

THE PERCEPTIONS OF PEER MENTORS AND MENTEES ABOUT THE PROCESS
AND IMPACT OF PEER MENTORING

By

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To Teacher Educators

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This is the fulfillment of a long journey of wanting to know more and to be more. It is a little sad to think that I have arrived at a terminal degree. But the learning doesn't stop just because the degrees are over. I will be a learner forever.

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Abstract of Dissertation Presented to the Graduate School
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Preservice teachers benefit from the knowledge of many groups of people: college faculty, mentor teachers, and peers who are preparing to be teachers. While much research has been done about the contributions of faculty and mentor teachers to the education of preservice teachers, very little has been dedicated to the peer mentoring process, one in which the mentor is on an equal footing or slightly ahead of those he or she is mentoring.

This study was undertaken to examine the perceptions of peer mentors and those that they mentored about how the peer mentoring process impacted their knowledge and skills as teachers. The primary question that suggested the study was: How do peer mentors perceive that their knowledge and/or abilities as teachers are influenced by their experiences as peer mentors? A secondary question was: How do mentored preservice teachers perceive that their knowledge and/or abilities as teachers are influenced by their experiences with their peer mentors?

The theoretical perspective of the study was constructivism. Grbich (2007) suggested that the research focus of constructivism is exploring how people, in this case the peer mentors and their mentees, made sense of the process of mentoring and teaching. The participants were four peer mentors from the UFTeach program and a group of six Step I preservice teachers. Individual interviews provided data which were then analyzed using an inductive analysis approach to determine domains that describe the work and learning of the mentors and mentees.

Findings of the study indicated that both peer mentors and their mentees learned valuable skills and knowledge about teaching as a result of their participation in the peer mentoring experience. Implications for practitioner research and for teacher educators are provided. The study culminates with the development of a handbook to guide professional development for future peer mentors.

CHAPTER 1 STATEMENT OF THE PROBLEM

Schools in America today are experiencing a critical shortage of teachers. Lieberman and Miller (2004) pointed out that statistics show that within the past decade as many as half of all teachers leave the profession within their first five year, and suggested that there will be a need for up to 200,000 new teachers annually by 2014. While these statistics show a need for teachers in all fields, finding and retaining qualified mathematics and science teachers has been an on-going problem for years.

Wilson (2011) suggested one of the contributing factors to this problem is that teachers are not valued in our culture. College undergraduates learn they can find employment in their fields that offers more respect for their preparation and knowledge and so are not interested in becoming teachers. Brainard (2007) further suggested that the nation's research universities are partially at fault. He explained that professors in the STEM fields regard their students as being too bright to end up as teachers, and thus typically guide those majoring in mathematics and the science away from education as a career.

The statistics are chilling when we consider how the lack of qualified teachers is affecting our nation's youth. Brainard (2007) reported that almost a third of secondary mathematics students and almost two-thirds of secondary physical science students sit under teachers who did not major in their subject and are not certified to teach it. Additionally, Wilson (2011) emphasized the importance of fully-qualified teachers, stating that students sitting under less-than-effective teachers for three years in a row are at high risk for failure.

In an effort to fill vacant positions, many school districts have chosen to hire teachers who have majored in a subject such as mathematics or one of the sciences, but who have not traditionally prepared to be teachers. While this addresses the immediate need for teachers in our classrooms, it raises other concerns. Wilson (2011) reported

Alternative routes [to teaching] have been touted as ways to increase the diversity in the teaching ranks, minimize barriers that keep the best and the brightest from entering the profession, and provide professional training that is more relevant than the training offered by universities. (p. 65)

A key concern, however, is that a love for and knowledge of one's subject may not be enough to enable one to teach that subject effectively. Wilson (2011) suggested that strong initial preparation is a key element in improving teacher quality. However, recruiting college students in the STEM fields into teaching has been a challenge as budget cuts have impacted teacher preparation programs (Bragg, 2007). UFTeach at the University of Florida is an example of a program that is designed to recruit mathematics and science majors into teacher education courses increasing their interest in teaching and providing stronger initial preparation for teaching than is typical in many alternative certification programs in the state. As part of the UFTeach program, peer mentors are used to assist less experienced peers in practicing beginning teaching skills. Because there is little research about peer mentors in teacher education generally, and none about the use of peer mentors within the UTeach or UFTeach model the current study was designed to examine perceptions of mentors and mentees about the impact of this program.

Background and Context

While the focus of this study was on peer mentoring, the program in which the mentoring was situated was the UFTeach program. Background about this program contextualizes the study. In 2007, the University of Florida Colleges of Education and Liberal Arts and Sciences applied for a grant and were accepted into a nationwide cadre of universities replicating the UTeach program developed at the University of Texas at Austin. The UTeach program began in an effort to address the critical need for secondary science and mathematics teachers in the United States (UTeach Operations Manual, 2007). The UFTeach program, one of several replications of the UTeach program, offered a minor in education to undergraduate students majoring in science or mathematics. Upon graduation, students who completed the UFTeach minor were eligible for temporary certification in the state of Florida.

As with UTeach, UFTeach provided a strong linkage between pedagogy and content (UTeach Operations Manual, 2007). Students took coursework which equipped them with content-area knowledge in their respective majors simultaneously with UFTeach courses in basic pedagogy. The courses were designed to prepare the preservice teachers to be secondary science or mathematics teachers. To enhance the linkage between pedagogy and content, UFTeach master teachers worked alongside UF faculty from the College of Education and the College of Liberal Arts and Sciences to teach courses in the minor (UTeach Operations Manual, 2007). UFTeach master teachers were chosen for their exceptional content knowledge and expertise as secondary teacher-leaders in public schools. There were initially two master teachers who began the work of the UF program (one science teacher and one mathematics teacher). In the fall of 2010 a second science master teacher was added to the faculty,

and in the fall of 2011, a second mathematics teacher was added, bringing the total to four master teachers.

UFTeach Courses

The UFTeach course progression begins with courses entitled Step I and Step II¹. These introductory courses (one hour and two hours respectively) provide students with a general introduction to the teaching profession. Once students have completed these two courses and the number of credit hours required by the University, they officially declare the UFTeach minor. All UFTeach students take seven additional three-hour courses. Six of these courses complete the standard UTeach (Texas) minor: Knowing and Learning, Classroom Interactions, Perspectives on Science and Mathematics, Research Methods, Project-based Instruction, and Apprenticeship Teaching. The seventh course in the UFTeach (Florida) minor is a reading course (titled Reading in the Content Areas) which is a state of Florida certification requirement. An eighth course, Functions and Modeling, is required for mathematics majors. A more complete description of these courses can be found in Appendix A.

The History of Enrollment in UFTeach Step I Courses. The UFTeach program began in the fall of 2008 with a total of 40 students. Enrollment remained consistent until the spring of 2010 when the number of science students enrolled in Step I dropped by almost half. Concerned with this drop, program leaders became more proactive in recruiting students. As a result, Step I experienced explosive growth in the fall of 2010. To meet the demand for this course two more sections of Step I were added to the course master schedule. Table A at the end of the chapter shows the enrollment

¹ In the spring of 2012 the configuration of courses changed as a three-hour Step I/II Combination course was added.

information from fall of 2008 to fall of 2011. It is important to note that the figures for each major category include students whose majors may not be Science or Mathematics, but who may be pursuing a science or mathematics minor in addition to the UFTeach minor.

Course Design of UFTeach Step I. As has been explained, Step I is the initial course in the minor, and is taught by master teachers. The minor began with two master teachers who co-taught Step through the spring of 2010. One of these master teachers was a former mathematics teacher and the other was a former science teacher, both of whom previously taught at the University of Florida laboratory school. In the fall of 2010 a third master teacher, a former science teacher and professional development trainer from Duval County was hired. In the fall of 2011 a fourth master teacher, a retired mathematics teacher from Alachua County, was hired. Each of the master teachers has over 20 years of teaching experience as a teacher. Students in the course are mainly science and mathematics majors enrolled in the College of Liberal Arts and Sciences.

At the beginning of the course, following the model established by UTeach (UTeach Operations Manual, 2007), each undergraduate chooses a partner based upon their course schedules, and then the pair is placed in public elementary schools. This placement in elementary schools is deliberate. While the intent of the program is to put more teachers in secondary science and mathematics classrooms, the elementary setting is considered a less-threatening environment in which students can begin to learn to teach. As preservice teachers progress through the courses in the minor, they move into secondary classrooms. Pairing students to co-teach is an advantage to the

program. Such a model provides the first of several built-in support systems for each preservice teacher. Researchers suggest that preservice teachers can benefit greatly from the support provided by different mentors (Bransford, Derry, Berliner, Hammerness, & Beckett, 2005; Gilles et al., 2009). Students in Step I observe in their assigned mentors' classrooms for at least an hour twice during the semester. They teach three 45-60 minute lessons to their students.

When the program began in 2008, student teams were required to write their own lesson plans with close supervision by both master teachers in the UFTeach program and their assigned mentor teachers [for the purposes of this study, all teacher mentors will be referred to as *mentor teachers*, and the terms *peer mentor* and *mentor* will be used interchangeably]. Preservice teachers were required to communicate and collaborate with their mentor teachers as they planned their lessons, and then were advised (but not officially required) to practice their lessons at least once with one of the master teachers or with the teaching assistant for the course before they taught in their mentors' classrooms.

When enrollment in Step I increased, it was no longer feasible for the master teachers to work with each preservice teacher as he or she practiced the lesson prior to classroom teaching. Therefore, in the spring of 2009, faculty selected four preservice teachers, two science majors and two mathematics majors, who had completed the initial courses of the UFTeach minor, had exhibited excellent content knowledge, had lesson planning abilities reflective of what they had learned in the initial courses, and who had exhibited a high level of commitment to the teaching profession, to serve as mentors. These mentors were to mentor other students as they progressed through the

Step I course. They provided support as Step I students learned to write and teach lessons for elementary science and mathematics students.

As enrollment in Step I classes gradually increased, and without a comparable increase in the number of master teachers, faculty was forced to create a new plan for providing support to Step I students. In the fall of 2010 four more mentors were hired, two more mathematics and two more science, bringing the total number of mentors to eight. All Step I students were now required to practice their lessons at least once with a mentor before they were allowed to teach. As part of their responsibilities, the peer mentors worked with Step I preservice teachers, watching them practice their lessons, helping them prepare materials for instruction, and making suggestions about how lessons could be improved. Additionally, these mentors visited science and mathematics classes to recruit students for the program. In the summer of 2011, two of the mentors regularly attended orientation sessions held by the University for incoming freshmen along with other UFTeach preservice teachers to recruit students for the program. A final responsibility of the mentors was to help the master teachers write and revise lessons that Step I preservice teachers would be teaching during their field experiences. These lessons were planned to coincide with the Alachua County pacing guides for elementary science and mathematics, and were designed to continue instruction on content that was already being taught in third through fifth grade classrooms.

Purpose of the Study

To enhance our knowledge about mentoring, and to improve our effectiveness, this study was undertaken to examine the perceptions of mentors and those they

mentor about the benefits of and the challenges faced in a peer-mentoring model of preservice teacher education. The research questions that drove this study were

- What happens in peer mentoring sessions?
- How do peer mentors perceive that their knowledge and/or abilities as teachers are influenced by their experiences as peer mentors?
- What other benefits and challenges do peer mentors perceive when working with other preservice teachers?
- How do mentored preservice teachers perceive that their knowledge and/or abilities as teachers are influenced by their experiences with their peer mentors?
- What other benefits and challenges do mentored preservice teachers perceive as a result of working with peer mentors?

A review of the literature on peer mentoring revealed few studies of the process within teacher education. This study was undertaken with the intention that the findings inform the currently limited literature about peer mentoring and provide some suggestions for improving peer mentoring programs.

Significance of the Study

One of the challenges faced in ensuring high quality teaching in mathematics and the sciences in today's secondary classrooms is recruiting candidates interested in teaching in these areas. There are many programs that have this goal. The UFTeach program is one of these. The purpose of this minor is to give students with majors in the STEM areas an introduction to teaching that will spark an interest in teaching and provide the preparation necessary to be certified to teach secondary mathematics or the sciences upon graduation. In this way program developers hope to address the critical shortage of qualified teachers in the STEM fields by giving college students early and ample field experiences that could help them decide to choose to become teachers.

This study informed the field about ways that a peer-mentoring relationship could impact

the learning of both mentors and those whom they mentor. It culminated in a training manual to be used in the UFTeach program outlining best practices and the essential knowledge and skills needed to enhance the effectiveness of the mentoring component of the program.

Definition of Terms

- **Constructivist Theory:** an epistemology that posits that knowledge is co-constructed by those who share the learning situation (Guba & Lincoln, 1994; Hatch, 2002). Constructivists assert that individuals construct their own reality of the world around them (Berger & Luckmann, 1967; Hatch, 2002). Grbich (2007) further noted that one's reality is dependent upon the signs and symbols of the society and culture in which one lives, those which become real to one from babyhood.
- **Inductive Analysis:** a strategy for examining data that calls for an ever-narrowing focus on data that leads to a collection of overarching themes revealed in that data.
- **Master Teacher:** Within the UFTeach program a master teacher one who is highly qualified in mathematics or some field of the sciences. Master teachers are clinical educators who teach many of the UFTeach courses and supervise students in their field experiences. They also provide induction support to UFTeach graduates.
- **Mentor:** A cooperating teacher working with one or more preservice teachers involved in some sort of field experience (Korth, Erickson, & Hall, 2009; Street, 2004).
- **Peer Mentor:** a preservice teacher education college student who shares similar experiences with those whom he or she is mentoring, but who is, at the same time, a step or two ahead of those he or she is mentoring, in terms of knowledge and experience.
- **UFTeach:** The UFTeach program at the University of Florida began in 2007 in an effort to prepare mathematics and science undergraduates to become secondary teachers. The UFTeach minor qualifies undergraduates for certification as secondary mathematics and science teachers upon graduation.

Organization of the Study

This study is divided into five chapters. Chapter 1 describes the critical need for qualified teachers in mathematics and the sciences in the United States and provides

background and contextual information about the UFTeach program and the need for the study. The second chapter provides a review of research related broadly to mentoring, and more specifically to peer mentoring. Chapter 3 explains how the study was conducted and the research methods that drove analysis of the data. The fourth chapter presents results of the data analysis, and Chapter 5 provides a discussion of the findings of the study and its implications for further research.

Table 1-1. UFTeach Enrollment – Fall 2008 to Spring 2011

Semester	Science Enrolled	Math Enrolled
Fall 2008 (two sections)	24	16
Spring 2009 (two sections)	18	16
Fall 2009 (two sections)	23	15
Spring 2010 (two sections)	13	25
Fall 2010 (four sections)	40	28
Spring 2011 (four sections)	39	32
Fall 2011 (three sections)	20	22

CHAPTER 2 LITERATURE REVIEW

The purpose of this study is to examine the perceptions of peer mentors and their mentees about the process and outcomes of a preservice teacher education peer mentoring experience. This chapter begins with a synthesis of the literature related to mentoring in order to provide an understanding of what a mentor is, what knowledge and skills are essential for good mentoring, and what benefits may accrue to, or what challenges may be faced by, mentors. The final focus of this chapter will be to examine the limited literature dealing specifically with peer mentoring, in an effort to show how peer mentors share some of the same benefits and challenges as other mentors. The literature reviewed was chosen from empirical studies that were published in peer-reviewed journals within the past fifteen years. Information from earlier empirical and theoretical works was included to help provide a background for understanding the process of mentoring.

Definition of the Term *Mentor*

A definition of the term mentor is in order before one begins to examine the skills that are essential for mentors. Interestingly, in a review of literature examining mentoring relationships with college students, Crisp and Cruz (2009) reported that there are over 50 definitions of the term *mentor*. They attributed this inability to settle on one definition to the fact that in the literature mentors are defined by both who they are and what they do. There are many different kinds of mentors who do many different types of mentoring. Within education, however, scholars most commonly use the term *mentor* when referring to cooperating teachers working with preservice teachers involved in

some field experience (Korth et al., 2009; Street, 2004). Yet even these researchers seem to have difficulty defining mentors without referring to their function.

Another common use of the term mentor is contextualized within induction programs for novice teachers. Here, *mentors* are veteran teachers physically based in the same schools as their mentees. They help one or more novice teachers by introducing them to important support personnel, by providing for physical needs a novice teacher might experience, such as furniture, materials, and supplies, by introducing them to the culture of the school, and by supporting them emotionally as they learn to teach (Awaya, McEwan, Heyler, Linsky, Lum, & Wakukawa, 2003; Cherubini, 2007; Ingersoll & Smith, 2004). These mentor teachers might be assigned to their mentees by a principal, or they might be self-chosen by mentees who become familiar with their teaching style and, in effect, apprentice themselves to the mentor.

A term closely related to *mentor* is *coach*. Some use the term *peer coach* to refer to more-experienced teachers, perhaps in this case released entirely or in part from their classroom duties, who collaborate with already-established colleagues in their own schools in order to mutually develop and refine essential teaching skills (Caccia, 1996; Slater & Simmons, 2001). Coaches may address the needs of teachers across the school setting, rather than just in a particular content field. An example might be literacy coaches who work with the entire faculty of their schools to plan for and conduct literacy instruction in all content fields.

Others use the term *coach* to refer to those educators hired by a district to go into various schools and work with specific groups of teachers to build teaching capacity in specific subject areas. These *coaches* often have no previous professional relationships

with the teachers with whom they are working (Li & Chan, 2007), and may or may not be welcomed by the teachers in the school, since they may be viewed as outsiders.

Mentors who perform the previously described types of work with teachers enact a more traditional understanding of the function of a mentor. However, that understanding is shifting. Le Cornu (2005) noted that the more-traditional understanding of mentoring is changing to “reconceptualize mentoring as much more of a collaborative or collegial relationship” (p. 356). She used the term *peer mentor* to mean two preservice teachers who are on equal or almost equal footing in teaching experience. She envisioned a constructivist situation in which the peer mentor and mentee work together to refine their teaching knowledge and practice.

Although a variety of definitions is used for the term mentor, the basic function of all mentors is the same. All mentors provide professional support to teachers who are most often less experienced educators than they are, whether the mentors are preservice teachers, novice teachers, or veteran teachers. All mentors share their own wisdom and knowledge about teaching in an effort to improve the practice of other teachers and improve the quality of the education students receive. Possibly the differences in the various titles stem from the degree to which these educators are involved with their mentees. In an effort to gain an understanding of mentors, broadly defined, literature was examined using any of the titles described above. However, for the purpose of this research study, the term *peer mentor* is used interchangeably with the term mentor and is defined to mean preservice teachers who are in a formally assigned role in order to share content knowledge and instructional strategies with other preservice teachers as they collaborate during coursework and field placements. This

chapter begins with an overview of the attitudes and skills of mentors in general, and then focuses on those of peer mentors more specifically.

