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In this case study of a peer mentoring program developed for first-year education doctoral (Ed.D.) students, we sought to understand how participants' experiences in the program might yield understanding about the mentoring process. Study participants included 11 mentees and 4 mentors. Interview and focus group data were analyzed through the conceptual model of self-regulated learning and mentoring. Four themes relevant to the phases of self-regulated learning emerged. Participants engaged in goal-setting in conversations about pre-planning for the dissertation and professional goals. During the post-mentoring phase, mentors' reflections on their conversations informed future conversations. Mentors transferred their knowledge by engaging in self-reflection about their professional practice. Finally, mentoring conversations increased mentees' self-efficacy. Implications for peer mentoring programs include paying attention to demographics and issues of pair compatibility. Future research ought to include the collection of longitudinal data and observations of mentoring conversations.

Introduction

The education doctorate (Ed.D.) was originally designed as a terminal practitioner-oriented degree with similarities to and differences from the research and scholarship goals of the Ph.D. (Shulman, Golde, Bueschel, & Garabedian, 2006; Wergin, 2011). While the goal of the traditional Ph.D. is to produce original research and scholarship, the goal of the Ed.D. has been to engage in high-level preparation for practice, sometimes through a capstone project for which students investigate a problem of practice in their professional contexts. That is, Ed.D. faculty aim to develop "practitioner-researchers" (Kerrigan & Hayes, 2016, p. 148). Despite these distinctions, schools of education implement the education doctorate in different ways. Some offer a culminating project such as a capstone project, while others offer the traditional dissertation (Kerrigan & Hayes, 2016; Shulman et al., 2006; Wergin, 2011).

Students in Ed.D. programs face many challenges. Attrition data for doctoral education programs are generally reported to be between 50% to 70% (Ivankova & Stick, 2007). The median duration of time from graduate school entry to the doctorate is approximately three years longer for students in education compared to all fields combined. Additionally, the time to completion for students in education programs increased, while it decreased for students in other fields (Rockinson-Szapkiw, Spaulding, & Bade, 2014; Wao & Onwuegbuzie, 2011). As national doctoral graduation rates hover around 50% (Littlefield, Taddei, & Radosh, 2015), attention to attrition, retention, and completion of the education doctorate is of vital importance.

Attrition in Ed.D. programs is due to multiple factors. As Gardner and Gopaul (2012) noted, part-time doctoral students in general "have dissimilar experiences from their full-time counterparts" (p. 65). As a result, Ed.D. students who are full-time educators while pursuing the doctorate often face exacerbated or unique challenges. First, research expectations may not be aligned between students and faculty (Kerrigan & Hayes, 2016). It can be difficult to transition from being students dependent on instructors who structure courses and assignments to being independent students engaged in scholarship and the creation of knowledge (Ames, Berman, & Casteel, 2018; Locke & Boyle, 2016). Furthermore, Ed.D. students typically wait longer (likely because they pursue careers first) to start the doctorate than other students, which might make it harder to assimilate to academic expectations. As Shulman et al. (2006) noted, "While arts and sciences students typically wait 2 years after receiving the bachelors before starting the Ph.D., education students have an average 'gap' of almost a decade" (p. 26). Second, students often are underprepared to explore methodologies prior to developing their dissertation or capstone project (Bernauer, Semich, Klentzin, & Holdan, 2013). Lastly, Ed.D. students find it challenging to balance work and life responsibilities with academic coursework and research (Gardner & Gopaul, 2012).

Although these challenges are likely faced by many doctoral students in different programs, they are exacerbated among Ed.D. students because of the unique demands involved with balancing school with often high-profile and demanding school or district leadership positions. This is a different experience than that of traditional doctoral or Ph.D. students who attend school full-time (Shulman et al., 2006) or are mentored and shepherded through the program and institution as graduate assistants (Gardner & Gopaul, 2016). To meet the immediate needs of school leaders who often do not plan to enter academia and seek career advancement (Shulman et al., 2006), coursework may be sequenced to frontload content in such a way as to delay academic writing and research skills. Additionally, due to their status as part-time students, Ed.D. students often are not fully immersed into the culture of graduate education (Locke & Boyle, 2016; Shulman et al., 2006).

One way to address these challenges is through mentoring programs which aim to establish relationships between doctoral students and their peers, in hopes that the sharing of similar experiences and advice will foster academic success (Brill, Balcanoff, Land, Gogarty, & Turner, 2014; Grant-Vallone & Ensher, 2000). Peer mentoring programs for education doctorate students who are also practitioners (full-time professionals) are potentially beneficial because mentees and mentors often share similar issues regarding work and life balance. These similarities can contribute to increased feelings of support and empathy (Lyons & Perrewé, 2014), and can promote support in planning for academic success and dissertation completion.

As faculty members (Lowery and Geesa) and a former graduate assistant (McConnell) in an educational leadership program at Ball State University, a public, mid-sized, midwestern university, we developed a peer mentoring program to foster the successful completion of the dissertation. The purposes of the program are to offer stronger support for new students and to ultimately decrease attrition rates. Between 2010-2011 and 2015-2016, the average number of students who entered our program each year was 16, ranging from a high of 30 in fall 2011 to seven in fall 2013. A review of institutional data yielded an attrition rate of approximately 50%, which led us to pursue the creation of a research-based program in the fall of 2016 to address this

problem (Erickson & Travick-Jackson, 2006; Holley & Caldwell, 2012; Lowery, Geesa, & McConnell, 2018; Pidgeon, Archibald, & Hawkey, 2014).

The peer mentors who were recruited were recent graduates of the education doctoral program as well as students who were further along in the program, and mentees were first year doctoral students. All mentors held full-time positions in education fields. They were identified by educational leadership faculty recommendations or they volunteered for the one-year commitment after hearing about the program from their peers. In order to better assess the effectiveness of this initiative, we decided to collect qualitative data to investigate if and how this peer mentoring program for first year students contributed to increased support in the academic and psychosocial domains of doctoral learning for mentees (Geesa, Lowery, & McConnell, 2018) and to understand if there were benefits that mentors associated with their experiences in the program (McConnell, Geesa, & Lowery, 2019).

