessed by the D-PETE students. In designing mentoring relationships, the course instructor should become familiar with each D-PETE student's background and be intentional about how they are assigned to mentor PSTs (Richards et al., in press). Some D-PETE students may be ready to mentor a small group of PSTs on their own, but others may benefit from assisting a more experienced mentor or observing for a semester before taking on their own protégés.

One practical limitation that threatens the application of the

mentoring model described in this study in other contexts is the need to have a large number of D-PETE to serve as mentors. Not all PETE programs have the same ability to draw upon D-PETE students to assist with coursework. Nevertheless, a modified version of the mentoring program could be implemented in which master's students or upper-division undergraduates assist with EFEs in a mentoring capacity. When trained to do so by PETE faculty members, these peer mentors could increase the amount of feedback and support provided to younger students just beginning their PETE program. Such an arrangement would allow upper-division students to gain valuable leadership experience while providing feedback and emotional support to their junior counterparts (Sanchez et al., 2006). Given that D-PETE students in this study who did not have teaching experience struggled to provide feedback to their protégés, the expectations of and responsibilities afforded to master's students and upper-division undergraduate students would need to be adjusted accordingly. These students could, however, support reflection and encourage dialogue by debriefing with students after teaching episodes.

Conclusions

In conclusion, a key finding from the current study is that an interdivision mentoring program, in which D-PETE students serve as mentors for PSTs, has the potential to positively influence PSTs' learning to teach through EFEs. Importantly, the functional side of mentoring, which involved vicarious learning and targeted feedback that helped PSTs improve their teaching, was facilitated through the development of positive interpersonal relationships between mentor and protégé. This highlights the importance of developing trust and a secure attachment state of mind in the mentoring relationship (Bowlby, 1988; Lejonberg & Christophersen, 2015). While there was some dismissing and anxious attachment noted, and while some of the mentors' lack of prior experience both teaching PE and working with PSTs served as a barrier, this study affirms research in other mentoring environments that has indicated positive outcomes for protégés development (Campbell & Campbell, 1997; Holland et al., 2011; Redmond, 1990).

Future research should extend the results of this study to other contexts and by using other mentoring arrangements in which upper-division PETE students serve as mentors for their less experienced counterparts. An additional line of inquiry relates to understanding the process through which D-PETE students learn to perform the role of teacher educator, which could include an experience mentoring PSTs (Richards et al., in press). Given that it is becoming more common for individuals to transition into D-PETE before teaching physical education in school environments (Richards & Ressler, 2017), this future research should more closely examine the ways in which having prior teaching experience relates to D-PETE students and faculty members' preparation for the role of teacher educator.

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¹ Level of research activity was determined in reference to the most recent Carnegie classification system ■