Attitudes and Skills of Mentors

The literature provides insight into the importance of using a mentoring attitude as well as mentoring skills as one works with mentees (Terrion & Leonard, 2007). This raises the question “Just what are the characteristics of a mentoring attitude?” A mentoring attitude is one in which mentors show respect for their mentees, valuing the mentee’s time and knowledge as contributions in their mutual relationship (Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Boreen & Niday, 2000; Cherubini, 2007, Feiman-Nemser, 2001). A caring mentoring attitude leads to an understanding on the part of the mentee that the mentor has his or her best interests at heart (Caccia, 1996; Hanson, 2010). Mentors who are enthusiastic about their teaching and share that enthusiasm with their mentees also have a mentoring attitude (Boreen & Niday, 2000). Finally, a positive mentoring attitude requires that the mentor be open, accessible, and willing to help (Algozzine et al., 2007).

A mentoring attitude is important, but in order for effective mentoring to occur, mentors must also have skills. In order to teach others effectively, a mentor must first have strong interpersonal skills (Grierson & Gallagher, 2009). McLean (2004) found that 43% of the mentors studied reported that the most important factor impacting their mentoring was learning more and better interpersonal skills. Effective mentors must be able to make mentees feel like respected colleagues. Algozzine et al. (2007) reported that 96% of the beginning teachers they studied reported feeling welcomed into their new school communities by their mentors. Having the interpersonal skills to convey

respect is vitally important as educators endeavor to lessen the attrition of new teachers.

Research shows that effective mentors need to be able to develop and sustain relationships with their mentees (Kardos, Moore-Johnson, Peske, Kauffman, & Liu, 2001). To do so, mentors need to be skilled in building trusting relationships (Caccia, 1996; Feiman-Nemser, 2001, Li & Chan, 2007). Relationships grounded in trust allow mentors and mentees the freedom to share their knowledge with each other with less fear of resistance or rejection. When mentees feel they cannot trust their mentors, they are more likely to resist acting upon their suggestions (Feiman-Nemser, 2001; Hanson, 2010).

Establishing a trusting relationship with mentees is not always easy, however. Research shows that building trust requires repeated contact between the mentor and mentee over time, which can be challenging for mentors and mentees to coordinate (Ingersoll & Kralik, 2004). In fact, being able to set aside enough time for effective mentoring is one of the top concerns of mentors and their mentees (McLean, 2004), although researchers are divided on exactly how much time is enough time for mentoring (Ingersoll & Kralik, 2004, Wang, 2001).

Another skill that mentors must develop is that of providing clear and specific feedback in order to help mentees understand what they have done correctly and what they need to change in order to be more effective teachers (Algozzine et al., 2007). There are, of course, different types of feedback, ranging from that which provides emotional support (almost like a cheerleader) to that which provides substantive suggestions addressing specific instructional practices (Athanases, Abrams, Jack,

Johnson, Kwock, McCurdy, . . . Totaro, 2008; Feiman-Nemser, 2001). Mentors must be skilled at recognizing and praising the positive elements of mentees' performance, but must also deftly lead mentees toward improvement in problem areas (Evertson & Smithey, 2000).

While traditional mentors may transmit knowledge to those they mentor (Whitehead & Fitzgerald, 2006), a more effective method of mentoring is one in which both mentor and mentee can comfortably share from their funds of knowledge as they discuss instructional practices and classroom management (Bowman & McCormick, 2000). Mentees learn from mentors, but mentors should be open to learning from their mentees as well (Katkus, 2007; Lam, Yim, & Lam, 2002; Le Cornu, 2005; Street, 2004). On the other hand, the mentor's teaching ability grows when he or she is willing to learn new skills from mentees (Hanson, 2010; Hastings & Squires, 2002).

Since mentors are expected to help mentees refine their knowledge of the content they are teaching, the mentor must have a good conceptual knowledge of that subject, and of the best ways to teach it (Athanasios et al., 2008; Feiman-Nemser, 2001; Grierson & Gallagher, 2009). While there are some things that a mentor from any subject discipline can help preservice and novice teachers learn about teaching, research indicates that mentors are most effective working with those who teach the same subject or grade level (Boreen & Niday, 2000; Cherubini, 2007). In fact, pairing mentors with mentees across grade levels and across subject areas may lessen the effectiveness of those mentors (Hertzog, 2002)

Challenges Experienced by Mentors

There are some interesting challenges that mentors experience. As has been noted, the literature suggests that it takes multiple contacts over time for mentors to

affect change in their protégés (Boreen & Niday, 2000, Feiman-Nemser, 2001). Release time for protégés to observe their mentors and colleagues teaching is also important. Those who develop mentoring programs must find ways to fund time periods for mentors to work with their protégés (Algozzine et al., 2007; Ingersoll & Smith, 2004). While such efforts are costly, some research has suggested that the quality of mentoring that protégés receive reflects directly on student achievement (Athanases et al., 2008, Evertson & Smithey, 2000). This is, of course, of tantamount importance in today's focus on accountability and student achievement.

The literature seems to indicate that for preservice preparation programs in particular, allowing teacher mentors (i.e., cooperating teachers) and their protégés to have input into what courses are taught and how they are conducted could be important in producing novice teachers who are better prepared as they enter teaching (Hastings & Squires, 2002; Hertzog, 2002). This may be challenging to accomplish considering the fact that the content of teacher preparation at the preservice level is so controlled by state education departments. However, this argues for a closer relationship between universities and school districts (Mitchell, Clarke, & Nuttall, 2007) in which mentors are able to make suggestions for or even help to develop specific courses to meet the needs of preservice teachers. Of course, mentors would draw from their specific mentoring skills related to content and pedagogy to make such suggestions.

Finally, many researchers argued specifically for more professional development that would enable mentors to learn new skills and refine existing ones (Cherubini, 2007; Evertson & Smithey, 2000; Feiman-Nemser, 2001; Hanson, 2010; Hastings & Squires, 2002; Mitchell et al., 2007; Wang, 2001). In order to be the most effective, mentors need

to stay current in all areas of their practice. Mentors can only teach what they know. Of course, this professional development for mentors would require both funding and time.

In summary, mentoring is enhanced by the development of a mentoring attitude and mentoring skills. Effective mentors show that they care for and respect those whom they mentor. They are willing to share their knowledge of best educational practices, but are also open to learning new ones from their mentees. They are enthusiastic about teaching, and seek to share that enthusiasm with those they mentor.

Mentoring is also enhanced by the skills that a mentor has in his or her repertoire. A mentor must have good interpersonal skills that invite his or her mentee into a relationship grounded in trust. Mentors must be skilled at both praising a mentee for his or her current performance and gently leading him or her forward in understanding of their subject and how to teach it. A mentor should also create a reciprocal environment in which both mentee and mentor are comfortable learning from the other.

Peer mentoring, the focus of this study, involves many of the same skills that all mentors need in order to be effective in helping preservice and novice teachers. However, peer mentors in the university setting may require some unique skills. In the final section of this chapter, findings from an examination of the limited literature specifically addressing peer mentoring will be discussed.

Peer Mentoring

An examination of the literature reveals that the term *peer mentor* may be defined as an experienced person who “provide[s] guidance and support to vulnerable students [similar to himself or herself] to enable them to navigate through their education” (Kram, 1983, as cited in Terrion, 2007). Notice that this definition addresses both the level of experience of a peer mentor, and the mentoring functions that he or she may be doing,

echoing what Crisp and Cruz (2009) noted about mentors in general. Admittedly, this definition differs little from that of mentor discussed previously in this chapter. Brooks and Moriarty (2009) disagreed, however, stating conversely that peer mentors are “two practitioners of similar experience” (p. 37). Eisen (2001) and Holbeche (1997) agreed that peer mentors share an equal status. For the purposes of this study, however, the important thing is the focus on the *peer* aspect of the mentoring. Crisp and Cruz (2009) cited Phillip and Hendry (2000), who provided a more elaborated definition of a peer mentor as one participating in a “friend-to-friend” relationship in which the friends act as “a safety net” for each other, or a “peer group” relationship in which peers group together to “explor[e] an issue” (p. 529). For the purposes of this study, as has been previously stated in this chapter, peer mentors will be defined as college students who share similar experiences with those whom they are mentoring, but who are, at the same time, a step or two ahead of those they are mentoring, in terms of knowledge and experience.

What the Literature Says

It should first be noted that there is little literature devoted to peer mentoring in the field of education. Therefore, to gain a more comprehensive understanding of peer mentoring in the undergraduate arena literature from other fields was also examined. One early literature review on college level peer mentoring examined studies dealing with successful outcomes that could be attributed to mentoring (Jacobi, 1991). This literature review provided archival information on mentoring, and noted the concern, echoed by other more recent literature reviews, that most of the literature on the mentoring of undergraduates lacks validity and generalizability because the studies are largely qualitative studies conducted with small samples. Jacobi included peer

mentoring under the general heading of mentoring, and offered only a passing reference to peer mentoring as a specific type of mentoring. She did provide, however, a list of functions of mentoring. Specifically, Jacobi noted that there are 15 functions of mentoring, loosely grouped into three categories: those that have a career development function, those that have a psychosocial function, and those that deal with the role model aspect of mentoring. The fifteen functions were

acceptance/support/encouragement, advice/guidance, bypassing bureaucracy/access to resources, challenging/opportunity/plum assignments, clarify values/clarify goals, coaching, information, protection, role model, social status/reflected credit, socialization/host and guide, sponsorship/advocacy, stimulate acquisition of knowledge, training/instruction, [and] visibility/exposure (Jacobi, 1991).

Four recent synthetic literature reviews of peer mentoring among young adult students were also examined. Three dealt generally with the mentoring of college students in various fields of study (Budge, 2006; Crisp & Cruz, 2009; Terrion & Leonard, 2007), and one specifically with peer mentoring in the nursing field (Christiansen & Bell, 2010). Crisp and Cruz (2009) provided a conceptualization of mentoring from the viewpoints of psychology, business and education. This review added to Jacobi's set of functions the idea that essential attributes of mentors included developing an attitude of reflection, being an exemplar in the field that can be looked up to, acting to help the mentee realize his or her dream, and developing a long-term relationship. These are far-reaching impacts, and understandably, a semester-long course-based mentorship could never fully develop all of these. However, it is a start.

Terrion and Leonard (2007) added that effective mentors must be willing to invest time in the relationship, should be close in age to those they mentor, should be able to show subject area knowledge and academic achievement in their field, and should have

good communication skills, be trustworthy, and support the reciprocal nature of mentoring. Budge (2006) echoed the findings of Crisp and Cruz, and added that mentors should have patience and compassion, and should work to affect the self-esteem and efficacy of those they mentor. Finally, the synthesis of skills and attributes of mentors developed in the Christiansen and Bell (2010) review echoed the findings of the other reviews, and added that peer mentors operate in an informal, non-judgmental environment that allows for openness between mentor and mentee, and may foster self-regulated learning. As has been stated, all of the literature reviews noted that the generalizability of the studies they reviewed were limited by the fact that they were qualitative studies done with small groups of participants.

Once these literature reviews were examined to gain an understanding of the essential abilities of mentors, and specifically peer mentors, a review of empirical studies in preservice teacher education was conducted. To locate empirical studies, search terms such as *peer mentoring*, *peer-to-peer learning*, and *peer-assisted learning* were used in searches in Academic Search Premier and Google Scholar. Each study found was examined to determine if it met the criteria for inclusion in this review, which was basically any study on peer mentoring in education. These search terms yielded over 300 empirical studies, some of which were included in the aforementioned literature reviews. Of these studies, most focused on mentoring between K-12 students or dealt more with cooperative learning groups than with peer mentoring as defined in this study. These studies did not meet the inclusion criteria. Of the 300 plus studies found, only five examined peer mentoring in the preservice teacher relationship. A summary of the five studies and a discussion comparing the findings of these studies to

the attributes of peer mentors revealed in the literature reviews above are included in the next section.

Study Summaries

Boreen and Niday (2000) conducted a qualitative study that involved two types of mentors from Iowa and Arizona in a long-distance mentoring relationship: an experienced teacher mentoring preservice teachers, and two preservice teachers co-mentoring each other through their field experience. For the purposes of this study, only the second relationship was examined. The research questions that guided this section of their study were “What kinds of questions do preservice teachers ask other preservice teachers to respond to?” “What types of mentoring strategies do preservice teachers offer each other to aid in unit development and professional growth?” and, finally, “How is teacher literacy evidenced in the email correspondence between preservice teachers?” Data were collected from the hard copies of email exchanges that were included in student portfolios, from student end-of-course reflections, and from notes made by instructors during student conferences. The data were framed as a case study of two preservice teachers that provided the best-case example of what took place between 30 pairs of students who were originally included in the study. The students profiled in the case were very similar in their enthusiasm for and dedication to teaching. Both had exhibited “organization, creativity, and a willingness to take on any challenge to increase their knowledge base” (p. 158). Findings from this study indicated that:

- preservice peer mentors should be allowed to select their own co-mentors for most effectiveness
- the co-mentors used positive comments and focused questioning to best advantage

- the subject vocabulary (termed “literacy talk”) that each participant could use and draw on in responses furthered their understanding of the dialogue they shared
- emails reflected professional trust between the two, evidence of internalized thinking, and the offering of specific unit-oriented answers to each other’s questions

The researchers admitted that time constraints, technology issues, and the need for quick responses served as challenges in this study.

Heirdsfield, Walker, Walsh, and Wilss (2008) conducted a qualitative study using students enrolled in a preservice education program at the Queensland University of Technology. They examined the perception of mentors related to their mentoring experience. Nine third- and fourth-year BEd students were chosen by three criteria: they had “successfully completed a health and wellness elective unit (subject) focusing on introductory-level counseling and social interventions,” they exhibited a “sound academic history,” and were easily able to meet mentees on campus for meetings (p. 113). Sixty mentees from an invited pool of 220 first year students agreed to participate. Data were collected through the six required written reflections collected every two weeks during the thirteen-week semester-long study. Four main themes were revealed through an interpretive-descriptive analysis of the data: preparation for mentoring, personal approaches to mentoring, benefits of mentoring, and frustrations of mentoring. Findings include the following:

- Preparation for mentoring is important, and what is learned can flow into a mentor’s preservice teaching practice. The preparation can have a positive effect on the self-esteem and efficacy of peer mentors.
- A multi-dimensional approach to mentoring (addressing both academic and social experiences) is the most useful approach to mentoring. It leads to “more positive engagement with coursework” as well as “increased self-esteem and confidence” for both mentor and mentee.
- Social support activities benefited both mentor and mentee.

- Mentors experienced frustrations such as worrying about engaging with particular mentees, difficulties in contacting mentees, the effects of time constraints on the relationship between mentor and mentee.

The third study reviewed, done by Morgan, Whorton, and Willets (2000), “evaluated the effect of peer-mediated instruction on the development of specific teaching strategies” (p. 1). This quantitative study involved eight traditional college students enrolled in an introductory course in applied behavior analysis. Data were collected via an initial “50 item multiple choice assessment [administered to participants] to measure student familiarity with various instructional procedures. The eight students were then randomly paired, and the partnerships continued throughout the eight-week study. Students were given written guidelines for eight targeted instructional behaviors, and then developed lessons that taught the behaviors to each other through role-playing. Investigators to document successful instructional behavior examined lesson plans. The findings of this study are as follows:

- Students initially exhibited “limited student skill in various methods of behavioral instruction”
- “Conspicuous and sustained increases in specific teaching behaviors after peer-mediated instruction was initiated” were evident.
- Weaknesses in the peer-mediation model included “difficulty in grading, extensive teacher planning, ongoing need for teacher intervention, and acceptance of cooperative learning as an effective method of instruction. (p. 3-4)

Parr, Wilson, Godinho, and Longaretti (2004) conducted their study with first-year Bachelor of Teaching students and Diploma of Education students at two Australian universities. The study examined student perceptions of the peer teaching process and the introduction of three layers of assessment. The research questions that guided this research were: “How do students think the process of peer teaching and learning, and the related assessment, impact upon their learning”, and “How do students think the

process of peer teaching and learning, and the related assessment, impact upon their teaching?” (p. 191). The 120 participants out of 800 invited students for Stage One of the study were randomly chosen from four of the 22 tutorial teams, and were non-traditional older college students. In Stage One a “large-scale questionnaire including both quantitative and qualitative items” designed “to gain an overall picture of their perceptions of the issues and patterns involved in the peer teaching and assessment processes” (p. 192). In Stage Two, 15 of these students volunteered to be interviewed using semi-structured interviews “to explore the responses and attitudes of students to their involvement in the peer teaching process” (p. 192). The investigators found that answers fell into three categories: people, processes, and product. Findings of this study are as follows:

- Benefits to peer teaching include collaborating with peers, clarifying subject content, viewing situations from different perspectives, working with a range of people from diverse backgrounds, having opportunities to determine curriculum content, strengthening communication skills, learning how to work as a team member, and being actively involved in learning
- Weaknesses of peer teaching include both the time commitment required for mentoring and the time constraints that prevent effective peer mentoring, difficulties in assessing peers, group conflicts, and lack of preparation of peer teaching teams.

The fifth study reviewed, done by Ragonis and Hazzan (2009), examined a peer-mentoring model known as disciplinary focus tutoring (DFT). The research questions that guided this study were

- “How is the DFT model evaluated by model participants from the pedagogical, organizational, and affective perspectives?”
- How do the tutors acquire the following *pedagogical* skills: becoming reflective practitioners and applying a variety of teaching strategies?

- How do the tutors acquire the following *disciplinary-pedagogical* skills: identifying difficulties encountered by CS (computer science) learners and guiding CS learners through problem-solving processes?
- Do the tutors promote their *disciplinary* (CS) knowledge? (p. 72)

The study covered two semesters, and the combined research population included 11 tutors and 22 tutees. This mixed methods study collected data using interviews, feedback worksheets completed by tutors after each tutoring session (10 in total), an evaluation questionnaire (36 Likert-type questions and 16 open-ended questions) completed by tutors at the end of each semester, an evaluation questionnaire (13 Likert-type questions and 5 open-ended questions) completed by tutees after each semester, summary interviews with some of the tutees, analysis of tutors' homework assignments, and the researchers' diaries. The findings of this study are as follows:

- Tutors responded positively to the tutoring process and the tools and experience they acquired.
- Tutors acknowledged the value of having a fixed, one-on-one pairing that continued across the semester.
- Tutors acknowledged that they learned from their "mistakes" made during the first semester, and that their tutoring improved as a result.
- Tutors responded positively to the reflection component of the experience.
- Tutors felt their responsibilities should have gained them more academic credits than they did.