While these investigations informed our understanding about the perceived benefits and challenges of the peer mentoring program, we wondered how an analysis of data might also inform our understanding about the mentoring process itself. Therefore, we reanalyzed the qualitative data through the lens of self-regulated learning and mentoring (Schunk & Mullen, 2013). This extends the analysis of mentoring programs beyond the traditional domains and characteristics explored in extant literature (Mullen & Tuten, 2010) and sheds light on more nuanced ways that mentoring might contribute to mentors' and mentees' learning processes. We sought to answer one research question through this single case study of our program: In what ways did peer mentors and mentees in an education doctorate program engage in self-regulated learning?

This article adds to existing peer mentoring research in two ways. First, we have found no studies that utilized self-regulated learning as a theoretical lens for graduate school peer mentoring programs, or peer mentoring in general. Second, research about doctoral students who are similar to the vast majority of our education doctoral students (working full-time as educators or school/district administrators) is not represented widely in the literature about peer mentoring, particularly in comparison to undergraduate programs (Lowery et al., 2018). In this current paper, we seek to answer the call by Schunk and Mullen (2013) to investigate mentoring through the lens of their proposed research model.

Literature Review

Peer mentorship is an interdependent relationship of mutual benefit and collaboration (Holley & Caldwell, 2012; Leão & Ferreira, 2015; Noonan, Ballinger, & Black, 2007; Webb, Wangmo, Ewen, Teaster, & Hatch, 2009). Mentee benefits that are associated with peer mentoring for higher education students include psychosocial support; increased clarity about the college or university systems and academic programs; and academic skill development (Fleck & Mullins, 2012; Holley & Caldwell, 2012; Mullen & Tuten, 2010). Mentors benefit from the development of interpersonal communication skills, teaching skills, and self-reflective practice (Erickson & Travick-Jackson, 2006; Booth, Merga, & Mat Roni, 2016).

Shared Benefits and Experiences Within Graduate-Level Peer Mentoring Programs

The benefits of peer mentoring in graduate programs are increasingly of interest to researchers (Fleck & Mullins, 2012; Grant-Vallone & Ensher, 2000; Holley & Caldwell, 2012; Welton, Mansfield, Lee, & Young, 2015). The main purpose of these programs is to create an inclusive environment that fosters social and academic support, leading to increased retention and graduation rates (Holley & Caldwell, 2012; Preston, Ogenchuk, & Nsiah, 2014). For example, Fleck and Mullins (2012) found that emotional support and networking were benefits of a peer mentoring program for psychology graduate students. Grant-Vallone and Ensher (2000) concluded that psychology graduate students who met more often with peer mentors were more satisfied with their relationship and "peer mentors provided higher levels of psychosocial support" than traditional mentors (p. 639).

Researchers in other contexts have found similar benefits. Lin (2014) discovered that relationships between master's degree engineering students were based less on hierarchical structures, as they usually are between faculty and student, and developed from friendships due to similar age and years of study, as well as working alongside each other in laboratories. This type of relationship contributed to the psychosocial support of mentees. Pidgeon et al. (2014) revealed that relationships were central for networking among Aboriginal students in British Columbia, and for the creation and maintenance of academic goals among peers. While Grant-Vallone and Ensher (2000) acknowledged that "peer relationships may serve in a supportive capacity related to both career advancement and psychosocial functions" (p. 637), their findings led them to assert that "traditional mentors might offer more career functions, while peer mentors can focus on emotional and support functions" (p. 641).The egalitarian relationship between peer mentors that is different from the relationship between students and faculty has been associated with increased feelings of inclusion, encouragement, and satisfaction with the mentee's graduate program (Grant-Vallone & Ensher, 2000; Preston et al., 2014).

The exploration of benefits does not preclude discussions about challenges or critiques. Christie (2014) raised a concern that critical investigations of mentoring that report on more than perceived benefits were lacking. Some researchers have uncovered challenges in undergraduate and graduate settings. These include issues of power and control regarding the roles and expectation of mentors, and tensions regarding boundaries between mentors and mentees (Christie, 2014; Colvin & Ashman, 2010).

The experiences and outcomes of students in doctoral peer mentoring programs are emerging, yet underexplored in extant literature (Holley & Caldwell, 2012; Lowery et al., 2018) As with peer mentoring programs in general, doctoral peer mentoring programs seek to provide encouragement, support, and academic scaffolding. Mentors provide educational and social support and leadership development, and act as counselors, role models, and friends (Webb et al., 2009). In their autoethnographic study, Booth et al. (2016) explained how as mentors, they enhanced their own social, teaching, and reflection skills. Similar to findings reported by Fleck and Mullins (2012), Holley and Caldwell (2012) found that peer mentor and mentee relationships developed in a university-wide program for doctoral students were the most productive when the mentee and mentor became friends. Likewise, doctoral mentees in a gerontology program viewed their mentors as sources of social support and advice (Webb, Wangmo, Ewen, Teaster, & Hatch, 2009).

A few studies explored the unique experiences of educational doctoral students (Erickson & Travick-Jackson, 2006; Geesa et al., 2018; Noonan, Ballinger, & Black, 2007). Erickson and Travick-Jackson (2006) found that mentors benefitted from the enhancement of teaching and leadership skills they developed. Geesa et al. (2018) found, as others have, that mentees benefited from learning more details about how to progress through their program, and from emotional support and encouragement, while mentors reported that they provided emotional support and reassurance while benefitting personally and professionally due to their participation in the relationship (McConnell et al., 2019). In addition to emotional support, specific benefits found in the Writer in Training program researched by Mullen and Tuten (2010) included collaborative learning and development of academic writing and research skills. Not as much is known about mentoring processes, or what aspects of the mentoring process contribute to the aforementioned benefits in these contexts, however.

Conceptual Framework: Self-Regulated Learning and Mentoring

We analyzed the extent to which, as Schunk and Mullen (2013) proposed, "self-regulated learning [plays] a prominent role before, during, and after mentor-protégé interactions" (p. 363). Although the authors investigated self-regulated learning in the context of research on faculty mentorship of students, we considered how this framework might shed light on the learning processes within a peer mentor paradigm. This new learning will inform our understanding of beneficial interactions between mentors and mentees and perhaps lead to more focused training of mentors.

Self-regulated learning occurs when individuals actively manage their learning by applying self-regulation processes of managing knowledge, attention, emotions, and behaviors during a learning experience where the goal is to reach a particular level of achievement (Lord, Diefendorff, Schmidt & Hall, 2010; Schunk & Mullen, 2013; Winne, 2001; Zimmerman, 2001). It is a process wherein learners set goals based on their past experience as well as their current environment (Pintrich, 2000). Järvelä and Hadwin (2013) delineated four assumptions of self-regulated learning which effectively summarize previous research. Self-regulated learning: (a) is intentional and goal-directed; (b) is metacognitive, that is, learners take time to consider their own learning and progress throughout the process of learning; (c) involves the control of behavior, cognition, and motivations/emotions; and (d) is a social process. Common features of self-regulated academic learning include: the use of goals to focus learning, motivation on the part of the learner; and a dynamic and cyclical feedback process around goals during which the learner makes modifications. These features further clarify how self-regulated learning occurs before, during, and after mentoring interactions.

Different theories underlay the concept of self-regulated learning, such as social cognitive theory (Bandura, 1986; Zimmerman & Schunk, 2004), information processing theory (Winne, 2001), and social constructivist theory (McCaslin & Hickey, 2001). A common feature of these theories is that each one explains how self-regulated learning requires one to be behaviorally, cognitively, metacognitively, and motivationally active in one's learning and performance (Zimmerman, 2001). Additionally, they recognize self-regulated learning as a dynamic and cyclical process where feedback is critical (Lord et al., 2010). Finally, theorists agree that goal-setting triggers self-regulated learning by focusing individuals on activities and strategy (Sitzmann & Ely, 2011). Schunk and Mullen (2013) focused on social cognitive theory for the development of a

conceptual model for research on mentoring because of the theory's attention to interpersonal interactions that occur between mentor and mentee in mentoring relationships.

Social cognitive theorists assert that self-regulated learning develops due to external sources such as social factors, and then shifts to internal sources over four phases: observation, emulation, self-control, and self-regulation (Schunk & Zimmerman, 1997; Zimmerman & Schunk, 2004). Observation involves gaining basic skills and strategies. Emulation involves performing behaviors and using strategies with instruction or help. Self-control involves using skills or strategies on one's own. Finally, learners adapt skills and strategies based on the current situation to fit their needs.

Researchers studying these processes seek to understand how learners apply strategies and engage in activities to help them set goals and achieve them (Locke & Latham, 2002). The effectiveness of goals is related to self-efficacy. Self-efficacy involves the beliefs an individual holds about his or her own capabilities to perform actions at a designated level (Bandura, 1986) and affects one's choices, effort, and persistence as a learner (Schunk & Swartz, 1993). According to Schunk and Zimmerman (1997), self-regulation and self-efficacy are developed from specific social learning instructional experiences such as modeling. Modeling, which precedes self-regulation, occurs when observers pattern their behaviors or beliefs after they witness a process or action (Bandura, 1986; Schunk, 1987).

The mentoring research model proposed by Schunk and Mullen (2013) "assumes that before, during, and after mentoring interactions, mentors and protégés engage in self-regulated learning" (p. 376)[1]. The model is summarized in Table 1.

Table 1
Summary of Schunk and Mullen's proposed mentoring research model (2013)

Mentoring phase	Pre-mentoring	During mentoring	Post-mentoring
Examples of self-regulatory processes	Goal setting	Mentoring processes (modeling, coaching, feedback, listening, encouraging)	Reflection
	Knowledge activation Self-efficacy Outcome expectations	Observational learning Practice Time management Self-efficacy Help seeking	Assessment of affect Transfer

During the pre-mentoring stage, mentors and mentees will likely engage in goal setting and planning for goal attainment. They activate knowledge relevant to the upcoming sessions and initiate "self-regulatory motivational beliefs…specifically self-efficacy for being successful,

[1] See Table 2 in Schunk and Mullen (2013) p. 377 for a visual representation of the research model. See Figure 1 (p. 378) for the process model of mentoring interactions.

value of and interest in mentoring…" (Schunk & Mullen, p. 376) as they prepare for the mentoring interaction.

During mentoring interactions, mentors exhibit behaviors such as modeling, coaching, providing feedback, listening, and encouraging. Those behaviors, also called mentoring processes, combine with self-regulated learning processes that are exhibited by mentor and mentee, such as observational learning, practice, time management, self-efficacy, and help seeking. Mentees learn through observation as they practice modeled skills or ask for help as needed. As they interact with mentees, mentors employ self-regulatory processes to adapt their strategies to the needs of the mentee as they observe mentee behaviors.

After mentoring interactions, mentors and mentees will likely engage in reflection, affect, and transfer. Reflection may lead to an evaluation of the process, outcomes of the session and quality of their relationship. An assessment of affect leads to their satisfaction or dissatisfaction over the amount of progress made. Finally, mentors and mentees may transfer new knowledge learned from their sessions to new or different situations and contexts. The authors summarized the assumptions and hypotheses of the research model:

> …during mentoring interactions, mentors' behaviors (e.g., modeling, providing feedback) are hypothesized to affect protégés' self-regulatory cognitions and affects (e.g., metacognition, self-efficacy, comfort), which in turn should influence their behaviors (e.g., attending, observational learning, practicing). These behaviors are predicted to affect mentors' self-regulatory cognitions and affects (e.g., planning, satisfaction) as they asses protégés' learning and decide on next actions. Mentors' cognitions and affects then are hypothesized to influence their behaviors (e.g. listening, encouragement) (p. 378).