The findings of these five studies revealed skills and attitudes of mentors that may fall into the three basic functions posited by Jacobi (1991): career development, psychosocial, and role modeling, and elaborated upon by Budge (2006), Crisp and Cruz (2009), Terrion and Leonard (2007) and Christiansen and Bell (2010). The five studies examined in this literature review will now be more fully discussed.

Essential Skills and Attitudes of Peer Mentors

Jacobi (1991) grouped the fifteen mentoring functions and attitudes she identified into the three categories of career development, psychosocial, and role modeling. The five studies ultimately chosen for this literature review reveal that these are indeed effective mentoring functions and attitudes. In addition, other functions and attitudes not identified by Jacobi but that are part of the functions and attitudes of effective mentoring are identified in these studies. Perhaps a more cohesive way of considering these would be to group them as the essential attitudes that allow mentors to be effective as they mentor and the essential skills that they use to mentor.

Attitudes of Effective Peer Mentors

An effective peer mentor seems to adopt a nurturing, caring attitude toward his or her mentees. The mentor genuinely wants to see mentees succeed as they work toward becoming good teachers. As such, the mentor acts as an advocate for mentees, helping to smooth the way as they learn their craft. Advocates are intercessors who act on the behalf of those they work with. Peer mentors show acceptance of and support for mentees as they provide advice, help mentees as they set and accomplish goals, and encourage a relationship in which the mentor and the mentees learn together.

Acceptance and support. In three of the five studies, findings indicate that peer mentors were specifically aware of the need to show acceptance, support, and encouragement for their mentees. Boreen and Niday (2000) reported that even early in their relationship the emails shared by the two preservice teachers in their study “indicated a kind of professional trust in each other’s ability to respond and offer worthwhile support” (p. 160). Heirdsfield et al. (2008) found that mentors were anxious to alleviate the stress that they knew their mentees were experiencing because they

were new to the university and the program. They likened this to providing protection for mentees. Ragonis and Hazzan (2009) linked the idea of encouragement and support for mentees to their model of one-on-one mentoring, noting that the relationship developed in the one-on-one setting allows for more support for the mentee.

To effectively encourage and support a mentee, a mentor must be patient and compassionate. This may not always be easy. Differences may occur because of the diversity of those with whom mentors may work. Heirdsfield et al. (2008) noted that many of the mentors in their study realized their need to learn more about the backgrounds of their mentees so that they can be the most effective with them. Doing so takes time and effort.

Advice and guidance. All mentors routinely offer advice and guidance as they mentor. While mentors may only be a step or two ahead of those whom they mentor, their experiences in teaching may serve to guide mentees as they work toward their own careers. Heirdsfield, et al. (2008) reported that peer mentees in their study looked to their mentors to help them develop a support network with other mentees. In this study, peer mentors created ways to link their mentees with those in other mentoring groups to form networks that would become more and more valuable as these mentees entered teaching.

As they advise and guide mentees, mentors may work to help them to clarify values and set goals for their learning. All preservice teachers have to go through a period where their values and goals may be challenged, or may simply need to be reaffirmed. The mentoring process is a constructivist one in which the mentor and mentee co-construct knowledge. Boreen and Niday (2000) reported that part of the

learning experience for the preservice teacher is a continual reassessment of his or her philosophy of teaching and learning in light of new knowledge that is being learned from his or her personal study, what mentors teach, and what is learned in university coursework. Peer mentors serve as sounding boards for their mentees as they think aloud about how their values and goals may be changing. Parr et al. (2004) noted that peer mentees and their mentors highly ranked “viewing situations from different perspectives” as a benefit of mentoring. Interestingly, Heirdsfield, et al. (2008) reported that this clarification process might work both ways as mentees may also serve as clarifiers for their mentors, which makes sense considering that peer mentors are still in the beginning stages of their preparation to be teachers, and are still encountering new pedagogy that could change their perspectives about being a teacher.

The nurturing, caring attitude that effective mentors exhibit toward their mentees allows them to use their skills to help mentees become better teachers. A discussion of some of the skills of peer mentors follows.

Skills of Effective Peer Mentors

There are some essential skills that mentors must use to mentor others. These skills are learned over time and with personal experience, either through what the mentor’s own mentor has taught him or her, or through his or her own experiences as they matured in their craft. These essential skills include some that might be loosely grouped as “people skills,” as well as those that are more grounded in the teaching profession. The “people skills” include being able to facilitate the development of relationships that are built on trust and continue over time and having good communication skills. Those more grounded in the profession include being skilled at acting as a role model for mentees and providing training and instruction for mentees.

“People Skills” and Peer Mentors. Effective mentors call on skills that facilitate the development of strong relationships. Trust is an important element of any relationship, but developing trust in a relationship is not always a quick or easy thing to do. While many of the studies reported the relationships that grew between mentors and their mentees, only Boreen and Niday (2000) explored the idea of trust as a basis for the relationship. Relationships built on trust enable mentors and their mentees to be honest and do the hard work to improve capacity. Boreen and Niday noted that emails recorded by Sheila and Marie “indicated a kind of professional trust in each other’s ability to respond and offer worthwhile support” (p. 160). This may have been enhanced, they felt, by the freedom that students had to choose their own mentors/mentees, which led to Maria and Sheila finding each other as mentors and “gell[ing]” (p. 160), although they admitted that good relationships did not grow as easily between other preservice teachers in their study.

In order for a relationship to be successful, the two parties must be able to communicate effectively. Good communication skills are invaluable to a peer mentor. Boreen and Niday (2000) noted that the preservice teachers in their study provided many positive suggestions and comments that furthered the learning of both of them. Being able to give suggestions in a positive way is evidence of good communication skills. Heirdsfield et al. (2008) noted that methods of communication became important to the mentors in their study. They noted that some mentors had to be creative about *how* to communicate with their mentees; they reported trying group emails, phone calls, and text messages to contact their mentees. Parr et al. (2004) noted that some of the participants in their study reported that communication in group sessions broke down

because the mentees were not honoring what their mentors were trying to communicate, instead wanting to argue about and challenge what they said. Without effective communication, the mentoring relationship suffers.

The skills in communication and building relationships enable the mentor to use his or her other skills to help mentees. These skills are those that are a part of showing, and not just telling, mentees what it means to be good teachers. These include being a role model for mentees and providing the scaffolding necessary for mentees to grow as teachers.

Showing and Not Just Telling. Good mentors are role models for their mentees. In doing so, they scaffold learning for their mentees. Heirdsfield et al. (2008) speak specifically to this skill of mentors. They noted that two of the mentors in their study “used an approach characterized by scaffolding by using their own notetaking and assignment work as exemplars for the mentees” (p. 116). One mentor reported that her mentee “later said [the peer mentor’s own notetaking and assignments] motivated her to edit her work because she knew she could achieve better” (p. 117). As mentees watch their mentors, they learn best practices for themselves.

As role models, mentors are skilled at providing an abundance of training and instruction for their mentees. All five studies spoke to this skill. Boreen and Niday (2000) reported that “both preservice teachers [in their case study] were applying their understanding of instructional theory to the educational practices with which they came in contact” (p. 160). They clearly saw these two preservice teachers moving into and out of the role of providing instruction as need arose. Heirdsfield et al. (2008) reported that one mentor “modeled study group formation [which mentees would be doing on their

own later in the semester] and provided individual tutoring” for a student who needed help with doing citations correctly (p. 117). Ragonis and Hazzan (2009) noted that one of their tutors felt that s(he) became very proficient in knowing exactly where to intervene to help scaffold instruction for the mentee in that relationship. Morgan et al. (2000) reported very clear increases in mentee subject knowledge because of the instruction that the peer mentors in their study provided. Parr et al. (2004) especially noted that mentors valued the time spent “clarifying subject content through discussion” with their mentees (p. 194).

Reflection. Mentors must adopt a stance as reflective practitioners and teach their mentees to be reflective as well. One of the most effective ways for peer mentors (or any teacher, in reality) to learn to be effective in what they do is to adopt a self-reflective approach to mentoring. Boreen and Niday (2000) noted that the preservice teachers in their study asked questions of both themselves and each other concerning their instructional knowledge and beliefs, which added to their mentoring relationship. Ragonis and Hazzan (2009) specifically built a cycle of reflection into their study: “before the tutoring session, after the session, and after receiving written feedback from the [professor] for the course” (p. 77). They also reported additional reflection occurring after tutors received feedback from other tutors and other administrative personnel in the study. Their reflection helped them to focus on the positive aspects of their tutoring, and correct areas of weakness that surfaced as they tutored.

Feedback. Being able to give good feedback to mentees is essential for helping mentees to learn what needs to be refined in their practice. Without good feedback, mentees may flounder as they try to assimilate best teaching practices. Boreen and

Niday (2000) reported that each preservice teacher gave feedback to the other during their time together, and that feedback enriched their content knowledge, their instructional strategies, and their beliefs about teaching. Good feedback may not always mean positive comments on what the mentee is doing, however. Sometimes mentors must give constructive criticism in a firm but loving way to help mentees grow.

Reciprocal learners. Peer mentors must be skilled at inviting mentees to learn from them, but they must also be willing to learn from their mentees. Both parties bring their own funds of knowledge to the relationship, and each should value what the other knows and learn from him or her. Parr et al. (2004) reported that the participants in their study realized the value of learning that occurred in the mentor/mentee relationship. They also reported, however, that some mentees were not as happy with being taught by peer mentors, as they would be if university faculty taught them. As has been noted, the study done by Morgan et al. (2000) revealed a “substantial and immediate effect” in the understanding of mentees about the content provided by mentors. Ragonis and Hazzan (2009) noted that the mentors in their study reported that their instruction of their mentees resulted in increased content knowledge and skills to their own benefit. Heirdsfield et al. (2008) reported that “there was a sense that mentoring ‘works both ways’: mentors grew personally and professionally through the mentorship,” resulting in increased organization skills and content knowledge for both mentor and mentee (p. 117). As has already been pointed out, the two preservice teachers in the study by Boreen and Niday (2000) shared content knowledge with each other throughout the semester, which resulted in an increase in vocabulary, content knowledge, and the knowledge of instructional theory for both of them. In addition, they noted that the two

preservice teachers in their study sought to learn from each other, and “examined their own philosophies in light of their writing correspondence and were. . .providing the type of scaffolding for each other that they might want to create for their own students” (p. 159). At various times, they both took on the persona of “the expert,” providing instruction for the other. Morgan et al. (2000) referred to this function as “reciprocal peer tutoring” (n.p.). This study examined how mentoring might affect how well mentees learned specific teaching strategies. Participants took turns being “the expert” and teaching mentees the specific strategies. The results of the study was that there was a substantial and immediate positive effect on how well mentees were able to apply the strategies they learned as they developed lesson plans and role-played teaching them.

In their study of mentoring among students in an early childhood teacher education program in a university in Australia, Heirdsfield et al. (2008) found that mentors showed an “expectation of the opportunity for distributing advice to mentees, and the potential for learning in return” (p. 115). Mentors reported that they “grew personally and professionally through the mentorship” (p. 117). Similarly, in their study of first year preservice teachers, Parr et al. (2004) reported that at least one of the participants specifically mentioned that the activities she learned from her peers “were quite good and you could almost take them straight into a classroom” to teach them herself (p. 195). Finally, Ragonis and Hazzan (2009) found that one result of the peer tutoring program they studied showed that these mentors believed that their mentoring led to a more in-depth knowledge of content, specifically in the computer sciences course they taught, and “enhanced them as future CS teachers” (p. 74). It is clear that

the act of teaching another can lead to an enhanced knowledge of the very content you are teaching.

In sum, peer mentors must be nurturers, showing mentees that they truly care about their growth as teachers. Being skilled at finding ways to communicate effectively with their mentees smoothes the way for mentors to build trusting relationships that allow them to act as role models to those whom they mentor. They are then able to show their mentees how to adopt a reflective stance, thinking about their practices and how they can effectively deliver instruction. Additionally, peer mentors skillfully provide their mentees with constructive feedback about their teaching so that they can refine their practice. Finally, mentors have to be good sharers, in that they are just as willing to learn from their mentees, as they would like their mentees to be willing to learn from them.

Benefits of Peer Mentoring

There are several benefits to peer mentors that were revealed in the literature. Their own understanding of content and content-specific vocabulary, while generally good, often is enhanced by their discussions with their peer mentees. This can be advantageous to the mentor who is still taking coursework because the discussions with peer mentees involve topics of common interest to both the mentor and the mentee. The study done by Boreen and Niday (2000) specifically noted the value the two preservice teachers found in using common literacy-related vocabulary as they discussed their unit projects and their understanding of how literacy is taught in the classroom. Additionally, they were able to scaffold learning for each other as they encountered gaps in knowledge that each was experiencing.

Parr et al. (2004) reported the value of having multiple perspectives on the content. In the peer mentoring process, each participant brings to the table his or her own perspective and knowledge about the topic, and each can add to the discussion from that fund of knowledge. While the process of distilling the knowledge may be an involved one, once that process is complete both the mentor and his or her mentee will likely have a much better understanding of their content.

Several researchers reported that mentors benefited from the interpersonal skills they learned during the mentoring process (Parr et al., 2004; Ragonis & Hassan, 2009). These involved a better understanding of collaborative learning, including how to work effectively with diverse groups of people, as well as learning how to work well together on projects. This skill has application to real-world situations as mentors and their mentees will encounter many situations in which they will have to work collaboratively with others.

Several researchers remarked on the benefit of learning teaching strategies that could be applied in classroom instruction (Boreen & Niday, 2000; Morgan et al., 2000; Parr et al., 2004). Peer mentors, with their more numerous field experiences, had made more teaching strategies a part of their own instruction and were able to share those with their mentees as the mentees planned for their own instruction.

Finally, Heirdsfield et al. (2008) addressed the psychosocial aspect of mentoring. They noted that the mentors in their study reported that they provided social support for their mentees as they experienced the frustrations that many freshmen experience in their first year of college. The mentors offered emotional support, and reported feeling rewarded by the gratitude their peer mentees showed for this support.

Challenges Experienced by Peer Mentors

While peer mentoring can be personally and professionally advantageous to mentors, the process can also involve issues that can negatively affect the relationship and the process of the mentoring. Along with the benefits of mentoring, the researchers in the five studies also explored the frustrations of peer mentoring.

All five groups of researchers noted the scheduling frustrations experienced by mentors as they tried to maintain contact with their mentees. Peer mentors found themselves surprised at how much juggling of both their own schedules and those of their mentees was necessary in order to plan enough time for effective mentoring to occur (Heirdsfield et al., 2008). Morgan et al. (2000) noted that careful course planning on the part of the faculty person in charge of the course could alleviate some of this frustration. A related issue that had impact on the amount of time spent in the peer mentoring process was whether the mentors had one or more mentees to work with during the semester. Some mentors reported that the ideal mentoring relationship would be one mentor and one mentee (Ragonis & Hazzan, 2009).

Boreen and Niday (2000) reported that one of the frustrations experienced by the other preservice pairings in their study was a lack of a deep, insightful relationship between the two. While Marie and Sheila (the case study they focused on in the presentation of their study) were able to develop a relationship that positively affected the learning of both, other pairs were not as lucky as to have that type of relationship develop. This more shallow relationship got in the way of deep conversation about teaching and learning. Morgan et al. (2000) echoed this when they reported that the mentoring groups in their study experienced some issues because of a lack of acceptance of cooperative learning as a viable way to enhance instruction.

Parr et al. (2004) noted that peer mentees remarked on the bias that some mentors had in grading assignments. Morgan et al. (2000) also noted this frustration. It obviously stemmed from the design of the mentoring process in these studies; mentors were to assess their mentees as a part of the grade the mentees would receive for the course. The other three studies did not report this frustration.

Conclusion

The review of the literature related to peer mentoring revealed several things. There is only a small bank of literature devoted to studying the effects of a peer-mentoring model in preservice education. This gap highlights the fact that peer mentoring is not commonly used in teacher preparation programs, although there are definite benefits to such a design. The five studies that were examined for this literature review noted the both the instructional and the psychosocial benefits of peer mentoring, and the researchers of these studies reported that both mentors and their mentees exhibited knowledge of enhanced instructional strategies and content knowledge. They also noted that mentors reported a sense that their mentoring was personally rewarding to them. Peer mentees in these studies reported positively on the supportive nature of their relationships with their mentors.

As with any relationship, however, there were frustrations experienced by peer mentors. These involved issues of time and commitment to the relationship on the part of the mentees. They also involved the process of peer mentoring, including the requirement that mentors provide assessment grades for their mentees. Many of the researchers noted that careful planning and monitoring on the part of university faculty who design the mentoring experience can alleviate some of the frustrations.

The five studies provide suggested findings about the mentoring relationship; however, the limited amount of research in this area suggests additional studies to understand the benefits and challenges of various peer-mentoring models are necessary. The current study seeks to add to the body of literature on peer mentoring by examining the perceptions of peer mentors and those that they mentor about the mentoring experience and the ways the experience may impact their developing abilities as teachers.

CHAPTER 3 METHODOLOGY

The purpose of this research was to examine the peer mentoring approach used in UFTeach through the eyes of peer mentors and their mentees (Step I students). The primary research question for this qualitative study was: How do mentors and mentored students participating in a peer mentoring program perceive the process and impact of this approach? More specifically, the study focused on the following questions:

- What happens in peer mentoring sessions?
- How do peer mentors perceive that their knowledge and/or abilities as teachers are influenced by their experiences as peer mentors?
- What other benefits and challenges do peer mentors perceive when working with other preservice teachers?
- How do mentored preservice teachers perceive that their knowledge and/or abilities as teachers are influenced by their experiences with their peer mentors?
- What other benefits and challenges do mentored preservice teacher perceive as a result of working with peer mentors?

Theoretical Perspective

This study was grounded in constructivist theory, an epistemology that posits that knowledge is co-constructed by those who share the learning situation (Guba & Lincoln, 1994; Hatch, 2002). Constructivists assert that individuals construct their own reality of the world around them (Berger & Luckmann, 1967; Hatch, 2002). Grbich (2007) further noted that one's reality is dependent upon the signs and symbols of the society and culture in which one lives, those which become real to one from babyhood.

Constructivists believe that, while members of a culture share certain signs and symbols, "multiple realities are presumed, with different people experiencing [the signs

and symbols] differently” (Grbich, 2007, p. 8). Therefore, what is reality for one person may be perceived differently by another living in the same culture.