Related to our program, we assumed that doctoral students enter the program with academic and professional goals. At minimum, they have the goal of dissertation and degree completion; the mentor-mentee interaction is the learning experience. This mentoring research model makes it clear that an understanding of the behaviors and cognitions of both mentors and mentees is important due to the cyclical nature of their interactions. We reanalyzed the data collected from our mentors and mentees (Geesa, et al., 2018; McConnell et al., 2019) to determine what aspects of this process we might unveil.

Ed.D. Program and Peer Mentoring Program Context

The Department of Educational Leadership's Doctorate of Education (Ed.D.) at Ball State University operates as a blended program (face-to-face and online learning) in a cohort model. Formal cohorts begin each fall and most students are full-time practitioners while pursuing their doctorate. Students complete a traditional dissertation as the culminating activity to achieve their degree. The development of the Ed.D. peer mentoring program and associated research took place between August 2016 and May 2017.

We recruited mentors for the program by word of mouth among recent graduates, seeking volunteers or faculty recommendations of graduates or students who were further along in the program. This yielded 10 mentors who were graduates of the Ed.D. program or Ed.D. students who completed coursework and were near the dissertation phase of their program. In November

2016, Lowery and Geesa conducted a two-hour training session for mentors about research-based mentoring skills and expectations of the peer mentoring program. During this same month, all first-year students in the Ed.D. program were invited to participate in the mentoring program as mentees. This invitation was offered during one of the classes which they all took together as part of their cohort. Eleven of the 12 cohort members signed up to be mentees.

Mentor-Mentee Pairings and Expectations

In order to pair mentors and mentees, both groups completed forms indicating demographic information such as gender, race, work and home location, their research interests, current positions, and future aspirations. Mentees were also asked to indicate their preference, if any, for how they were matched with mentors (e.g. gender, race, research interests). Nine of the 11 mentees were men and two were women; five mentors were women and five were men. Two mentees preferred to be matched with mentors of the same gender. Other mentees did not express a specific preference regarding how they were matched with mentors. Based on the demographic and geographic information provided, mentors and mentees were paired and given one another's contact information. Because we had 11 mentees and 10 mentors, one mentor agreed to work with two mentees.

Aside from initial informational meetings and e-mails, peer mentoring conversations were left largely to the discretion of the mentor/mentee pairs. Mentors were expected to initiate mentoring conversations at least once per month in person, by phone, or via web conference. Additionally, mentors were expected to check in on their mentees once per month via text message, e-mail message, or phone call. The mentoring meetings began in December 2016 and lasted through the academic year until May 2017.

Research Methods

We conducted a single case study. The purpose of our research was to understand the program in our context, which is a main purpose of a case study design (Stake, 1995; Yin, 2009). Shortcomings of case study research, which include the inability to generalize results, were limitations, but not barriers. The case study design was appropriate for our research because we sought to understand the complexities of our program at our university (the bounded system) while also exploring the similarities and differences among the experiences of our mentees with what we knew about other peer mentoring programs (Stake, 1995). As Yazan (2015) pointed out, three preeminent qualitative researchers, Merriam, Stake and Yin, agree that the case study approach is beneficial for understanding programs, people, and program evaluation (although Merriam demonstrates more flexibility in finding value in case study research beyond program evaluations). Multiple data were used, including: pre- and post-survey data from mentees, interviews with mentees, one mentee focus group, one mentor focus group, and one mentor interview. The data used for this study includes the interview and focus group data.

Study Participants

Participants in the study included all mentees who participated in the program (n = 11) and four of the 10 mentors (n = 4). Table 2 displays general information about the participants. We recruited mentors for the study after the aforementioned training session. While all ten mentors

agreed to participate in the study, just four participated in the focus group (Mentors 4, 7, and 10) and interview (Mentor 1) for the study. General information about the mentors is provided in Table 3. The four participants are indicated by italics. Although we collected more specific information regarding demographics and research interest as part of our matching process, the information provided here is general or marked with an asterisk in order to protect participant confidentiality. The number of mentors was evenly balanced between men and women, but three of four mentor study participants were women. We will discuss implications of the gender disparities in the mentee group, (nine of 11 male), and the mentor study participants later.

Table 2
Mentee Information

Mentee Number	Gender	Current position	Research interests	Future aspirations
1	Man	District administrator	Role of school counselors	District administrator; Higher education instructor
2	Man	High school principal	School climate and safety	Superintendent
3	Man	Elementary school principal	School safety and improving instruction	Superintendent
4	Woman	*	Professional learning communities	District office position and higher education instructor
5	Man	High school principal	School safety and facilities	District office position or higher education instructor
6	Man	District director	School start times	
7	Woman	*		Higher education instructor
8	Man	*	Unsure	Building or district administrator, or professor
9	Man	High school principal	Literacy	Superintendent
10	Man	Middle school principal		Superintendent
11	Man	*	Curriculum, instruction, and assessment	School district administration

Note. Blank sections indicate no response.

Table 3
Mentor Information

Mentor Number	Gender	Current position	Dissertation topic/Methods	Future aspirations
1	*Woman*	*	*Advanced coursework in high schools*	*Higher education*
2	Man	School principal	School safety/Quantitative	District administration
3	Man	*	Professional development/Mixed methods	
4	*Woman*	*	*Literacy/Mixed methods*	*Superintendency*
5	Woman	*	Mathematics/Quantitative	Higher education
6	Man	School principal	School safety/Quantitative	
7	*Woman*	*	*Student achievement*	*District administration or higher education*
8	Man	*	Educational technology/Quantitative	
9	Woman	District administrator	Professional development	
10	*Man*	*District administrator*	*Student achievement*	

Note. Blank sections indicate no response. Mentor # does not match his or her mentee.

Data Collection

Geesa conducted and audio-recorded individual interviews and one focus group interview of mentees during the spring semester. Individual interviews were conducted via web conferencing during March and April 2017. The interview protocol consisted of 11 questions (Appendix A). Mentees were asked to recall their experiences in the peer mentoring program, including benefits of being mentored, whether they asked to be matched with a mentor based on demographics and if they found that beneficial, how mentoring helped them with their academic and career goals, and improvements that could be made in the mentoring program. Seven of the 11 participants participated in the focus group in April 2017. The focus group protocol consisted of six questions that were about similar concepts, but were different from the interview questions (Appendix B).

Lowery planned to conduct two focus groups with mentors (Appendix C) in April 2017. Although several mentors indicated they would attend the first focus group, only one participated. As a result, this became an interview. Three mentors participated in the second scheduled focus group. The focus group and interview were also audio-recorded and transcribed. To summarize, the timeline for data collection was as follows:

November 2016 – mentor training

December 2016 – Mentor/mentee meetings began

March-April 2017 – mentee interviews

April 2017 – mentee focus group

April 2017 – mentor interview

April 2017 – mentor focus group

Data Analysis

Focus group and interview recordings of mentees and the focus group session and interview with mentors were transcribed by McConnell and checked for accuracy by the co-authors. Lowery engaged in first and second cycle coding based on the key characteristics of self-regulated learning; namely, the characteristics of self-regulatory cognitions, affects, and mentor/mentee behaviors through the three stages of Schunk and Mullen's research model. This facilitated our development of themes in the context of the new conceptual framework (Merriam & Tisdell, 2016). The first coding cycle primarily consisted of identifying codes through In Vivo coding. In this process, the researcher develops a code, which is "a word or short phrase from the actual language found in the qualitative data record" (Saldaña, 2016, p. 105). As we have coded this data previously (Geesa et al., 2018; McConnell et al., 2019), we were confident that we had similar understandings and interpretation of this data. However, as the conceptual framework is new, we wanted to ensure inter-rater reliability based on the new framework. Lowery coded the data and the co-authors reviewed the data and coding. As common understanding about this process was developed, the categories and themes emerged. Categories, consisting of similar codes that were clustered together, emerged as the data was reviewed and refined. Finally, themes emerged from this process.

Findings

Our data analysis yielded four themes relevant to the phases of self-regulated learning. First, regarding pre-mentoring: participants' reflections about their conversations demonstrated evidence of goal-setting in conversations about pre-planning for the dissertation and professional goals. Two themes are related to the post-mentoring phase: mentors' reflections about their conversations as they got to know their mentees informed future conversations; and mentors engaged in self-reflection about their professional practice as a result of mentoring. The fourth theme is about mentee outcomes. Mentoring conversations increased mentees' self-efficacy due to the mentors sharing of prior experiences and knowledge about what to expect in the program and because the mentors provided encouragement.

Theme 1: Evidence of Goal-Setting

Participants' mentoring conversations demonstrated evidence of goal-setting in conversations about pre-planning for the comprehensive exams, selecting a dissertation topic, and professional goals and skills.

Goal-setting and pre-planning for comprehensive exams and the dissertation. Through mentoring conversations, mentees were able to pre-plan for two milestones in the doctorate program, the comprehensive exam (comps), and the dissertation. Mentee 8 explained, "you think about things like the dissertation, you think about the comps. Even though we're still a ways away from those things, they're still on your mind." Mentor 1 remembered, "that's mainly what we talk about is getting through comps and the dissertation and making sure he has a realistic view of how that is really supposed to go." Similarly, Mentor 7 had conversations "around the progression of courses and comps and trying to narrow your topic for your dissertation…." While this is similar to planning for what lies ahead, it is also about goal-setting in that as a result of these conversations, mentees are better positioned to create plans to attain the goals of successful completion of the comprehensive exam and dissertation. These plans ranged from "forcing myself to be organized," to saving notes from their classes for the comprehensive exam, learning how to use a web-based reference tools to organize references, and reading a "how to" dissertation book.

Mentoring conversations helped mentees plan for the goal of identifying a dissertation topic. For example, Mentee 6 explained, "[My mentor has] given me some ideas of what I can do with the areas that I feel like I'm good at, so like technology…he's a tech person, so he's given me some good ideas with respect to that." This example also demonstrates how the mentor integrated knowledge about the strengths of his mentee into suggestions for the dissertation.

Professional goal-setting and skills. Seven mentees expressed how mentoring conversations helped them set goals, or at least begin thinking about professional career goals. Mentee 8 reflected on how he learned the importance of certain professional skills. He noted, "We've had some very good conversations about working with school board members, or being the face of your corporation in regards to PR [public relations]. Also, we've talked about networking, and…always doing what is best for kids…."

Three other mentees discussed how mentoring has propelled them to consider new options. Two mentees stated they were not committed to pursuing the superintendency, but their mentoring conversations were beneficial for "keeping [their] eyes open" and getting them to think about other opportunities such as college teaching. The mentees were thankful that their mentors encouraged them to "keep an open mind, because down the road, having the credentials will open doors that you don't even know are there yet." Mentee 3 expressed similar sentiments, but not for the same reason. He had aspirations of being a superintendent in a smaller school district, but through discussions with his mentor, he came to understand the benefits and challenges of leadership in larger districts. He stated that he is now considering "opening [his] search up a little bit to maybe some larger school districts."

Theme 2: Mentors' Reflection and Knowledge of Mentee-Informed Future Conversations

Mentors revealed that as they got to know their mentees, they reflected on their conversations and tailored future conversations to the mentees' needs, expectations, or concerns regarding how to prepare for the dissertation, balancing family, work, and school, and future career-planning. Mentor 1 described her reflective process:

> …like when he asks me questions, it kind of makes me stop and reflect and really think about my experiences…But afterwards, I'll think about our conversations and consider things that have been offered to me…And look at my situation and just kind of see if changes can be made or if I can apply things a little differently.

When Mentor 1 learned that her mentee struggled with uncertainty about doctoral coursework, she provided examples and information that provided additional scaffolding needed to build his sense of efficacy about the doctoral program. She reflected on how her mentee responds to her conversations: "He kind of offers me a reflective piece when he says it back to me or to make sure he understands..." Mentor 1 addressed her mentee's learning by getting to know his emotional state and offering an ear or advice. She surmised that "he has a lot of insecurities of not knowing what's coming." So, she reassured him of the path and shared some of the major touchstones of the program such as the dissertation.