Grbich (2007) suggested that the research focus of constructivism is exploring how people make sense of the world around them. Further, constructivist research explores how societal events and beliefs impact that sense. As the researcher and the participants interact, the researcher’s understanding of the situation is also colored by her own understanding of the world. Seidman (1991) warned that the researcher can try to divorce him/herself as much as possible from the interviewing situation, but realistically the “interaction between the data gatherers and the participants is inherent in the nature of interviewing” (p. 16). Some things researchers must consider are: how they can know that what is being revealed in the data is an accurate picture of what is in the participant(s) mind; whether they can avoid getting bogged down in the deconstructed data, and be able to reassemble that data in such a way as to show the true “big picture” of what is being revealed; and finally, whether they understand both the participant’s interpretation, as well as their own, of the phenomena that is being observed. All of these issues can threaten the objectivity of the researcher.

The next thing to consider in a study grounded in constructivist theory is how the data will be collected. Constructivism lends itself to qualitative methods involving interviews that help to reveal how participants make sense of the world around them (Grbich, 2007; Hatch, 2002). The purpose of this study was to investigate peer mentors’ and mentees’ perceptions of the mentoring experience and their perceptions of what they learn through interacting with one another. As such, the study was designed using qualitative methodology with interviews as the primary data source.

It may seem somewhat confusing to say that this study was grounded in constructivist theory while simultaneously noting that the peer mentors and their mentees learned from each other, a situation more typically labeled as constructionism. Crotty (1998) noted that the term constructivism should be used for “epistemological considerations focusing exclusively on the meaning-making activity of the individual mind” and constructionism should be used for “the collective generation [and transmission] of meaning” (p. 58). Crotty reported that some researchers use the terms interchangeably. In this case, the Step I students and their peer mentors first made meaning in their own minds, and then, most likely, collectively made meaning as well. However, this is conjecture, since the interviews were conducted individually, not collectively, and so any one participant could only hypothesize about the meaning created by another participant. Because the study examined the meaning-making of the individual, it is grounded in constructivist theory (Crotty, 1998).

Additionally, this study examined participants’ perceptions of any reciprocal learning that took place during the mentoring sessions. The literature on peer mentoring and reciprocal teaching revealed much about the benefits of reciprocal learning for teachers (Awaya et al., 2002; Gabriel & Kaufield, 2008; Heirdsfield et al., 2008; Le Cornu, 2005; Patrick, Elliot, Hulme & McPhee, 2010). As Robertson (2009) noted, “the co-creation of new knowledge through a learning partnership challenges each person to examine their previous ways of knowing, and their core values and beliefs” (p. 39). In the peer mentoring model that was studied, preservice teachers and their peer mentors both brought to the table their particular understanding of the skills and knowledge that

are inherent in becoming an effective teacher and each added to his or her knowledge through conversation and interaction with the other.

Research Design

Interview Rationale

The study was conducted through semi-structured interviews with a sample of peer mentors and a sample of mentees who were Step I students. Lincoln and Guba (1985) suggested that structured interviews are appropriate when

the interviewer knows what he or she does not know and can therefore frame appropriate questions to find it out, while the unstructured interview is the mode of choice when the interviewer does not know what he or she doesn't know and must therefore rely on the respondent to tell him or her [italics original] (p. 269).

While how peer mentors and their mentees perceived the peer mentoring experience was not specifically known, the form and structure of the peer mentoring component, and the literature-based factors that suggested the strengths and challenges that those in peer-mentoring situations can experience were known. This knowledge facilitated the development of in-depth interview questions to be used to gain an understanding what peer mentors learned about themselves as mentors and teachers, and what mentees learned about themselves as teachers, through their peer-mentoring experiences.

Mangold and Zaki (1982) called good interviewing an art, a skill that can tease out the finest nuances of a particular situation, by the way the interview is structured. They suggested that the researcher let the participant lead the interview, meaning that the researcher guides the interview with broad pre-selected questions, but spends most of the time simply listening to what the participant is saying in order to get the most complete information about a particular event or situation, probing as necessary to draw out all the nuances.

Hatch (2002) called interviews “a special kind of speech event” because the interviewer can interpret word choices made by the interviewee, make note what is revealed about the situation that is being examined by the tone in the voice of the one being interviewed, and “encourage informants to explain their unique perspectives on the issues at hand” (p. 23). In qualitative studies like this one, interviews make use of open-ended questions that allow participants the opportunity to talk intensively about their own unique understanding of the incident being studied (Hatch, 2002; Mangold & Zaki, 1982). The researcher develops initial questions that guide the interview, but remains vigilant during the interviews, asking further questions to probe for increasingly deeper insights about participants’ experiences. The researcher also listens to what is said by participants in order to add any new questions that might be suggested by what one participant says during an interview.

The study was structured to gain an understanding of the perceptions of peer mentors and mentees about the benefits and challenges of a peer mentoring model of preservice support. The interview questions were designed to elicit a rich, thick description of the perceptions of the mentors and their mentees about the mentoring process.

Participants

The participants were peer mentors from the UFTeach program. The peer mentoring support component was added to UFTeach beginning in 2009. These mentors were UFTeach preservice teachers who had completed Step II, and had exhibited a commitment to becoming a teacher and good ability to write appropriate lesson plans. These peer mentors had been in the public school classrooms at least

nine times (and possibly more, if they were further along in the UFTeach minor) observing and teaching 45-60 minute lessons in their content area.

Mentees were Step I preservice teachers with whom the peer mentors worked. The mentees were nominated by their mentors, who provided the names of mentees they thought showed a commitment to learning to become good teachers. These mentees, students in the initial course in the UFTeach minor, had most likely never been in public school classrooms as teachers, although some may have had experience as tutors, camp counselors, teachers of young people in some form of religious education, or teacher's aides. However, they probably had little or no experience in planning for lessons, or teaching them.

Participant Selection

The peer mentors in UFTeach were hired in two groups as the need grew for more help with the Step I students' lesson preparation. The peer mentor participants for this study were intended to be four from the second group of peer mentors, as they had received the most formal training as peer mentors. However, one of these mentors declined to be interviewed, so one mentor from the first group of mentors was substituted. All of the mentors chosen to be a part of this study had experienced training, and had served at least two semesters working with Step I preservice teachers as peer mentors.

There were three Caucasian females and one Caucasian male peer mentor in this group. Pamela and Petra, both 21 years old, were mathematics majors. Pamela¹ was one of the first UFTeach students to be chosen as a mentor. Pier, a 20 year old male,

¹ All participants in the study were given pseudonyms to ensure their anonymity. All peer mentors have been given pseudonyms beginning with the letter "P."

was a statistics major. Pia was a 21 year old biology major. All completed several courses in the minor. All expressed commitment to a career in teaching and eagerly participated in their field experiences.

The original design of this study was to ask the peer mentors to recommend two to four preservice teachers with whom they had worked and who had impressed them with their efforts to improve as teachers. From this potential pool of 16 preservice teachers the researcher planned to select eight mentees, both male and female, to be interviewed about their experiences with and perceptions of peer-mentoring. However, peer mentors struggled with choosing exemplary mentees, so interviews were conducted with the seven mentees who were suggested. The peer mentors were not told which mentees participated in order to maintain anonymity and allow the Step I preservice teachers to feel free to be honest about their perceptions of the mentoring experience.

Although most of the seven mentees were mathematics majors, the group included males and females and varied somewhat in age. Of the group, three were of Hispanic origin, two were Caucasian, one was an Asian/Pacific Islander, and one was of American Indian/Alaskan Native origin. Most had only taught as tutors, camp counselors, or in religious training classes. There were two sets of teaching partners. Stockard², a 21 year old mathematics major, was partnered with Stacia, a 17 year old mathematics major. Stephanie, a 20 year old mathematics major, was partnered with Stuart, a 19 year old mathematics major. Steele, a 20 year old mathematics major, and Stella, a 19 year old mathematics major, were interviewed alone because their

² All mentees have been given pseudonyms beginning with the letter "S".

respective partners declined to be interviewed. Staria, a 20 year old biochemistry major, was interviewed alone. She did not have a partner due to a rigid schedule that prevented her from being able to have a partner.

Data Collection

Data were collected through individual interviews with participants. The use of open-ended questions helped the researcher to understand the unique perspectives of those interviewed.

Interviews with Peer Mentors

Data were collected through single individual interviews with each of the four peer mentors. All Interviews were scheduled at times convenient for the students, and each lasted approximately one hour. Interviews were audiotaped, and were transcribed in their entirety. Interviews with peer mentors focused on their perceptions of their personal experiences as peer mentors. In addition, interviews included questions designed to elicit how they perceived that their abilities as teachers had been influenced by their experiences as peer mentors. Specifically, questions addressed such topics as what kinds of training the mentors received, as well as any suggestions they had for future training; whether there were any issues that made the peer mentors uncomfortable during their mentoring sessions; and their perceptions of benefits they might have accrued from the peer mentoring situation, or challenges inherent in peer mentoring. The full interview protocol can be found in Appendix C.

Interviews with Step I Students

The seven Step I participants were interviewed using the Step I interview protocol in Appendix C (only six of the interviews were useable; the seventh interview was corrupted). .As was the case for the peer mentors all interviews were conducted at

times convenient for the mentees, audiotaped, and transcribed in their entirety. Each interview lasted approximately 30 minutes. Interviews focused on the Step I students' experiences with their peer mentors and were intended to reveal their perceptions about the mentoring experience. In addition, interviews focused on how these students perceived that their abilities as teachers were influenced by their experiences with the peer mentors. Specifically, questions addressed such topics as why they chose particular peer mentors, the type of advice they received, and whether they perceived that there were specific benefits or challenges to working with peer mentors. These interviews were also designed to elicit the preservice teachers' perceptions about how this experience influenced their knowledge and/or abilities as teachers. All participants were given the opportunity to receive copies of their interviews once they were transcribed. Only two elected to do so, and copies of their interviews were provided to them electronically.

Data Analysis

Inductive Analysis

Data were analyzed using an inductive analysis strategy. According to Hatch (2007), inductive analysis starts with an examination of the discrete elements of the situation being examined. The researcher then begins to search for similar patterns in the elements, gradually moving to more general statements about the topic of study. The process of analyzing data inductively is to see what is revealed through the data, determining patterns, themes, and relationships that, in the case of this study, were a part of the peer mentoring experience in a preservice setting. The data were collected through individual interviews. Hatch (2007) suggested that interviews conducted for qualitative studies are intended to probe for deep, rich descriptions that help the

researcher to more fully understand the context of what is being studied. The focus of the interviews was to achieve a very specific understanding of the experience, benefits, outcomes, and challenges of peer mentoring relationships.

Reading the data

Hatch (2007) suggested that the data analysis process must begin with reading the data. His point was that the researcher must be hyperaware of all that the data reveal. To be able to draw the connections that may be found between frames of analysis in the data, the researcher must know that data thoroughly. To this end, the data were read over and over again. This close reading of the data collected from interviews began to reveal categories, or domains, that showed relationships (Hatch, 2007; Spradley, 1979). Domains are ways to group data that are understood by those living in the culture in which the experience is happening (Berger & Luckmann, 1968; Hatch, 2007).

Spradley (1979) called these domains “cover terms.” He suggested that researchers begin by making a list of words, or “included terms,” that name things in the phenomena being examined. Some of the included terms identified during data analysis of this study were “comfortable/uncomfortable,” “requirements/choices,” “benefits/challenges,” and “processes/skills.” As these examples show, many of the included terms seemed to be framed as opposites.

Hatch suggested that interviewers look at domains in the terms of semantic relationships. He encouraged researchers to consider nine universal semantic relationships suggested by Spradley (1979) as they analyze their data.

In the current study most of the semantic relationships were important in analyzing the data. The following examples are illustrative of the domains that emerged from the data:

- rationale (“x is a reason for doing y”) The data indicated a domain of “Teaching mentees how to use classroom equipment” as mentors described how their own struggles with using such equipment were reasons to incorporate technology into mentoring sessions.
- means-end (“x is a way to do y”) The data indicated a domain of “The format for mentoring sessions” as mentors described taking on the persona of an elementary student as a way to help students refine the questions they might ask during instruction.
- sequence (“x is a step in y”) The data indicated a domain of “Steps in preparing for mentoring sessions” as mentors described the steps they went through as they prepared for mentoring sessions.
- attribution (“x is a characteristic of y”) The data indicated a domain of “Characteristics of prepared mentees” as mentors described the actions that they believed indicated mentees had adequately prepared for their practice in mentoring sessions (e.g. make decisions about how to divide instructional responsibilities across partners).
- location (“x is a place for doing y”) The data indicated a domain of “Places where mentoring practice is most productive” as mentors described practicing with mentees in areas where there were active Smart boards.
- function (“x is used for y”) The data indicated a domain of “Necessary resources for preparing to teach” as they described the books, manipulatives, and equipment available to them.

The data were organized using these semantic relationships by keeping domain notesheets on each participant and then combining domain worksheets across participants. As data analysis continued, summary sheets with the domains, listing all the pertinent elements for each domain, were created. As new domains and elements to support them became apparent they were added. At the end, these worksheets included terms and cover terms arrived at by repeated reading of the data that were collected. Once all data were collected and analyzed specific themes were identified,

such as *peer mentoring skills*, which included skills such as *effective listening*, *building confidence in mentees*, and *providing feedback in positive ways*.

In summary, the data analysis procedure could be likened to a funnel with a strainer on the end. The data from all the interviews were figuratively poured into the analysis funnel, the discrete cover terms were funneled out, and recombined to form themes that described peer mentoring relationships. These themes were then used to present a cross-participant interpretive description of the findings. Secondly, the data were used to develop a training manual for peer mentors in the UFTeach program to use as they mentor Step I students.

Trustworthiness of the Data Analysis Process

Lincoln & Guba (1985) noted the ongoing argument between quantitative and qualitative researchers about whether findings from qualitative research can be considered valid, reliable, and objective. They reported,

the point to be made is that criteria defined from one perspective may not be appropriate for judging actions taken from another perspective just as, for example, it is not appropriate to judge Catholic dogma as wrong from the perspective of, say, Lutheran presuppositions. (p. 293)

They suggested that one think of credibility and transferability, rather than validity, in a qualitative study. Additionally, in a qualitative study, one should consider consistency and dependability rather than reliability. Finally, they suggested that one should think of confirmability rather than objectivity.

Credibility and Transferability

Lutzhof, Nyce, and Petersen (2010) suggested that credibility in a study can be established through prolonged engagement, persistent observation, and triangulation. In the current study credibility is established through persistent observation, attained

through interviews with multiple participants, and through triangulation of the data across participants.

While only one interview was conducted with each peer mentor and mentee, interviews were conducted with multiple participants who offered different perspectives (mentor/mentees) and then the data was triangulated. According to Creswell and Miller (2000), triangulation is a process of looking for “convergence among multiple and different sources of information to form themes or categories in a study” (p. 126). As has been noted, the notion of persistent observation suggested by Lutzhoft et al. (2010) is present in the current study because peer mentors and those being mentored were interviewed about their perceptions of the peer-mentoring experience, the impact of that on their knowledge and skills as teachers, and the challenges they encountered during the process. Triangulation of data about the experiences of both peer mentors and their mentees helped to confirm or disprove commonalities of experience.

Transferability refers to what a reader can glean from a study and then transfer into his or her own context. Creswell and Miller (2000) suggested that transferability is enhanced when there is a rich, thick description of the situation being described. Lutzhoft et al. (2010) further suggested that such thick, rich description even explains “why actors believe that this situation takes the form it does” (p. 539). During the interviews, both mentors and mentees explained their perceptions about the mentoring process in detail. Using participants’ language enabled me to create detailed descriptions of their perspectives about the processes of mentoring and their learning from the process.

Dependability and Consistency

Dependability and consistency in qualitative research have to do with procedures put into place to ensure the consistency of the findings. (Bowen, 2009; Lewis, 2009). Several procedures were a part of the current study, such as member checking, keeping all identities of participants anonymous, and referring continually to my research journal for notes about interview data and emerging ideas.

To make sure that the descriptions provided by the participants were as deep as possible, they were offered the opportunity to read the transcripts of their interviews and add to what they said, or correct, if necessary, any misconceptions that became apparent during their review of those transcripts. Lincoln and Guba (1985) referred to this procedure as “member checking” (p.314). Mentees were protected and able to speak freely because of their anonymity; mentors were not which of those they nominated were interviewed. Additionally, continual reference to my research journal allowed me to check back with previously interviewed participants to confirm or negate emergent findings.

Research journals are used in qualitative research to help create transparency about the research process (Ortlipp, 2008). Greenfield (2011) suggested that research journals are invaluable tools because they allow a researcher to record his or her reflections on the research while it is taking place, record new ideas that might impact further interviews or analysis, and make notes of important questions to ask. In this way the research journal is part of the process of ensuring dependability and consistency. The data analysis process I undertook began with and continually returned to an examination of my research journal in which my thoughts were recorded during and after each interview. For instance, I made a notation during an interview with one of the

peer mentors, which suggested expanding the definition of resources beyond physical resources, such as books, manipulatives, and other equipment, to include master teachers as a resource. I made a note in my research journal to probe other participants to see if they also viewed the master teachers in this way.

Additionally, I used the journal during data analysis. For instance, during analysis I noted that one mentor, unlike the others, perceived that only 10% of her mentees were sufficiently prepared for their practices sessions. This anomaly prompted an additional conversation with the mentor in which she clarified that this situation occurred only early in her mentoring career, and the percentage had risen during each semester until now the majority were prepared. Noting such thoughts in the research journal during and after interviews reminded me to narrow my focus more tightly for each interview, as Hatch (2007) suggested, to get at all facets of the peer mentoring relationship and to ensure consistency of data across participants.

Confirmability

A final test of the trustworthiness of a study is whether there is confirmability of the study. Bowen (2009) suggested that confirmability involved the “internal coherence of the data in relation to the findings, interpretations, and recommendations” (p. 305).

Bowen indicated that one way that confirmability can be proved is through an audit trail.

An audit trail is

a systematic recording and presentation of information about the material gathered and the processes involved in a qualitative research project. [It is a] record of the research process as well as the theoretical, methodological, and analytical choices made by the researcher. [It] documents chronologically and systematically what [the researcher] did, how [he] did it, and how [he] arrived at [his] interpretations (Bowen, 2009, p. 205).

The audit trail for this study is apparent in the notes that were recorded in my research journal before, during, and after data analysis. Questions that emerged were noted, as were the decisions that I made, such as decisions to rephrase or add questions to the interview protocol. All the theoretical, methodological, and analytical choices that I made were grounded in the data, which added to the confirmability of the study.