Mentor 7 reflected on how as she learned more about her mentee, she recognized similarities between them that informed her approach with her mentee. Both she and her mentee have children and like to be organized with timelines and deadlines. These commonalities were sources of conversation: "She's got kids herself and I had kids when I was going through it, so we can relate a lot to… so trying to juggle everything and we've had a lot of great conversations about that."

Finally, Mentor 4 demonstrated how she incorporated knowledge gained about her mentee through mentoring conversations into planning for future professional positions. As an administrator in her mentee's district, Mentor 4 saw herself as a doctoral *and* professional program mentor. As she is supporting her mentee to successfully complete the doctorate, she is also thinking about how to support her professionally: "I'm working with someone who is in my district so it has helped me to think about what I see for her in the future…it certainly has helped my district in thinking about what opportunities she would be a candidate for."

Theme 3: Mentors Transferred Self-Reflective Practices

Three mentors engaged in self-reflection about their professional practice as a result of mentoring. Schunk and Mullen (2013) stated that this might occur during the post-mentoring stage of self-regulated learning. Mentor 1 expressed how mentoring conversations reinforced her appreciation for self-reflection:

> I think if you can't be reflective in what you do, there's no point in doing what you do. So we're in a field of learning here, so you have to be a continuous learner to teach others to be learners, right?

Likewise, Mentor 4 postulated, "anytime we have the opportunity to work with people who are interested in furthering their education, it allows us the opportunity to consider the things that we do, why we do them, how we do them." She found value in the mentoring conversations because they gave her the "chance to really reflect on what [her] practices are and why those are [her] practices.

Mentor 7 was self-reflective in a different way. She agreed that "that reflection piece is huge" for the same reasons as Mentor 4. She added that reflecting on her mentoring conversations also

allowed her to think about different practices in different corporations. She recalled, "So we've had some nice conversations just discussing differences, you know, in our different corporations. So I guess I would say that I think that maybe has helped me grow a little professionally."

Theme 4: Mentoring Conversations Increased Mentees' Self-Efficacy

Data from mentee interviews and the focus group indicate that mentees' efficacy increased as a result of mentoring conversations. Bandura (1986) defined perceived self-efficacy as "a judgment of one's capability to accomplish a certain level of performance" (p. 391). Mentees expressed their increased capability to successfully navigate the doctoral program as a result of mentors sharing their experiences and knowledge about what to expect in the program, and because mentors provided encouragement.

Mentors shared experience and knowledge about what to expect. Mentees' appreciation for mentors sharing what they can expect, based on mentors' prior experience in the same program was almost universal among mentees. Communicating with somebody who has "been there, done that" made them feel more able to address similar situations should they arise. Specifically, they learned about professors' expectations, navigating possible challenges, and the dissertation.

Mentors gave mentees "a heads up on what to expect." Because the mentors were successful graduates, mentees were confident that their perspectives were valuable and insightful for "what was to come." Mentee 11 appreciated that he gained "a better idea of what to expect out of each" of his professors, since his mentor had all of them as well. He explained that adjusting to different professors during his undergraduate experience was difficult for him so having some prior information from his mentor increased his confidence. Mentee 5 explained:

> The mentor kind of helped me troubleshoot some things that…she knows what's ahead, so she's kind of helped me look ahead to what's coming up and how to prepare for that. So it's helped me to be more proactive. Just in signing up for classes, and just…like, what's coming around the pike, as far as classes and comps and all of those pieces.

Some mentees gained confidence regarding how to deal with possible challenges, such as selecting a dissertation topic and chair, or writing the dissertation. It was helpful for mentees to be exposed to how mentors navigated challenges related to the dissertation process by "getting their first-hand experiences." One mentor shared her dissertation and the committee selection process, what the mentee called "the two big unknowns." Therefore, he found those conversations very helpful.

Mentors offered encouragement. Mentees explained how mentors acted as "cheerleaders" and offered encouragement that bolstered their confidence. This manifested as general encouragement that mentees could finish the dissertation and assurance around specific issues such as mentees' approaches to time management and tackling classes.

One mentor-mentee pair used the term "cheerleader" to describe their dynamic. As a result of their conversations, the mentor believes the mentee thinks the dissertation is doable. Other mentees explained the value of being encouraged. Mentee 2 said that it was nice to have "someone that says, you know, 'you can do it…it can be done and we're getting it done.'" This encouragement bolstered his belief that he could succeed: "So someone saying that, I think is

impactful. You know, oftentimes when you're tired of doing something, you want to stop, and you know, when you have a statement like that sticking out in your mind, that's helpful." Mentee 5's mentor was encouraging by saying things such as "You'll get it. It's like riding a bike, you just have to keep practicing.'" Mentee 7 found it beneficial to receive encouragement from her mentor who is a mom and administrator like her. She delineated the mentor behaviors as "listening and giving advice and supporting me through the process and just encouraging me to keep at it."

Mentees were comforted by their mentor's encouragement, which was likened to "a safety net," and "support." Like Mentee 11, who "was a little reluctant," Mentee 6 had trepidation about his ability to complete the doctoral program. His mentor helped build his confidence. Likewise, Mentee 11 found that mentoring conversations made pursuing the doctorate "sound a little less intimidating."

Two mentees offered additional insight into how mentor encouragement contributed to increased self-efficacy. Mentee 3 said that he gained "reassurance" that his approach to the program and classes is working for him. As a result of his mentoring conversations, he has focused on organization in anticipation of the rigorous coursework and research ahead:

> I've kind of gotten into a routine now due to her advice, and carving out time every day, I mean I usually work here on my schoolwork to a certain time, and then I spend an hour after that working on some of my [university] work. That's helped me…I feel like I can do…it feels more manageable.

This demonstrates that as the mentee developed a writing routine, a key behavior for doctoral success, his perceived efficacy also increased. Mentee 9 credited his mentor with helping to eliminate "excuses on why not do it, and [has] encouraged [him] on the why and how to do it." This reflection indicates that the mentor's explanation of how to be successful increased self-efficacy, beyond only encouragement.