Subjectivity

It is impossible for any researcher to totally divorce himself or herself from the topic being studied. My values, beliefs, and perceptions became an inherent part of any questions that were asked of participants or any interpretations made. Creswell and Miller (2000) stressed that it is important for researchers to “self-disclose their assumptions, beliefs, and biases” and “bracket or suspend those researcher biases as the study proceeds” (p. 127). This process was important for me because I had been immersed in the peer mentoring component of UFTeach. I worked closely with the peer mentors and with mentees as they participated in the process. I had mentored some of the peer mentors. In addition, I participated in the initial discussions about the design of the peer mentoring component. I entered the study with assumptions about the value of peer mentoring and had heard informally about some of the challenges and/or successes peer mentors had experienced. Having had these experiences it was important that I guard against interpreting what mentors or mentees reported based on my experiences or assumptions. To avoid this, I made a conscious decision to step back and approach the data analysis with an open mind even though I had been immersed in the process of peer mentoring from its inception. I also made the conscious effort to actively search for evidence that countered my entering assumptions.

Conclusion

The purpose of this study was to examine the perceptions of Step I preservice teachers and their peer mentors about the peer mentoring experience. The study was grounded in the theoretical perspective of constructivism, which posits that participants make meaning in their own minds about a particular experience. Care was taken to make sure that, while the researcher admitted her own understanding of and experiences in mentoring, effort was made to use it only to make sense of what the data revealed about peer mentoring in the UFTeach setting.

Table 3-1. Peer mentor pseudonyms.

Name of peer mentor (all names are pseudonyms)	Age	Major
Pamela	21	Mathematics
Petra	21	Mathematics
Pier	20	Liberal Arts Statistics
Pia	21	Biology – Secondary Education Majors

Table 3-2. Mentee pseudonyms.

Name of mentee	Age	Major
Stacia	17	Mathematics
Staria	20	Biochemistry
Steele	20	Mathematics
Stella	19	Mathematics
Stephanie	20	Mathematics
Stockard	21	Mathematics
Stuart	19	Mathematics

CHAPTER 4 DATA ANALYSIS

The purpose of this study was to gain an understanding of the perceptions of peer mentors and mentees in the UFTeach program about how their experiences within the mentoring relationship impacted their knowledge and/or abilities as teachers. The study focused on the perceptions of both mentors and mentees. The following research questions guided the study:

- What happens in peer mentoring sessions?
- How do peer mentors perceive that their knowledge and/or abilities as teachers are influenced by their experiences as peer mentors?
- What other benefits and challenges do peer mentors perceive when working with other preservice teachers?
- How do mentored preservice teachers perceive that their knowledge and/or abilities as teachers are influenced by their experiences with their peer mentors?
- What other benefits and challenges do mentored preservice teachers perceive as a result of working with peer mentors?

The chapter begins with a brief review of the structure and purpose of peer mentoring as envisioned by program faculty. Next, the chapter includes an analysis of the perspectives of mentors about their training, the mentoring process, and what they learned from that process, followed by an analysis of the perspectives of mentees about their learning within the mentoring relationship.

Structure and Purpose: Step I Teaching Experiences

In the UFTeach program, Step I mentees are paired to teach three lessons in their assigned elementary classrooms during the semester. As has been previously explained, elementary classrooms are chosen because elementary students are less threatening and more forgiving as Step I mentees learn to teach. A typical UFTeach

Step I lesson used a five E's lesson plan format: Engagement, Exploration, Explanation, Elaboration, and Evaluation. The purpose of the Engagement section of the lesson is to catch the attention of students and make them curious about the topic of the lesson. During the Exploration portion of the lesson students participate in activities designed to help them to discover as much as possible about the topic. The Explanation section is where active teaching begins. The teacher facilitates discussion about what the students have experienced as they explored the topic, clarifies inferences and conclusions students have made during their explorations, and makes sure that the students know pertinent content vocabulary and can use it correctly. In the Elaboration portion of the lesson, students are guided toward putting what they have learned during their explorations into action, applying their knowledge to other real-world situations. Finally, student learning is assessed in a written evaluation of some type. While each lesson contains the five elements, Step I mentees may or may not get to the Elaboration portion when they teach the lesson. Therefore, they may only instruct using the Engagement, Exploration, Explanation, and Evaluation portions of the lesson.

Lesson planning and implementation in the UFTeach program is structured using a gradual release model. The majority of the first lesson plan is written for mentees by peer mentors in collaboration with the master teachers. In this way the mentees have a model of a lesson plan that includes the five E's, and they are more likely to experience implementing a well-crafted plan. After participating in Step I lessons and classroom discussion about how to engage students prior to teaching a lesson, and about ways to write higher order questions that foster critical thinking, the mentees are asked to add to the plan in order to enhance the engagement section and the questions that will be

potentially asked of students during Lesson I. This is done in collaboration with their peer mentors and the master teachers.

In preparation for Lesson II, mentees assume greater responsibility for writing the lesson plan. In this lesson the mentees are given the topic, the standards that cover what the elementary students are supposed to learn from the lesson, the elaboration activities, and the evaluation for the lesson. They are responsible for writing the engagement for the lesson, the questions for the lesson, and the Explanation portion of the lesson, again with help from peer mentors and master teachers. By Lesson III, Step I mentees assume full responsibility for the initial development of their lesson after being given the topic. They must do research to find and link the lesson to the appropriate standards that will drive the lesson, and with guidance and help from peer mentors and master teachers craft all five sections of the lesson plan and select appropriate manipulatives and other supplies to use as they teach it.

It is the responsibility of the peer mentors to help Step I mentees as they learn to develop the various sections of the lesson plan. Several peer mentors are present in the Step I classes as mentees are taught strategies that engage students, how to develop good questions, and how to write good plans for evaluations that assess what students have learned during the lesson. They help the Step I mentees when students work on their lessons during class time. It is important to note, however, that only one or two peer mentors are present in each Step I class, so students may not be developing lesson plans with the peer mentor who will eventually practice with them. At the beginning of the semester peer mentors are asked as a part of their duties to schedule time to be present in at least one Step I, Step II, or Step I/II Combo class each week.

Thus, each peer mentor is assigned to a specific class and within that class mentees consistently work with the same peer mentors throughout the entire semester. Step I students may, however, choose to practice lessons with a peer mentor other than the one assigned to their class. Peer mentors help mentees learn to use any manipulatives or equipment that will be a part of their lesson materials. Additionally, they work with mentees to provide them the opportunity to practice each lesson to make sure that the lesson is cohesive and flows smoothly through the five sections, that mentees know who will teach what part of the lesson (since they teach in pairs), and that mentees have all the materials/equipment they need to teach the lesson. As many of the Step I lessons have been written by peer mentors, and most of them were taught by peer mentor themselves when they were Step I mentees, the lessons are familiar to them. While working with mentees during lesson planning, the peer mentors are able to make suggestions about teaching strategies that will help their mentees to design strong lessons.

Perspectives of Peer Mentors

Data from the interviews with peer mentors provided insight into their perceptions of the training that they received, their description of the structure of peer mentoring sessions, and their perceptions of what they think their mentees learned from them, what they learned from their mentees, and their reflective practices. Each will now be described.

Training. The research tells us that the more training that peer mentors receive, the more equipped they are (Heirdsfield et al., 2008). The four peer mentors in the current study had similar but not the same training because training changed somewhat

for peer mentors who entered the program at different times. The data revealed four forms of training that all of the peer mentors experienced to varying degrees.

The first type of training opportunity was what might be called “formal” training. This training was conducted by one or more of the master teachers in a meeting specifically called for that purpose as new peer mentors joined the group. According to Pamela there was no formal training conducted the first semester that peer mentors were hired, but peer mentors were given instructions about the role during this semester. A document created by Pamela during that first semester and used in some training since that time provided insight into the instructions that peer mentors received during the first semester of implementation (Appendix B). The document was a short list of the duties of peer mentors, including suggestions about how to build rapport with mentees, how to communicate with mentees, the paperwork peer mentors should use to document their work, and the duties of peer mentors as they help mentees to plan and practice their lessons. Although formal training was available for all peer mentors in subsequent semesters, not all of them were able to attend each semester, and three of the four did not mention it as an important part of their preparation for the role.

Only Pier specifically mentioned that he received formal training during his time as a peer mentor. Each semester that Pier served as a peer mentor he attended this type of training. Another of the four mentors, Pia, received this training before her first semester as a peer mentor, but then attended only five minutes of the formal training held the next semester because the scheduled meeting conflicted with other classes. The third peer mentor, Petra missed the formal training meeting before she began as a mentor because of a death in her family, but attended the second time the training was

given. As has been noted, there was no formal training for peer mentoring available when Pamela, the first peer mentor chosen for the peer mentoring program, began this work. She attended the training in subsequent semesters.

Two of the four peer mentors called formal training the least helpful of all the training they received. Pier related,

I would say [the formal training] was less helpful [than any other training]. It was more. . . learning the paperwork, the grading, and things like that. (Pier: 25-26)

Pia noted,

It was more like, they just told us to come in and they discussed [procedures] briefly. Like what they wanted us to do and how they wanted it to go. (Pia: 35-36)

These two shared a common perception that the training focused on procedural details that they did not find important.

The second type of training was informal training that was conducted through multiple conversations with master teacher(s), or that mentors received through observations of other, more-experienced mentors as they conducted various mentoring sessions. All the mentors reported that informal training was more helpful than formal training. Petra reported that watching the other mentors was particularly helpful. She noted,

Seeing how the other [peer mentors] interacted sort of gave me an idea of how I should be interacting with students. (Petra: 32-33)

Pier agreed, noting that observing other peer mentors gave him insights about how to frame his work with mentees. He reported,

The experience that I [had with one of the more-experienced peer mentors] . . . was more helpful dealing directly with [Step I] students, which I feel is the more important aspect of peer mentoring” (Pier: 27-29).

Finally, two mentors mentioned the UFTeach classes as an important part of the training as mentors. Pia noted that having taken the classes strengthened her skills in such areas as classroom management and time management and that she now felt able to teach those skills to those she mentored. Pier viewed his experiences during these classes in the same way, and reported that he was able to pass along all he learned in his coursework to Step I students.

In summary, the data revealed that each peer mentor received multiple forms of training both before and during his or her time as a mentor. Along with training on the procedures of mentoring in formal training sessions, these mentors also valued the pedagogical knowledge they gained in their classes and received what might be called “on the job” training as they sat in on mentoring sessions done by other mentors, or had conversations with other mentors about their mentoring. Mentors reported that they valued the informal training more than the formal training.

Peer mentors were also asked about what occurred during mentoring sessions. Generally the sessions revolved around practicing lessons and providing feedback to mentees. Mentoring sessions occurred before each of the lessons taught by mentees. These sessions were primarily a time when the mentees practiced the lesson they were preparing to teach. Peer mentors offered feedback during and after each practice session. The feedback comments were intended to help students make their lessons more effective by suggesting additional teaching strategies to mentees.

Mentors reported that the mentoring sessions they conducted generally followed a predictable sequence. The sessions were scheduled for one hour, although mentors were instructed to extend the session if time allowed and if mentees requested it.

Mentees were also able to schedule more than one meeting per lesson with their chosen peer mentors if desired. The mentors reported that each session had the following components: introductions (if the teaching pair was unfamiliar with the mentor), a time to practice the lesson, and feedback. At times, mentees had questions related to the program and course requirements, and time was devoted at the end of the practice session to addressing those questions if peer mentors were comfortable answering them.

Three of the mentors reported that they took specific action to prepare for practice sessions. Pamela reported that it was important for her to help students focus on addressing the comments made by master teachers and other peer mentors who read the lesson plan. As a part of her preparation for practicing with mentees, she reported,

I read those specific comments [the master teacher] makes about the pair and that's an extra thing that I'm looking for [when working with] that specific pair. (Pamela: 354-356)

She also reported that she looked at lesson plans carefully to find practices or misconceptions that might detract from the lesson, and then considered ways that she could help mentees to change practices or to understand their misconceptions. However, she reported that a recently hired master teacher was sending feedback in an email directly to students without copying her, and this hampered her efforts to help students refine their lessons.

Petra agreed that looking carefully at lesson plans was important if one wanted to identify areas in which mentees needed help. She reported,

Mainly what I'm looking for when I look at the lessons is just what the students in the program have [written] and what seems like it could use some more explanation. (Petra: 198-200)

She then structured her practice sessions with a focus on helping students to flesh out their explanations for students. She further noted that a key instructional element that mentees often miss is the need to be detailed and explicit in their explanations, so she

Tell[s] [mentees] when they come in to be as specific as possible [when they are teaching]. (Petra: 201)

Pia reported that part of her preparation for mentoring was thinking about what her mentees were saying in their lessons and determining whether they fully understood the concepts they were trying to teach to students. She reported,

I automatically see if my [mentees] don't know the subject. . .I'll go tell [a master teacher] 'we were talking about this [concept] but they clearly don't know the difference between [for example] a theory and a law'. (Pia: 298-302)

Being able to identify the misconceptions that her mentees had about content allowed her to then find ways to help her mentees to gain a full understanding of the content they were going to teach so that they could be more explicit with students.

In summary, three of the mentors reported taking time specifically to prepare for the practice sessions. They noted that looking at lesson plans and reading the comments made by the master teachers and other mentors helped them to identify possible misconceptions, determine where content knowledge was inadequate, and access the depth of explanation the mentee was likely to provide. This preparation helped them think about concrete ways to help their mentees to refine their lessons.

In the mentoring process, peer mentors worked to help their mentees to learn to improve as teachers. In doing so, they also refined their own abilities as teachers. The data revealed some very specific things that the mentors learned as they worked with mentees.

What Peer Mentors Learned About Teaching as They Taught Their Mentees

What mentors teach their mentees they must first learn for themselves. Mentors, as defined in Chapter Two, are those more experienced teachers who share their wisdom and knowledge about teaching in an effort to improve the practice of other teachers and improve the quality of the education students receive. In the UFTeach program mentors are slightly more knowledgeable about teaching than mentees. Mentors don't generally come to their mentoring with a vast bank of wisdom and knowledge, but they do come with some prior knowledge acquired from coursework or through their teaching experience. The four mentors reported that they shared suggestions related to classroom management, the effective presentation of the content, the correct use of classroom equipment, and the use of higher-order questions to help students think critically. At times, however, the peer mentors admitted that they also learned more about these things as they co-constructed knowledge with those they mentored (specific references to the ways that peer mentors co-constructed knowledge follow).

Thus, a major outcome of mentoring was that the mentors grew in their knowledge of teaching. All four mentors mentioned that they both solidified and added to their bank of instructional techniques as they helped their mentees develop theirs (specific references follow). Drawing across the interviews five areas of learning emerge as important to one or more of the mentors.

Managing materials and time effectively. Three of the four peer mentors specifically identified materials management as something with which they and their mentees struggled. As they discussed these issues they developed many suggestions for their mentees, implicitly informing their pedagogy as well. Pamela reported that this

issue routinely came up as she practiced the lesson with her mentees. In one instance she noted that mentees often fail to consider that leaving materials in front of elementary students either before or after they are needed for the lesson creates an unnecessary distraction for the students. She said,

I make sure [to ask mentees] 'When did you pick up these manipulatives? Are they in front of [students] the whole time?' (Pamela: 153-154)

She found that her mentees don't always think through how to efficiently pass out materials to students and to collect them from students without wasting valuable teaching time.

Pia pointed out that many of her mentees had not learned effective materials management because they were so new to teaching. She noted that she often questioned students about things they were going to do during the lesson that she could see had potential for disrupting the flow of the lesson. She reported,

[I tell the mentees] how to handle the kids doing things [with the materials during the lesson]. A lot of it's classroom management stuff that would be in between [activities in the lesson] like asking. . . 'Are you sure that you want to do that, because. . . [things could happen] so you might want to, you know, take the [materials] away before. . . this section.' (Pia: 116-121)

Pier referred to the process of handling materials as "logistics," and reported that many mentees assumed erroneously that it came naturally to teachers. He noted,

You pass things out, [you think] kids are going to wait [until you tell them to use them, but] kids aren't going to wait" (Pier: 442-444).

He stressed that mentees had to learn to think ahead about potential pitfalls related to materials that students were excited about using, especially how to get those materials to students in an efficient way.

Another facet of classroom management is time management. Pia reported, "[Time management] was my biggest problem" (Pia: 114-115) and noted that she was

especially careful to make sure her mentees understood how time could get away from preservice teachers as they taught. Pier agreed, noting that time management could affect how much of the lesson got completed and how much down time students experienced during a lesson. He reported that many times he heard his mentees lament that they never got to the Elaboration portion of a lesson because they spent most of their time during the Exploration and Explanation parts of the lesson.

Managing teaching roles effectively. When there is more than one teacher in the classroom, both need to work together to ensure smooth transitions as they switch responsibility for the instruction. Sometimes this can be troublesome, particularly when one teacher is more comfortable in front of students, or more knowledgeable about teaching the content. Remembering her experiences in Step I, Pia reported,

I was the dominant one. And [her teaching partner] was a lot more quiet, so if I was running out of time [she] didn't say anything. . .our first experience [teaching] in Step I was completely. . .chaotic, because we didn't have peer mentors. (Pia: 126-133)

Pia, recognizing her propensity for being the dominant teaching partner in her field experiences, incorporated her experience as she worked hard to help her teams decide how to divide the teaching duties equally during their lessons.

Presenting content effectively. To teach content effectively mentees need both content knowledge and pedagogical content knowledge. One can't teach what one doesn't know. Some of the mentors mentioned that both they and their mentees were learning how to effectively teach content with which they might be unfamiliar. Pier reported that he viewed the mentoring he did as reciprocal learning. He noted,

I've learned so many different ways to do things. Mathematically and activity-wise. . .sometimes the [mentees] come up with just ingenious activities." (Pier: 522-524)

Further, he reported, mentees

usually explain [what happened during the lesson] to tell how good it went, then I'm learning from the little things they say. . .I feel like. . .it's great experience that I'm learning through them. (Pier: 535-539).

He added,

If I don't write [things mentees tell him they have learned from their mentor teachers] down, I make mental notes, because that's. . .things that experienced teachers do [from which he can learn]. (Pier: 543-544).