Mentors 4 and 10 also reflected that offering assurance was a major part of their role. Mentor 4 said that quelling "anxiety, worry, talking her [mentee] off the ledge [figuratively]" was a part of her mentoring conversations. She was able to offer this reassurance by sharing similar experiences or feelings that she had while going through the program. Mentor 10 shared that his role has been "easing anxiety and some of the worry about what's to come…kind of reassurance that…it really is doable."

Mentees reiterated that they felt supported by their mentors during the focus group. One mentee reported he felt "reassurance" and feels like he's "maybe on the right track" in approaching coursework. Other mentees expressed gratitude for the extra support structure and motivation provided by mentors.

Discussion

Below we explain how our study sheds light on our research question: In what ways did peer mentors and mentees in an education doctorate program engage in self-regulated learning?

Pre-mentoring. Although we did not collect evidence of goal-setting prior to the onset of mentoring conversations, data revealed that goal-setting about careers, the dissertation, and planning for future conversations did occur as a result of mentoring conversations. Examples of goal-setting included planning for the dissertation and discussing career goals. These are key aspects of self-regulatory activity (Locke & Latham, 2002). Lord et al. (2010) delineated goal setting, goal selection, and goal striving as elements of self-regulatory behaviors, all which are influenced by environment and feedback. Our analysis leads us to conclude that mentees engaged in goal setting in broad terms regarding dissertation and careers. However, we did not specifically ask questions about goal-setting to understand the nuances of goal selection, goal striving, and goal setting. This is one reason why asking such questions are important to include in future studies. For example, according to Lord et al. (2010), "When choosing to pursue a goal…individuals mentally simulate how much effort it would take to reach each potential goal as well as what the potential outcomes of goal pursuit might be" (p. 552).

We also saw evidence that mentors planned and focused their discussion to meet the needs of their mentees who, for example, expressed anxiety about the dissertation or comprehensive exam that would take place in the future. Similarly, one mentor engaged her mentee in conversations about work and life balance after realizing their similarities regarding work, career, and approach to time management. As Schunk and Mullen (2013) asserted, the self-regulated learning mentoring model is a cyclical process in which mentors considered mentee behaviors and responses to their conversations as mediating variables that informed future conversations.

During mentoring. Mentors demonstrated many of the mentoring behaviors categorized by Schunk and Mullen (2013) including providing feedback, listening, encouraging, and protecting. For example, one might argue that Mentor 4 sought to protect the interest of her mentee by thoughtfully considering the appropriate leadership role for her in the district. As extant literature demonstrates, networking is a benefit of mentoring relationships (Fleck & Mullins, 2012). Grant-Vallone and Ensher (2000) explained, "…peer relationships may serve in a supportive capacity related to both career advancement…" (p. 637). Although the mentor was a supervisor in one context, she served as a peer mentor in the program. Furthermore, mentees' appreciation for the support they received provide further enhancement to Mullen and Tuten's (2010) assertion that "mutual support is a critical factor in student success, progress, and well beingness" (p. 28).

Schunk and Mullen hypothesized that mentees may "feel self-efficacious as they perceive their learning progress…" (p. 377). There was evidence that mentees increased their sense of self-efficacy regarding successful progression through dissertation completion as a result of their mentoring conversations. Mentees' confidence increased as mentors shared stories and reflections to which mentees could relate, helping them to envision their own successful performance in the program. This relates to Sitzmann and Ely's (2011) assertion that "The relationship between self-efficacy and performance tends to be stronger when an individual has knowledge of the task to be performed…" (p. 422). Furthermore, increased mentee efficacy as a result of mentor support further strengthens previous claims about the importance of peer mentors as psychosocial support. As with other studies, mentees reported the vital role mentors played as cheerleaders, encouragers, and listeners (Booth et al., 2016; Fleck & Mullins, 2012; Holley & Caldwell, 2012; Preston et al., 2014).

Post-mentoring. As stated earlier, mentees engaged in goal-setting, in part as a result of their conversations with mentors about pre-planning for the dissertation and considering a variety of career options. Schunk and Mullen (2013) stated that an important outcome of mentoring is for mentees to gain "career and psychosocial skills and beliefs they need to continue to learn (i.e., be self-regulated learners) outside of mentoring contexts" (p. 381). Mentees who indicated they were thinking differently about professional opportunities and the skills required to meet the needs of students demonstrated that this internalization of skills took place. This also supports extant literature about peer mentoring. Pidgeon et al. (2014) concluded that their peer mentoring program provided opportunities to enrich Indigenous graduate students' "graduate experience in consideration of future academic roles (e.g. teaching, research, and service)" (p. 15). Although most of our mentees are not considering the academy, there is potential to integrate opportunities for them to think about such future career goals into our program.

Perhaps most surprising to us were the ways in which mentors transferred their self-reflection about the processes in which they engaged to support mentees to their roles as professional educators. Scholars have discovered that mentors increased their learning as a result of peer mentoring. However, while Erickson and Travick-Jackson's (2006) study revealed how mentors learned in part during a course designed to introduce mentoring skills, the mentors in this study indicated they learned from self-reflection about the mentoring process (Booth et al., 2016; Preston et al., 2014). There is still much to consider before we can make claims regarding internalization and transfer. For example, we do not know *how* mentors might have increased their professional capacity as educators as a result of their reflection in the mentoring process.

Implications and Conclusion

Limitations in this study include several of the weaknesses in extant literature described by Schunk and Mullen (2013) and offer new opportunities for further research. We asked questions about mentees' understanding of academic, psychosocial, and career skills, and mentor data yielded some insights into their cognitive processes. However, although mentees completed a survey at the beginning and end of the program within the same academic year, this did not constitute a longitudinal study. Interview and survey data may be more complex or shed more light on other aspects or benefits of the mentoring program after more time for participation in the program and more time to reflect on mentoring processes and conversations. Additionally, we did not collect observational data, relying on self-reported data. Observational data may provide opportunities to learn more about how aspects of mentoring interactions develop learning, reflection, and application, or how much effort participants exert to set and achieve goals (Sitzmann & Ely, 2011).

Unanswered questions about the mentoring experience regarding the extent to which, if at all, gender or other demographic characteristics such as age influenced the mentoring experience or learning underscore the importance of examining experience through intersecting identities. In particular, the absence of a gendered analysis was a limitation in this study. The gender disparity between mentors and mentees raises questions regarding research analysis and for program administration. Although gender was not a focus in this study and all mentees (n = 11) said that they did not believe their mentor's gender had any affect upon the relationship, it is possible that there were unidentified consequences of this gender imbalance upon the findings. For example, one mentor pair explained how their similarities as working mothers balancing school and

families created an additional bond between them. More exploration of this and other gendered themes could take place with perhaps more pointed questions or more balanced gender representation in both groups, which leads to the next point. Mentees were largely male, which we noticed at the beginning of the academic year. While nine of 11 was an anomaly, our cohorts tend to be predominantly male. We have begun department discussions to investigate why women are underrepresented and how we might make the structure and content of our program more attractive or relevant to women leaders. One final observation about gender is that even though the mentor group was balanced and most agreed to participate in the study, including a focus group, ultimately three of the only four participants in the focus group were women. This leaves us to ponder possible reasons for this attrition and how we might provide more opportunities or follow-up for more balanced gender participation. Perhaps conducting individual interviews with mentors and/or including observations of mentor conversations, where the researcher adjusts her schedule to meet with the participants, might better promote participation.

In addition to the importance of gender, other implications for further research surfaced. Factors such as race and age were not taken into consideration but could have had unseen effects upon our data. Future studies could look further into the possible influence of these factors upon mentoring benefits and challenges, or mentoring relationships. For example, it might be beneficial to explore whether and how research that indicates Black students benefit from having Black teachers (Cherng & Halpin, 2016) and that there are benefits to having race-congruent teachers (Egalite, Kisida, & Winters, 2015) might apply in this context. Of course, this also requires that we continue to diversify student representation in our program. Relatedly, the exploration of the pairing process in general should be explored. Fleck and Mullins (2012) found that "pair compatibility…may not be [an essential aspect] to include in graduate mentoring programs" (p. 287). They suggested that finding an appropriate way to assess pair compatibility may be in order.

The analysis of our data through the lens of self-regulated learning exposed areas for more focused attention on the behaviors of mentors and mentees during the pre-mentoring stages. The analysis of mentor data illuminates the importance of asking mentors to set goals and to monitor their own learning to assess the benefits of their participation in the program. Additionally, mentees' responses regarding the usefulness of a peer mentoring program during the first year of their graduate program may be useful when considering the timing of the program and when mentees have developed specific goals beyond degree attainment. In short, while the reanalysis of our data through the lens of the mentoring research model has illuminated important aspects of meaningful mentoring processes, this study illustrates the importance of integrating a framework into the design of a study, rather than as reanalysis of data. The latter allows for researchers to identify, from the outset, the key aspects they wish to observe or measure.

Our findings demonstrate that self-regulated learning occurred on a surface (or general) level. Analysis of self-regulated learning processes is needed. We underscore the areas identified by Schunk and Mullen (2013) regarding gaps in mentoring research we identified earlier as areas for further mentoring research. They assert studies need to include more than self-reported or interview data after mentor-mentee interactions; observational data; examination of the role of mediating variables such as the cognitive processes of mentors and mentees; and longitudinal timeframes. An understanding of the importance of Schunk and Mullen's research model is

crucial. As they asserted, "Mentoring research that assesses the operation of self-regulated learning may provide insight into how mentor functions and behaviors exert their effects on protégé outcomes" (p. 376). Additional benefits of observational research include opportunities to identify and analyze how mentors might model academic or career-related skills (Bandura, 1986).

Implications for individual programs include paying attention to demographics, as well as considering whether mentor-mentee pair compatibility should be assessed, and if so, the best way to assess the pairing. For example, we did not collect information on the urbanicity of participants' work environments, another variable that might influence aspirations or work-life balance. We also have incorporated discussions of balanced representation of gender and other demographics in our program. As we seek to understand mentoring processes in order to evaluate the effectiveness or utility of our peer mentoring program, we see much value in this research model.

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Appendix A. Mentee Interview Questions

1. How has your relationship with your mentor helped your progression through the Ed.D. program?
2. What has been the most impactful way your mentor has supported your progression through the Ed.D. program?
3. What types of successes have you shared with your mentor/mentee?
4. Have you participated in a mentoring program before? If so, what was that experience like?
5. How did the program complement (or not) your experiences a) in the Educational Leadership department and b) Ball State University?
6. Do you feel supported by your academic program and faculty advisor? Explain.
7. What challenges do you face as a graduate student at this institution?
8. Did you request that the peer mentor be of the same race or gender as you? Why? How did that impact your relationship?
9. What were the most positive aspects of the program for you? What areas could the program specifically improve?
10. What other programs/experiences/resources have you participated in during your graduate school enrollment?
11. How have conversations with your mentor helped you to develop next steps in your career after getting your doctorate?

Appendix B. Focus Group Questions for Mentees

1. In what ways, if any, has the mentor/mentee relationship contributed to your development as a professional?
2. How might the Educational Leadership program faculty improve to provide more support towards progression towards the doctorate?
3. What do you know now that you didn't know about the Ed.D. and the Educational Leadership program as a result of spending time with your mentor?
4. What have been the greatest benefits from having a mentor?
5. Describe the ways your mentor has supported your progression through the program with a) academics b) emotional or personal concerns c) career planning
6. What other needs or issues might be helpful for you to have a conversation or problem-solving with your mentor?

Appendix C. Focus Group Questions for Mentors

1. In what ways, if any, has the mentor/mentee relationship contributed to your development as a professional?
2. How might the Educational Leadership program faculty improve to provide more support towards progression towards the doctorate?
3. What have you learned about yourself as the result of being a mentor?
4. What do you believe has been the most significant impact of your mentoring conversations with your mentee?