Pia noted that some of the mentees she worked with didn't know as much as she expected about the content they were teaching, and that she needed to help them find information online about it. She reported,

Subject material is always a pain because a lot of these topics that we're learning, or having [the Step I mentees] teach, we haven't had since we were [in elementary school] so sometimes. . .we have to go do our homework, and then pressure them to do their homework. (Pia: 155-157)

Conversely, Pamela reported that she didn't feel that she needed to teach content, other than to clear up any glaring misconceptions, because her mentees seemed to know their content. The difference between the two viewpoints may stem from the fact that Pia is a biology major and Pamela is a mathematics major. The science peer mentees have a slightly more subject-area focus (i.e., biology, physics, chemistry) and therefore may be not as knowledgeable about a subject outside of their focus, while mentors who are mathematics majors are more generalists and are more knowledgeable about all the mathematical subjects (algebra, geometry, etc.). However, like Pia, there were times, Pamela admitted, that she needed to study up on particular content herself in order to be able to identify where mentees were confused. She noted,

some topics are easier for me than others. The topics that are more abstract, like spatial visualization, [are] hard for me. . .so I have to know more than just the lesson. . .[I have to determine] where students are going

to struggle or where's the teaching pair going to mess up or not emphasize enough? (Pamela: 176-189)

She attributed her time spent teaching her brother (who is learning-disabled) as contributing to her ability to recognize where students and/or mentees might struggle with the content for the lesson.

In addition to content knowledge, teachers must know pedagogy. Both peer mentors and their mentees were learning and refining their instructional practices.

Pamela reported,

Since I typically meet with more than one group teaching the same lesson, if I meet with Group A and I learn something from them, then I normally tell Group B. . . 'you don't have to do this but another group's doing it and I really like that idea. . . I didn't think about it.' (Pamela: 435-438).

Pamela reported, however, that she herself rarely used activities or techniques that she learned from groups of mentees during practice sessions in her lessons.

Petra agreed that she might share ideas between groups of mentees, but admitted,

I've always had trouble fitting the things that I find [from other people's lessons] exactly to the lesson [I might be teaching]. (Petra: 351-353)

Both mentors stressed that the reason that they didn't incorporate many of the techniques they saw in mentees' lessons into their lessons was that, in large part, these techniques and strategies were more fitted to elementary lessons than to secondary lessons, which are those taught by mentors and other UFTeach students who are further along in the minor.

Using classroom technology effectively. One of the areas identified by the USDOE as an important component of students' success in the global world market is the effective use of technology of various types. When asked about this, the peer

mentors reported that knowing how to work with an interactive Smart board seemed to be a big concern as they worked with mentees. All of the classrooms in which the Step I preservice teachers presented lessons were equipped with this technology and it was expected that they use it during lessons. Pier, the mentor with perhaps the most background in using this technology, reported that he made sure to schedule practice session in places at the university where there were Smart boards, such as in the Education library, or in a vacant classroom in which this technology could be found. He made sure that his mentees knew how to operate the Smart board correctly, because of his experiences as he struggled to learn it. He reported,

I know the first time I taught we had a Smart Board, and. . .I always went backwards when I was trying to go forward because you have to tap in the right order. So I showed [his mentees] how to do all that. . .and the Smart Notebook software. . .that way they can make [lesson materials] for the actual [Smart Board] in the future.” (Pier: 144-148)

Developing higher-order questions. The third thing that mentors reported having to learn themselves and having to help their mentees learn was how to craft good higher-order questions that encouraged students to think critically. Pia reported that she struggled with questioning skills as a Step I preservice teacher and because of this, she made sure that all of her mentees knew how critically important questioning is in a lesson. She noted,

Most of [the mentees]. . .their questioning is not developed. . .they’re very low-level questions.” (Pia: 97-100)

In summary, there were five specific areas in which one or more mentor reported learning along with the mentees. Those areas were how to effectively manage classroom materials and time constraints during a lesson, seamlessly transition in their roles as co-teachers, teach the content, use classroom technology, and craft strong

higher-order questions that encourage students to think critically. Peer mentors reported that learning more about these things as they worked to help their mentees added to their teacher persona. Additionally, mentors reported that they acquired some of the skills of mentors that enabled them to work effectively with their mentees.

What Peer Mentors Learned About Mentoring Through the Mentoring Process

The literature reviewed indicated that there are certain skills that good mentors acquire. Across the group mentors mentioned learning several of these skills: coaching or offering suggestions, finding ways to help mentees become more confident, listening effectively, providing feedback in a positive way, knowing when and how to be assertive, and giving guidance and advice about the program and coursework.

Coaching. During the practice time, Step I mentees taught the lesson to their mentors who acted as coaches for their mentees. In training, the peer mentors were taught to adopt a “show, don’t tell” attitude with their mentees, and encouraged them to treat the practice time as if it were a real lesson. To that end, each of the mentors noted that they tried to make the practice session as real as possible, so they took on the persona of an elementary student during the practice times in order to make the practice more realistic. Although in theory the mentoring sessions were structured such that the mentees taught the lesson and then received feedback, in reality teaching and feedback occurred in a more cyclical fashion. Each peer mentor reported stepping in and out of the student persona into that of a mentor, in order to ask questions about the lesson or share teaching strategies with his/her mentees. Pamela reported,

I will let them know. . .that sometimes I’m going to be their third or fourth-grade student and at other times I’m going to be their peer mentor.
(Pamela: 121-123)

Each mentor noted that at times they highlighted gaps in the lessons by asking leading questions that helped mentees to spot those gaps themselves, rather than just pointing them out in isolation. Pamela reported,

If they realize [their gaps and misconceptions] on their own then they'll be more likely to not make that mistake in class. (Pamela: 134-135)

Pier noted that while practicing a lesson on identifying patterns in mathematics, reflecting on the possible learning of a student he told his mentees,

You know, I [the student learner] was [confused]. Did I make a simple mistake, or was it just luck that I got [the answer]? I didn't really know the pattern. (Pier: 172-175)

Petra reported that while in the persona of a student she tried especially hard to phrase questions for her teaching teams like a student might. She noted,

I try and give them the most ridiculous questions that I can think of, like things that will be most difficult for them to answer, just because I want them to be thinking about student responses. (Petra: 97-100).

She felt that they could think about what the real students might ask about during their lesson. Petra also mentioned that she wrote down her comments about the lesson on paper during the practice time. She then shared the comments with mentees at the end rather than to interrupt them too much during the lesson practice time unless there was some glaring error that needed immediate correction. She gave the paper on which she noted comments to her mentees so that they could have tangible reminders of suggestions that she made. She was the only mentor to report using this strategy with mentees.

Listening effectively. Becoming an effective listener is another essential skill of a good mentor. Pamela talked about this skill. She reported, for instance, that like many teachers,

I like to talk [but have learned that] maybe my idea is not the best idea and their idea either would work just as well. . .or even work better. So [mentoring] makes me a better listener.” (Pamela: 420-424).

Part of being a good listener is also reading the non-verbal cues of others. Petra reported that she used non-verbal cues to give her an idea of how her feedback to mentees was being received. She noted,

I think I just try to read their face after I tell them, how they are looking, if they're [accepting what she has told them] or if they're like 'Oh, okay, I could see how that could happen, and maybe I'll be more careful about things that I didn't expect to happen in the classroom. (Petra: 132-136)

Building confidence through praise and feedback. Mentees were understandably nervous as they prepared to teach their lessons. Pia and Pamela both reported that to counteract this nervousness they made a special effort to praise their mentees. Pia likened this to giving her mentees a “pep talk,” and assured them that teaching their lesson was ultimately going to be fun, since she found that her mentees were often nervous about how each lesson was going to progress.

Pier reported that such nervousness might initially make lessons less effective, since it might make mentees reluctant to ask necessary questions because of fear that their mentor might judge them. He noted,

I think that. . .it is that [mentees say to themselves] 'I don't want you to think that I'm messing up kids, or that I'm a bad teacher. (Pier: 242-244)

However, he noted across the semester that nervousness disappeared in many cases and mentees were willing to ask questions about and welcomed suggestions for making their lessons better.

Petra reported that she “like[s] to share stories about. . .things that I've done wrong in the past” (Petra: 116-117) in order to put students at ease about the mistakes they are making and give them hope that the mistakes can be corrected. She reported

wanting mentees to feel positive about their lessons once practice is over. Other peer mentors agreed, and stressed that they told their mentees about their experiences as a way of making them feel more confident about their lessons.

Another way to make mentees feel more confident is to provide good feedback for them about their lesson writing and teaching. Some researchers report that providing feedback is one of the most important functions that mentors perform (Feiman-Nemser, 2000).

Two of the mentors mentioned that mentoring taught them to give feedback in a more positive way. They explained that, at times, they wanted to just tell their mentees to do things in a particular way because they said so, but felt that this kind of approach to feedback was too autocratic. Pamela and Petra both stressed the importance of not telling mentees how to do something, but instead

going about [feedback and suggestions] in a nice way, like letting them know, 'It's just a suggestion, I'm not like the best teacher ever, and I don't know everything [but] here's what I'm suggesting. (Pamela: 425-428).

Conversely, Pamela later equated giving negative feedback with "be[ing] mean" (line 470).

Petra agreed, reporting that she didn't try to force her suggestions on mentees. She noted,

I'll make sure I'm saying whether something is an opinion [of mine] – let them know that they don't necessarily have to do it the way I suggested it. (Petra: 167-168).

Perhaps because of their youth and relative inexperience as mentors, the peer mentors talked about their difficulty with being assertive. As has been noted, Pamela found giving mentees negative feedback when forced to do so distasteful, but reported that she could be assertive if necessary. She reported,

I feel like I [can be] assertive when I know I am right. When I know I'm right, I'm going to stand up for it. . .it comes from experience" (Pamela: 248-254).

Petra felt the same way. She admitted that "I don't want to have to be the bearer of bad news" (Petra: 365-366) and that she was uncomfortable confronting mentees when she felt they were not taking their responsibilities seriously, but agreed that mentees sometimes have to hear negative feedback in order to learn.

Offering non-teaching guidance and advice. In addition to providing teaching strategies and feedback on lessons, mentors reported that mentees often wanted to know more about the program or about some of the topics that came up during Step I classes. It appeared that the mentors took on a "big brother/sister" role as they tried to provide mentees with guidance and advice.

Once mentees were finished practicing their lessons, all mentors reported making time for their mentees to ask questions related to their teaching, or to talk about other aspects of the UFTeach program. The mentors reported that mentees were curious about further coursework in the program, and asked when they should take a particular class, or asked specific questions about the coursework. Pamela reported that her experiences in the program allowed her to answer such questions with confidence. Petra noted that she didn't mind discussing such things with her mentees,

because we [peer mentors] just went through it as well. . .usually I'll try and reassure them that they'll make it through. (Petra: 292-294)

Petra reported, however, that she was careful what advice she gave to mentees, because

I think the worst thing you can do is tell them something that's wrong, and so I try to shy away from that. (Petra: 165-166)

Pier agreed, and reported,

sometimes they ask me questions about class, about Step I, and I have to tell them that I really don't know and that they have to talk to [a master teacher about]. . . assignments or things off the syllabus. . . I feel like they feel that we're [the peer mentors] more incorporated with Step I and Step II than we are. In the fact that we are there to help them with teaching. We're not usually there to help them [with questions about] the UF class. (Pier: 307-314)

He noted, however, that if his mentees asked him such questions they could search for the answers together, or go to talk to a master teacher about their question.

In summary, mentors reported that they learned to be better teachers as they mentored, building a toolkit of techniques and strategies related to good classroom management, content knowledge, and questioning. They also learned some of the important mentoring skills, such as listening effectively, giving appropriate feedback, and giving guidance and advice to mentees. In talking about these skills, the peer mentors offered insight into the kind of relationships they enjoyed with their mentees. The mentors perceived that their mentees trusted them; and the mentors reported that mentees often ended a mentoring session by asking additional questions about program requirements or coursework in the minor.

Elements of Productive/Unproductive Practice Sessions

The mentors were very open in revealing what they considered to be the elements that make a practice session work. Each of the four mentors identified preparation and focus as key determinants of productive or unproductive practice sessions. Each mentor talked about how important it was that mentees prepare for practice sessions. Mentees who arrived at practice sessions on time, excited about the lesson, and prepared to teach, they reported, generally experienced productive mentoring sessions. The peer mentors noted that being prepared to teach meant that the teaching team had already discussed how to teach their lesson, divided up the sections in an effort to ensure that

both of them taught equally during the lesson, and had materials at hand and ready for the session. Pamela noted,

what makes [practice sessions] really good is when the kids show up prepared and on time and they have everything printed out that they need . . . they know the lesson, they've already talked about it together outside of class and before they get to me and they know they're right. Like they could teach it in front of a class and totally bypass me. (Pamela: 269-273)

Petra agreed. She noted,

There's the best ones where the students just come in and they just blow me away and I'm like 'Wow! I want them to be my teacher!' They're into it, they're excited. (Petra: 205-207)

Pier reported that the best session he conducted was with a very prepared set of mentees. He noted,

they were so prepared they had actually [rewritten] their lesson. They modified the whole lesson. . .they had everything ready prepared, all the handouts. Any questions I threw at them they had a good explanation. . .I guess it was just such a good session because they - I felt like they had been teaching. (Pier: 326-335)

Although the above quotes indicate the mentors valued high levels of preparation and readiness to teach, this did not necessarily mean that the lessons were perfect or that their coaching role was unnecessary. Pia reported that when mentees were prepared and had a good working knowledge of their lesson then she could help them to fine-tune that lesson to make it even better. She noted,

[we can] brainstorm. . .different things, like how to approach something. . .they may be unhappy with the lesson, like a specific activity in the lesson, or they don't think it will go well. So I'll ask them what are they thinking of, and then sometimes it is a really good idea, so I just kind of make it fit. (Pia: 67-70)

Mentors also stressed preparation (or the lack of it) when they talked about unproductive sessions. They found it easy to recognize when their mentees were not prepared for the practice session. Pamela noted,

It's [as if it is only] the second time they've looked at the lesson and they are still learning what it entails and trying to figure out. . .who's going to do what part. They're reading it right from the sheet. [I want to tell them] 'You're not going to get anything from this if that's all you're doing'. . . The more you know your lesson the better the practice is going to go. (Pamela: 462-466, 486-487)

Additionally, the peer mentors reported that their mentees might be late to the practice session, or not show up at all, and have to reschedule. Pier noted,

I had one group I had to reschedule twice because the first time. . .the meeting [time] just didn't work out, and the second time, we just weren't going to have enough time before one of them had class, and I said, 'Let's just not even get into it,' because I wanted to [practice] the whole thing. (Pier: 366-369).

They also noted that unproductive practice sessions could be the result of a lack of cooperation between the two members of the teaching team. Pier noted,

I think the most challenging thing is when you don't have cooperation . . .when there's no cooperation, then it's just like talking to wall, because it doesn't matter what you say and what you're doing, you just can't work. (Pier: 579-583)

He noted that if he encountered a team that could not cooperate, a master teacher could help in resolving the issue.

Pier noted, however, that even those mentees who were unprepared for their first lesson generally became more prepared as the semester progressed. He reported,

Usually by the end [of the semester]. . .[mentees] talk about 'Well, you know, I'm trying to work on [various issues with lessons], what do you think?' and I know that they. . .want to improve, and I think they more than anything just want to do good for the kids. (Pier: 244-247)

Comments from the mentors like these indicated that most mentees seemed to take their lesson preparation and practice seriously, and those that might not take things seriously initially quickly learned to do so.

Focus was the second key determinant of productive sessions and it became most visible to mentors when it was absent. Petra noted that she could tell which of her mentees were unfocused, and was not averse to spending extra practice time with them to try and correct their focus. She noted that she practiced with a pair

who were definitely having some trouble figuring out what they were doing with themselves. . .and not taking it seriously, but we spent a lot of time working on it and talking about it. . .there was a point where they weren't sure we were even going to let them teach, and then towards the end they had a really good lesson. (Petra: 209-217)

While each mentor related one or two stories of unprepared, uncooperative, or unfocused teaching teams across the time that they have mentored, they also made it clear that a lack of preparation and focus on the part of mentees was not the norm.

In summary, the peer mentors were enthused when practice sessions went well, and attributed this success to mentees who were well-prepared to practice their lessons. On the other hand, mentors were frustrated by mentees who came to practice sessions unprepared and/or unfocused because they found it hard to help those mentees to revise their approaches to teaching their lessons. They reported, however, that such cases were few, and those mentees soon worked through their issues and learned to prepare for and stay focused on their lessons during practice sessions.

What Mentees Report about Their Peer Mentoring Experiences

A second set of interviews were conducted with seven mentees who were identified by their mentors as Step I students who were committed to teaching and were making progress as preservice teachers. The original plan was to interview eight mentees. Each peer mentor was asked to provide the names of two teaching teams who were then invited to be a part of these interviews. Not every mentor felt he or she could identify a teaching team that fit that criterion. In addition, in some cases, only one

member of the teaching team agreed to be interviewed, so only seven interviews were conducted. Of the seven interviews, two were conducted with one person of a two-person teaching team, two were conducted with both members of a teaching team (although one of these interviews occurred during a fire drill, and as a result the data were corrupted and unusable). The final interview was conducted with a mentee who taught alone because her schedule was incompatible with those of other students in her Step I class and she had no partner. This resulted in usable data from six interviews with mentees. These interviews provided additional insight about mentor/mentee relationships and mentees' perceptions about how their experiences helped them as they developed their teaching abilities. Findings from the analysis of the data from mentee interviews follows.

Value of the practice model used during mentoring. When asked if the current practice model, which required both members of the teaching team to be present, was a good one, every mentee agreed. Steele noted, "We teach as partners so you still have to practice with your partner" (Steele: 198-199). He remarked that practicing individually rather than as a pair might disrupt the flow of the lesson, making it "staccato" rather than "seamless [and] fluid" (Steele: 207-208). Stuart, however, reported that there might be some value in practicing independently of one's partner, and noted,

if you [practice individually] each person would probably be more comfortable handling each part in the event maybe if something happens, an emergency kind of situation. (Stuart: 210-212)

Stockard reported that practicing individually might cause problems when

we go to [teach] it together we'd kind of forget what we separated and then we might run into crossing. . .like I would talk about what she should be talking about. (Stockard: 209-211).

Taken together their perspectives indicated that the current practice was effective for the mentees.

Choosing peer mentors. In the UFTeach program mentees choose their mentor. According to the literature, being able to choose your own mentor had an impact on the effectiveness of the mentoring relationship (Boreen & Niday, 2000). Since even the needs of Step I mentees vary from teaching team to teaching team, having the ability to choose a mentor that they consider to be a good fit for their needs is an asset.

The mentees used varied criteria for initially choosing a mentor, including compatible schedules, a prior relationship outside of Step I classes, albeit not a very deep one, or because he or she was assigned to help in their Step I classes. After their initial practice session, however, most of the mentees reported that they continued to meet with the same mentor because of convenience or because they appreciated that mentor because of the quality of the advice he or she gave.

Steele, like all of the mentees, reported that his initial reason for choosing his mentor was convenience. He noted,

Well, the first time [we chose a peer mentor] it was really just 'let's find someone who has an open block on Thursday' because my teaching partner and I both don't have class on Thursday. . .so we were near the back of the line (to sign up). . .[and] she was the last [peer mentor] with an open block on Thursday so we picked that one. (Steele: 10-17)

In addition to choosing a mentor because of scheduling compatibility, two of the mentees considered a prior relationship they had with a mentor. Stephanie and Stuart chose a mentor that they had previously met and liked, but said that they would have made a different choice if scheduling had been an issue. Stephanie noted,

I had been to the first UFTeach [student organization] meeting [as had Stuart, her partner] and I saw her there and I liked the way that she was presenting herself. But if. . .our schedule hadn't coincided with her[s], or if

all her blocks had been taken, it wouldn't have been a problem to [work with another peer mentor]. (Stephanie: 36-42)

Although UFTeach mentors have majors in mathematics or in various fields of science such as biology or chemistry, Step I mentees could choose to be mentored by any mentor with any major. Staria was the only mentee to say that she initially chose a mentor whose background, like hers, was in science. She reported,

I wanted someone who could provide me with a second opinion, or a third opinion, as it were [about teaching science lessons], and she seemed to have the most to say, more so I thought than any other peer mentor might. (Staria: 17-20)

She was the only mentee interviewed who taught alone because of a rigid schedule that did not match any other Step I student's schedule, and so explained that she needed a mentor who could provide more scaffolding while she wrote lessons than some others with partners required.

While many of the mentees reported working with the same mentor for all three lessons, one mentee reported that she and her partner deliberately chose to work with more than one peer mentor. Stockard noted that she and her partner were mentored by different mentors for two of their practice sessions. Stockard said,

I think there's absolutely value in choosing different [peer mentors] because different people have different experiences and even just between the two that we've done differently, they've both like acted differently when we were practicing so you get the different experience. . .it was all pretty much geared toward the same thing but just, like, it was their personal experiences [although] it might have been different how they said it. (Stockard: 22-29)

While the mentees cited convenience or prior relationships as the reason for choosing their mentors initially, they had different reasons for electing to remain with a mentor for subsequent lessons. The three main reasons for electing to stay with a mentor were that they felt comfortable with the mentor, that they valued the feedback

provided by the mentor, and that they appreciated when a mentor could share special technical knowledge with them.

All mentees emphasized that they quickly came to value the feedback from those they chose as mentors. Staria reported,

I [can ask] my peer mentor pretty much anything because I think we've built up a good line of communication where I don't feel stupid asking. (Staria: 166-168)

She further reported that one of the suggestions made by master teachers in class had never made sense to her, but she chose not to interrupt and question the master teacher about it during classes. She reported feeling comfortable asking her mentor for clarification, however, when the mentor told her the same thing during a practice session. She noted,

I had a question about one of the comments that the master teacher made. . . [I felt] I must not have paid attention [during the class discussion, and didn't want to interrupt]. . .so asking my peer mentor was much more comfortable. . .I can. . .approach my peer mentor with pretty much anything. (Staria: 169-177)

While Stuart agreed that this affective aspect of mentoring was important, he additionally noted that the ability of the mentor to give good feedback was equally important. He noted,

I think the bottom line is being able to feel comfortable going through the lesson and feeling comfortable talking it over with [the peer mentor] and being able to get really good feedback, things to work on, maybe if you have some questions to improve your lesson; that's a big thing. (Stuart: 26-30)

Stella also noted that she and her partner continued to meet with the mentor they had initially chosen because of compatible schedules because they appreciated his expertise with the interactive Smart board. She noted that their mentor took extra time to work with them as they experimented with it. She reported,

It was like convenience almost just to continue going to him, and. . .he had a lot of helpful suggestions and he was willing to [practice technology with us]. . .especially with the Smart Board, neither of us had used a Smart Board before. So he took the time. . .after we finished our lesson, he's like, 'Yeah, this is how you do some basic things; go ahead and play,' and so we got to sit there and play with the Smart board for a while and it was just very helpful, in my opinion. (Stella: 28-36).

In summary, while time schedules or prior relationships initially influenced their choice of mentors, many mentees continued to meet with the same mentors for subsequent sessions because they felt comfortable with those peer mentors, appreciated the feedback they received, or appreciated the technical knowledge about software applications that their mentor was able to provide. One mentee additionally reported valuing the opportunity to work with more than one mentor, rather than continuing to practice with the same mentor, because she thought their varied personal experiences gave her additional perspectives on teaching.

While choosing a mentor was important to mentees for a variety of reasons, the format of the mentoring session was equally important. An analysis of what the mentees revealed about the mentoring sessions follows.

Mentoring Sessions. As was explained earlier in this chapter, Step I students were required to meet with a peer mentor prior to teaching each of three assigned lessons. Each session lasted approximately an hour. Mentees were instructed to practice their prepared lesson plans with their mentors, making sure to use the equipment and manipulatives they planned to use in the classroom.

The six mentees reported a common structure and sequence for their practice sessions. Their report reinforced the statements mentors made about structure. In general, mentors took on the persona of students, and tried to behave like and ask questions as elementary students might. During or at the end of the practice session the

mentors offered suggestions about techniques and strategies to help their mentees to present their lessons effectively. After the practice was over, some mentees reported asking their peer mentors for advice about the minor and the coursework involved in it.

What Mentees Learned From Their Mentoring Experience

All the mentees reported that the mentoring relationship enhanced their knowledge of what it meant to be a teacher through reinforcement and suggestions. Stella reported feeling validated as a teacher when her mentor complimented her ideas and practices.

She noted,

Getting the constructive criticism and then the compliments, then you can file it [away in your mind] and as. . .you hear [them] more then it become more. . .natural to do [things that way]. (Stella: 195-197).

Stockard reported that the things she learned from her mentor are important because

If you don't . . .practice [the suggestions made by the peer mentor] and get that advice and experience then you're not going to do it in your own classroom. . .so definitely every advice they give you is helpful to building your own teaching identity. (Stockard: 258-261)

Like their mentors, the mentees reported that mentoring sessions increased their knowledge of how to teach because their mentors provided suggestions of techniques that increased their instructional repertoire.

Classroom management. Preservice teachers are very concerned about classroom management (Ingersoll & Smith, 2004). Stockard reported that she valued the prior experience of her mentor related to classroom management techniques. She noted,

She'll say, 'Okay, you never really told me. . .' [or] 'You never handed me this worksheet' or 'You need to give them instructions before you hand [the worksheets and materials] out,' . . .so just like general advice. . .but it's always good to hear them say it because [the peer mentors have] been

through it. . .you make sure to remember to do stuff that they say.”
(Stockard: 80-86)

Steele reported that his mentor discussed behavioral rewards in response to a question about giving candy to students. He noted,

One of the things the peer mentors were saying was that candy [can be] really good. . .but it can really cause problems because then it causes [them to] only do math for candy, and then if you don't give them candy, they don't want to do it. (Steele: 359-262)

Stuart also talked about managing behavior during an instructional activity. He reported,

I thought [her suggestions] were really good, particularly when it comes to grouping students or having students. . .interact in a situation like that when we're playing a game. . .with the class. (Stuart: 83-85)

Mentees seemed to appreciate specific classroom management tips that they could use with their lessons.

Another classroom management issue mentioned by the mentees was how to manage time effectively during a lesson, which is one of the problems that many preservice teachers have. Staria reported that this was one area in which her peer mentor was really able to help her. She noted that she and her mentor discussed at length how to modify her lesson to better address the needs of the gifted children she taught. As they considered various activities to use during her lesson, her mentor helped her to understand how much time those activities might take, and cautioned her to be aware of how time management can affect a lesson. She noted,

We had to sit down and think through the changes that I made, and she had a different perception on [the lesson]. . .offering suggestions. . .directly going and saying 'This [activity] might take too much time, you might want to go and do something totally different, or you might want to make [other] modifications.' (Staria: 72-76)

In summary, mentees were concerned about how to control student behavior while conducting inquiry lessons, what sorts of reward systems to use with students, and how to manage time while teaching. The mentors spoke to each of these from their experiences in the classroom.

Instructional tips. The mentees also reported that mentors provided tips on instruction during their practice sessions. Stella reported that her mentor helped her and her partner to achieve a more coherent flow to their lesson. They were struggling with how to best structure the lesson using the five E lesson plan elements, given the instructional materials (e.g. student discovery records) they were expecting to use. As was noted earlier, for example, the Elaboration portion of the lesson plan is where students apply the knowledge they have learned to real-world situations. However, in order to do so, students need materials that build on what they have already learned and not those that introduce totally new material. Stella reported,

The elaboration was something that the students hadn't learned at all and it was 'We can only do this if the students have already gone over it.' So. . . [our question was] could we. . .move the second worksheet [that builds on what they did in the first worksheet]. . .down to the elaboration?. . .So he gave us a couple of [ways to structure the presentation of the lesson materials] that we could choose from. (Stella: 118-127)

Staria reported that her mentor taught her a strategy for adapting lessons to student need. Her class included some students who were considered gifted and talented, and she was struggling with how she could meet their differing needs while at the same time meeting the needs of the other students in the classroom. She noted,

She reminds me over and over and over again not to overestimate my students. . .I have a tendency to assume that they know more than they do . . .[my peer mentor has] taught middle schoolers and high schoolers who are at different levels in their learning abilities. . .[she has had] to adapt her lessons [to meet the needs of all students]. (Staria: 95-100)

Staria also reported that she believed that her mentor's ability to make these modifications successfully came because she had more experience in the classroom.

Staria noted that she often did not think of such things herself simply because she had been in the classroom so few times. She reported,

I think it's a lack of experience that I thought we would be completely busy . . . keeping the students quiet. . . [but] you need to keep the students thinking about the bigger picture [of the lesson]. (Staria:121-126)

Her preconceived perceptions of what takes place during instruction, and her discovery that instruction might actually be quite different, revealed that she appreciated the help that her mentor gave her to plan instruction for diverse student needs in her classroom.

Stuart reported that his mentor gave him and his partner a unique way to meet the learning needs of their students. He noted that she

Basically just kind of talked about different ways to utilize. . . things to help you out, and there's so many things out there for free. . . there was this song, really kind of cute and catchy, that was incorporating [how to measure slope] that she just happened to find [and shared with us]. (Stuart: 226-231)

Stephanie reported that she appreciated the questions her mentor asked in her persona of a student because they made her realize that she needed to come up with alternative questions clear up a student's confusion if there was one who was confused.

Her mentor

would ask questions, like two or three questions [like she was] a student who understood the material, and a student who didn't understand the material, just to make sure that we were prepared for any questions that [the students] might have for us, (Stephanie: 75-77)

She pointed out that this process helped her

to realize that I need to make sure that I know how to explain this better in case student doesn't [get it]. (Stephanie: 76-77)

In summary, mentees reported that their peer mentors provided instructional suggestions that helped them to develop more coherent lesson plans that addressed the learning needs of all students. The mentors asked questions in their personas of students that helped mentees to think critically about their plans for instruction, and whether they actually understood what they were planning to teach their elementary students.

Program advice and guidance. Apart from instructional strategies, mentees were also curious about the UFTeach program itself, since they were taking the initial course in the minor. Steele reported that his mentor answered questions about the UFTeach program and courses. He found this particularly helpful in planning for future semesters. He noted,

We asked her about the program, and what we could expect, what the workload was going to be like because we have busy schedules ourselves for our majors so we want to make sure that we can handle it. (Steele: 45-47)

Stockard echoed this, and noted,

We stayed to talk. . .about the minor and about the classes we [would be taking]. . .it was almost like a student advisor because it's really hard for you to get in to see most of our advisors so [the peer mentors] are there saying 'Okay, you can take this, that's perfect.' (Stockard: 93-97)

While mentors were not expected to be student advisors, they did have knowledge of the courses in the minor from their own experiences in them, and could speak to the work load that mentees could expect.

In summary, the relationship between mentors and their mentees as described by those mentees was a nurturing one. Mentees chose their mentors for a variety of reasons, the most common of which was compatible schedules. They often choose to continue with one mentor because they were comfortable with both what the mentor

was teaching them, and how it was being taught. Practice sessions appeared to be held in much the same ways, focusing on instructional strategies and non-academic advice and guidance. Mentees reported that the relationships they enjoyed with their mentors enhanced their knowledge of teaching and their repertoire of teaching practices.

Conclusion

The peer mentoring relationship examined seemed to benefit both the mentors and their mentees as they were building their teaching repertoires. Mentors both shared from their experiences and learned from the experiences of their mentees. Mentees reported that their peer mentors were instrumental in helping them to think critically about the content they were presenting and how to best differentiate their instruction to meet the learning needs of all students in the classroom.

CHAPTER 5 DISCUSSION

The purpose of this study was to examine the perceptions of peer mentors and mentees about the relationships of peer mentors with those whom they mentor and the nature of the learning that take place as the two parties work to co-construct knowledge. Additionally, the study was designed to examine the learning of both mentors and mentees. This chapter will provide a discussion of the findings of the study.

Summary of Findings

The findings for this study focused in three areas: what peer mentors perceived they learned from peer mentoring, what peer mentors and mentees perceived was valuable about the peer mentoring session format, and what mentees perceived they learned from being mentored.

The study revealed several important findings:

- Peer mentoring impacted mentors in two ways: they developed the skills necessary for effective mentoring, and they continued to develop a repertoire of teaching practices.
- The format of peer mentoring impacted the learning of both parties.
- Peer mentoring helped mentees learn instructional strategies and the practices of teachers.

A discussion of these findings follows.

What Peer Mentors and Their Mentees Learned from Peer Mentoring

The literature indicated that effective mentoring begins with a mentoring attitude, defined primarily as an attitude which shows respect for mentees, values their time, and acknowledges the knowledge base that mentees bring to the relationship (Algozzine et al., 2007; Boreen & Niday, 2000; Cherubini, 2007; Feiman-Nemser, 2001). Effective mentoring continues with a strong relationship; the literature indicated that the

relationship between the peer mentor and mentee is vitally important to the success of the peer mentorship (Ensher, Thomas, & Murphy, 2001). This relationship is impacted by the mentee's belief that the peer mentor has his or her best interests at heart and is willing to do whatever he or she can to meet the needs of the mentee, offering clear and specific feedback as the mentee learns his or her craft (Algozzine et al., 2007; Caccia, 1996; Feiman-Nemser, 2001; Hanson, 2010; Li & Chan, 2007).

These skills for mentors, which also emerged in the current study, can therefore be broadly grouped into two categories: affective skills and instructional skills. Peer mentors need to develop satisfactory relationships with their mentees (Ensher et al., 2001). Mentors in this study reported that they learned skills that enhanced their relationships with mentees as they learned how to effectively manage time, communicate clearly with mentees and listen effectively to them, and give practical feedback. In relation to Instructional skills peer mentors reported that they helped guide mentees in their first steps toward becoming accomplished teachers by modeling skills such as effective classroom management and high-order questioning. While the affective skills enhanced the peer mentors' abilities to work effectively with their mentees, the instructional skills also enhanced the peer mentors' development as teachers and through them to their mentees. A discussion of these skills follows.

The affective skills of mentoring

Across the board the peer mentors reported that they had developed some of the affective skills of mentoring which contributed to the relationships they formed with their mentees. These relational skills stem from an attitude of respect for mentees, viewing them as valuable co-constructors of knowledge. In the area of relational skills, the peer mentors reported the importance of learning to make time for effective mentoring,

learning to communicate effectively with mentees, including learning to be effective listeners, and learning to give effective feedback.

Time management. The literature indicated that time management is always a challenge in the mentoring relationship (Heirdsfield et al., 2008; Parr et al., 2004; Ragonis & Hazzan, 2009). Everyone has very busy schedules, particularly college students who may be trying to work, attend classes, and have satisfying social lives. In order for successful mentoring sessions to occur, the literature indicated that both peer mentors and their mentees had to agree to honor each other's time (Heirdsfield et al., 2008). In the current study, the peer mentors were busy with academic and social obligations, as were the mentees. These varied obligations seem to have prompted the dissatisfaction reported by peer mentors with mentees who did not show up on time or at all for a practice session. Fortunately, this was not a common situation. Most mentees arrived on time and prepared to practice their lessons.

On the other hand, none of the mentees indicated that their peer mentors took advantage of their time by not showing up or being unprepared to work with them. In fact, all were complimentary about the amount of time that their peer mentors spent with them. Several mentees mentioned that their peer mentors were willing to schedule additional practice times with them when they requested such practices. This seemed to indicate that the peer mentors were willing to exert additional effort to help those who genuinely needed it.

The literature on mentoring emphasizes the importance of time management in building the trusting relationship needed to foster effective mentoring. Ingersoll and Kralik (2004) reported that such a relationship can only be established through repeated

contact between the mentor and mentee over time. The question becomes, then, how much time is needed to develop an effective mentoring relationship? Caccia (1996) studied a mentoring relationship that began with the mentee being very resistant to the relationship. He reported that the mentor refused to give up on her mentee, instead redoubling her efforts to maintain contact with her mentee. Over the course of almost two years, the mentee began to open up and accept the mentor and her suggestions for bettering his instruction. Feiman-Nemser (2001) reported on the work of an exemplary mentor who spent an entire year working with his mentees. Obviously, the more time a mentor can take to work with mentees the better the outcomes will be. The UFTeach mentoring relationships were designed to last for one semester, although peer mentors always had the option to continue to work with their mentees at the request of those mentees as they continued through Step II.

Some might question whether one semester is enough time to develop a good relationship with a mentee. The studies reviewed in the literature about peer mentoring were all conducted over the course of one semester (one study, however, actually spanned two semesters) and all reported that effective relationships were formed between the peer mentors and their mentees. These researchers did stress, however, that pairs in the mentorship had to work hard to overcome time constraints. Because UFTeach peer mentors and their mentees took the same content-area classes, their schedules may have been somewhat more compatible, but the peer mentors as well as the mentees reported some scheduling difficulties at times. More discussion of this can be found later in this chapter.

Listening. The literature indicated that it is vitally important that peer mentors become effective listeners (Boreen & Niday, 2000; Parr et al., 2004). Young and Cates (2004) reported that emotional and directive listening are important skills for mentors to acquire. They defined emotional listening as listening that looks for a need to offer sympathy or support. Directive listening, on the other hand, was defined as listening that leads to advice-giving. UFTeach mentees often needed mentors who could listen to them as they thought out loud through new ideas about teaching practices in order to offer advice. They also needed mentors to listen as they vented about things that happened in the course of the teaching day. There were also times that the mentees needed advice and guidance. The importance of lending a willing ear to mentees as they talked about their experiences and asked questions was supported by the literature (Awaya et al., 2002; Boreen & Niday, 2000)

Mentees don't always communicate their concerns verbally. Mentors need to be skilled in reading body language as well (Awaya et al., 2002). The peer mentors reported that attending to both verbal and non-verbal cues helped them to communicate more effectively with their mentees. The literature suggests that mentors profit from training in effective listening techniques. Young and Cates (2010) suggested that mentors need to be trained in "specific directive listening techniques such as how to ask questions, give advice, and offer constructive criticism to protégés" (p. 227). Evidence from the current study indicates that peer mentors, who had no professional development related to listening skills, identified learning to listen as an important skill.

Feedback. The literature revealed that giving effective feedback was a very important skill of peer mentors (Boreen & Niday, 2000; Parr et al., 2004). Terrion and

Leonard (2007) linked the giving of effective feedback to a foundation of good communication skills. There are different types of feedback, ranging from what might be called “cheerleading,” or providing emotional support (Athanases et al., 2008), to that which provides substantive suggestions addressing specific instructional practices (Feiman-Nemser, 2001, Terrion & Leonard, 2007). Peer mentors have to learn how to avoid shallow praise that doesn’t adequately identify areas on which mentees need to work (Evertson & Smithey, 2000).

While all the mentees reported that their peer mentors gave good feedback, the mentors reported that doing so was not always easy. The peer mentors received no direction during training on how to give effective feedback and said that the hardest part of their job was giving feedback that might be viewed negatively by mentees, likening it to being mean or the bearer of bad news. However, the peer mentors agreed that it was important to be firm and assertive with some mentees who refused to act on the feedback that they provided for them, which was an indication that they recognized their own abilities to be firm and assertive. Specific professional development on how to give effective feedback might help to relieve the anxiety that peer mentors feel when they have to give critical feedback to their mentees and help them to learn additional strategies for providing effective feedback.

Instructional skills

The literature suggested that instructional skills that are learned through the process of mentoring often are assimilated into a peer mentor’s teaching practice (Heirdsfield et al., 2008). Boreen and Niday (2000), for example, reported that two of the peer mentors they studied demonstrated increased use of content-related literary terms as a result of their conversations about their practices as English teachers. The

two teachers reported that their growing understanding of critical vocabulary was an important addition to their abilities to instruct students using that same content vocabulary.

While the mentors agreed that they learned valuable teaching practices from their mentees, the application of that learning was uneven from mentor to mentor. One peer mentor stressed that he was always learning and using what his mentees shared from their own knowledge of teaching strategies, emphasizing that he believed he was learning through his mentees effective teaching practices from mentor teachers in the schools. Others reported that they did not always incorporate what they learned from mentees into their own classroom teaching. They reported a belief that some of what they had learned from their mentees would not apply, since they were now teaching secondary students and not elementary students as were their mentees.

One peer mentor in particular was very vague as she talked about what she had learned from her mentees. Perhaps this might be because not all the peer mentors had the same levels of mentoring experience. Peer mentors build their bank of essential skills with each new mentee that they mentor, but some peer mentors had mentored fewer mentees than others, as was the case with this mentor. The other mentors did agree, however, that they often passed on to other groups of mentees what they considered to be good instructional strategies that were shared with them by their mentees.

The researchers in some of the literature suggested that mentors were less open to learning opportunities from the mentees than one might think. Parr et al. (2004) reported on the tension between the mentors and the mentees in their study, and linked

it to the dissatisfaction that was reported by peer mentors because others did not take the learning situation as seriously as did they. Boreen and Niday (2000) questioned why many of the mentor/mentee relationships in their study never truly developed to the level they had expected, and stressed that this lack of relationship prevented the same level of learning that they reported in the pair they chose for their case study. Because all peer mentors bring to their mentoring their own learning needs, it is possible that not all those needs are met as they co-construct knowledge with their mentees, depending upon the level of commitment in the mentoring relationship.

Procedures and Routines. Researchers reported that classroom management is one of the primary concerns of new teachers (Ingersoll & Smith, 2004). Therefore, it is not surprising that the peer mentors reported that they learned additional strategies related to procedures and routines as a result of their mentoring. While much of the content in Step I and Step II classes focuses on the development of effective teaching strategies, mentees needed additional help as they sought effective ways to manage behavior and movement around their own classrooms, as well as ways to handle instructional materials and equipment while teaching. The learning of the peer mentors was perhaps deeper than that of the mentees, as evidenced by the mentors' reports that they were able to share strategies more tailored to the particular needs of mentees from their own experiences. They also noted that as their mentees reported back about how their lessons had gone, they were able to share with their mentors other strategies that they had learned from their directing mentor teachers. The peer mentors then were able to share these strategies with others that they mentored.

In the literature reviewed for this study Morgan et al. (2000) reported that mentees in their study exhibited a growing, sustained understanding of specific classroom management strategies as mentoring progressed over time. The current study focused only on Step I students enrolled in their first semester of coursework in the UFTeach program, so it might be hard to say with confidence that strategies became ingrained in mentees' minds, but they reported at least a working understanding of certain strategies. Mentees stated that they discussed with their mentors various techniques and strategies that could be used to handle lesson materials or classroom instructional equipment, and strategies for grouping students for cooperative activities and keeping students in order as they worked cooperatively. While these strategies might seem to be fairly obvious to those not trained to be teachers, they are not so obvious when a preservice teacher is struggling to remember all the things he or she must do during a lesson. Both mentees and the peer mentors talked about the importance of having ready access to classroom instructional equipment like the Smart board in order for mentees to practice using that equipment.

Questioning. The literature about preparing students to compete in the global work Stuart et al. stresses the importance of teaching students to think critically (Levine, 2007). It is important for teachers to ask questions during instruction that encourage and enhance students' critical thinking skills. The peer mentors each reported that they stressed with their mentees numerous ways to change their lower-order, recall questions into higher-order questions that emphasized critical thinking. Three of the mentors reported that this was because they knew that learning to craft good higher-order questions was the focus of several lessons in the Step I course.

The literature suggested that mentors increased their own knowledge about teaching as they helped their peer mentors learn their craft (Boreen & Niday, 2000; Morgan et al., 2000). As the peer mentors searched for effective strategies that their mentees could use, they found that their understanding of these strategies was deepened as well. They reported that some of the strategies had become natural practices to them because they had modeled them so frequently for their mentees. For example, one of the mentors reported that her own problems with developing good questions that encouraged critical thinking for use during instruction made this a priority focus as she worked with her mentees.

The peer mentors emphasized the importance of improving the type of questions that mentees included in their lesson plans. While their questions initially were lower level recall questions, mentees reported increased skill in developing higher-order questions to be used in their lessons. This was a good outcome, since, as has been noted, much of the instruction in Step I classes has to do with writing effective higher-order questions that enhance the critical thinking abilities of students, and the mentors were reinforcing what the mentees were learning in class.

All of the mentees agreed that what they were learning from their peer mentors had an impact on their knowledge and skills as emerging teachers. All new teachers have to work to develop their “bag of tricks” that allows them to orchestrate classroom activities and present good cohesive lessons. Conversations with and modeling from other teachers can help a preservice teacher learn this early in his or her field experiences. Boreen and Niday (2000) noted that the rich conversations between peer

mentors and mentees helped to provide the fund of knowledge upon which mentees could build as they progressed through their field experiences.

Lesson plans. Parr et al. (2004) reported that one of the benefits to a peer mentoring relationship is that mentors appreciate having opportunities to determine curriculum content and write lessons that address that content. One of the functions of the peer mentors was to help write lesson plans that would be used by their mentees during their field experience. As such, the mentors themselves were continually trying to refine their lesson-writing abilities. As their skill increased, they were better able to help their mentees to write more cohesive lessons plans. The peer mentors reported that these mentees had made good strides in their journeys toward being able to write cohesive lesson plans, and the mentees themselves agreed.

Some mentees reported that they made the conscious decision to ask their peer mentors for suggestions about ways they could improve their lessons, and then work to address those suggestions on their next lesson. Admittedly, these Step I students had limited experience with writing lesson plans, but they seemed to believe that they had learned some good strategies for refining those lessons. The strategies ranged from including more technology in the lesson delivery to restructuring lessons in order to create a lesson that flowed more smoothly.

Giving program-related advice to mentees

One of the functions of peer mentors revealed through this study was that of providing advice to mentees (Jacobi, 1991). Several of the mentees reported that they learned more about the UFTeach minor itself from their mentors. While providing advice and guidance isn't a skill or content knowledge-based area of learning need, it

does highlight the affective, nurturing component of mentoring (Heirdsfield et al., 2008). Mentors were able to provide information about the courses in the minor, the intended order that courses should be taken in, and what kind of workload could be expected in the courses, helping mentees to plan their schedules effectively.

In summary, affective skills as well as instructional skills are very important for peer mentors to add to their funds of knowledge about mentoring. The “people skills” of mentoring, such as good time management, building trusting relationships, listening and providing constructive feedback for mentees build the relationship in which mentors can then learn and practice their instructional skills as well.

Peer Mentoring Relationships

The perceptions of the mentors and mentees in the current study contribute to what educators know about the role of relationships in peer mentoring. The relationship between mentor and mentee is the foundation upon which effective learning can begin to take place. Creating relationships is hard work however the literature revealed that the effects of peer mentoring were stronger when a relationship formed between the peer mentor and his or her mentee. Effective mentoring relationships are based on trust between mentor and mentee (Boreen & Niday, 2000, Heirdsfield et al., 2008). The peer mentors and their mentees reported that they felt that their mentoring relationships were effective ones. All but one of the mentees in the current study noted that they had grown to trust their peer mentors, and that this trust was what drew them back to the same mentors in subsequent practice sessions (the remaining mentee stressed that she had deliberately chosen to work with multiple mentors, but indicated that she chose those she trusted as effective mentors).

Additionally, the literature suggested that effective mentoring relationships are task-focused (Boreen & Niday, 2000; Morgan et al., 2009). The bounded task given to the peer mentors may have helped to build the relationship more quickly and strengthen the relationship. In the case of relationships between these mentors and mentees, the intended outcome of the relationships was that both peer mentors and their mentees learn to be more effective teachers. To that end, mentors focused on teaching their mentees instructional strategies that would help them to be effective teachers.

The studies emphasized that as relationships formed and grew, the mentoring pairs were able to begin to address more deeply various ways they could each grow as teachers (Boreen & Niday, 2000). Several factors affected the ability of the UFTeach peer mentors and their mentees to form productive relationships that allowed this hard work to take place, including compatible schedules and knowing a peer mentor before choosing him or her as theirs.

Self-selection. The literature revealed that mentoring relationships were enhanced when mentees were free to choose their own mentors (Boreen & Niday, 2000; Ensher et al., 2001). The format of the UFTeach peer mentoring component enabled self-selection. Mentees were able to choose their mentors and, as was noted previously, their choices were initially based almost exclusively on those who had schedules compatible to their own. One of the benefits unique to the peer mentoring effort studied here is that, because the peer mentors and their mentees are all undergraduates in similar majors, they share some of the same content courses, and so have compatible blocks of time in which mentoring can take place. None of the mentees reported any problems finding a peer mentor with a similar schedule.

Prior relationships. Mentees reported that, in some cases, they had some prior knowledge of or a relationship of some sort with one of the peer mentors which influenced their decision to pick that particular mentor. Some mentees elected to choose mentors who visited in their Step I classrooms during the first week of the semester, mentors who attended their class regularly during the semester, or mentors whom they met while attending the UFTeach Student Organization meetings. However, most of these prior relationships were not deep ones that had been developed over time, and none of the mentees reported that they had any prior knowledge about how that person mentored others.

Thus, the mentoring relationships developed within the structure of this program were short term ones (one semester in length). While a few had prior knowledge of their mentors, most did not. Nevertheless, participants reported that the ability to self-select their mentors, as well as effective, task-focused mentoring sessions lent to the effectiveness of the relationships. While the literature suggested that long-term relationships were the ideal (Feiman-Nemser, 2001), it also provided evidence of successful mentoring relationships that were formed and lasted for a single semester (Boreen & Niday, 2000; Heirdsfield et al., 2008; Morgan et al., 2000; Parr et al., 2004). Similarly, Ragonis and Hazzan (2009) reported that the mentors in their study, conducted over two semesters, established good mentoring relationships with their mentees.

Although mentees could select a new mentor for each mentoring session, most of the mentees reported that they continued to go back to the peer mentor they chose initially because they felt comfortable with that person and believed that they had

received good advice from him or her. The literature revealed that there is value to having a fixed, one-on-one pairing that continued across time (Parr et al., 2004). The peer mentors in this study were able to build somewhat deeper relationships that they believed fostered growth both in the knowledge and practice of their mentees. There was also the potential for continuing that mentoring relationship within further field experiences.

The Design of Peer Mentoring Sessions

The intended design of the UFTeach peer mentoring component was that peer mentors would meet with Step I mentees as they practiced lessons that would be taught to elementary students. The mentors' task was to offer instructional strategies for teaching the lessons as they were presented, or, if necessary, help their mentees to write more cohesive, better planned lessons. In order to do this, the peer mentors first had to familiarize themselves with the lessons and research any strategies that might improve the lessons.

The literature revealed that the design of mentoring sessions is important. Heirdsfield et al. (2008) reported the importance of preparation for mentoring sessions on the part of the peer mentor. They found that ample preparation can have an effect on the self-esteem and the efficacy of the mentor. In this study, all of the mentors reported that they prepared for their mentoring sessions by researching the topic and appropriate instructional strategies for teaching that topic, and learned valuable content knowledge and the appropriate use of instructional manipulatives and equipment that they could then share with their mentees. Parr et al. (2004) reported that a lack of preparation on the part of the mentors in their study, which was a result of a lack of sufficient time for mentoring, was a weakness in the peer mentoring model they used.

Mentor preparation for mentoring sessions. In preparing for the peer mentoring sessions, the peer mentors reported first looking over the drafts of lessons prepared by their mentees to acquaint themselves with the content and general format of the lesson that was to be taught. As they read the lesson plans the peer mentors were able to view the revision comments that master teachers and/or other mentors gave the mentees. This prepared them to emphasize areas identified by the master teachers in which the mentees needed more work before teaching the lesson. The peer mentors regarded this as an important part of their preparation for mentoring likening it to homework they do to prepare for a class. This seemed to indicate that the peer mentors took their responsibilities seriously and wanted to be as prepared as possible to deal with questions and make suggestions to refine the lessons.

Consistency in mentoring. Interviews with the peer mentors revealed that there was some issue of consistency in how they worked with their mentees. Mentors in the UFTeach program were all tasked with practicing with students, but it appeared that the master teachers tended to interpret this task differently. One master teacher instructed peer mentors who reported to him that a discussion of the lesson was sufficient, while the other master teachers favored a role playing or “practice teaching” approach to mentoring and instructed peer mentors to make mentees actually teach the lesson to them. Another newly-hired master teacher sent her feedback to mentees but did not include the peer mentors in that email. They were therefore unable to help their mentees to focus on the necessary revisions suggested by this master teacher. Misunderstandings like these led to some confusion on the part of the mentors about what the expectations were for them. The study conducted by Parr et al. (2004)

indicated that the less confusion and chaos there was in the mentoring relationship, the more effective that relationship would be.

Mentee preparation for mentoring sessions. A second key element of a successful mentoring session appeared to be how well mentees were prepared for the session. To the peer mentors, this meant that mentees had taken time to go through the lesson both individually and together with their partner (if they had one), dividing the lesson into which parts they would teach, familiarizing themselves with the content and the materials they would use to teach the lesson, and identifying appropriate questions to use to elicit student responses and probe for deeper understanding about the content. Parr et al. (2004) reported that changing the practices and beliefs of mentees was impossible if the mentees weren't very focused during their mentoring sessions. This reinforces the perspective of peer mentors in the current study that when mentees arrived unprepared for the session, it hampered their ability to help mentees to refine their lessons.

Conclusion

In conclusion, both peer mentors and their mentees appear to have learned more about being a teacher because of what took place in their mentoring relationships. It is important to point out that both groups had a somewhat limited view of what it means to be a teacher, but that view changed with each mentoring session, and with each class they took in the UFTeach minor. Both the peer mentors and their mentees learned the same instructional strategies: classroom management strategies, questioning strategies, and specific strategies for teaching their content. Additionally, peer mentors learned some of the skills essential to being effective mentors, such as how to carve out

the time to mentor, how to communicate effectively with mentees, and how to give effective feedback in constructive ways.

Implications for Further Research

Previous research shows us that effective mentoring provides an invaluable support as preservice teachers learn their craft (Terrion & Leonard, 2007). Ensher, et al. (2001) suggested that the needs of novices can be met by three types of mentors: traditional mentors, step-ahead mentors, and peer mentors. Traditional mentors are those experienced teachers, both older and possessing a much stronger knowledge base, who work with a less experienced protégé. Step-ahead mentors might be regarded as “junior mentors,” as they are generally one step above mentees in terms of knowledge and understanding. Peer mentors are on a comparable knowledge level as those they mentor, and may know just slightly more in certain areas than those that they are mentoring. For the purposes of this study, the mentors fell into this category. The peer mentors and their mentees were very close in age (undergraduates between 19 and 21 years old at the time of the study). The mentors have perhaps just a little more knowledge about lesson planning and teaching than their mentees. Le Cornu (2005) suggested that the format of mentoring has changed to incorporate the experiences of peer mentors who share experiences with other preservice teachers with the same or almost the same level of experience, like the UFTeach mentors. The current study examined the perceptions of mentors and their mentees about the learning that takes place as they work to co-construct knowledge about their craft, and provided suggestive evidence that a mentoring program incorporating the experience of peer mentors has benefit for preservice teachers, whether in the role of mentor or mentee.

Critical questions remain, however, about how peer mentoring impacts the actual instructional strategies of mentors and those they mentor. Morgan et al. (2000) suggested that “conspicuous and sustained increases in specific teaching behaviors [occurred] after peer-mediated instruction was initiated” (p. 3). This is one study, however, and more studies are needed to examine this claim. This question suggests that more research needs to be conducted in order to understand the contributions that a peer-mentoring model of preservice teacher support can make to the knowledge and skills of mentors and those they mentor.

Several suggestions for further research seem logical. One suggestion for further research might be a controlled study across the UTeach replication programs in which Step I preservice teachers who had peer mentoring are compared to those who did not. Systematic observation of their lessons could determine if those who have experienced peer mentoring are using instructional strategies learned in coursework and in the process of mentoring in their teaching more frequently or with more skill than those who were not participants in the peer-mentoring program. A slightly different focus might be to observe mentees as they teach to see how feedback from their mentors is or is not incorporated into their teaching. Both studies would benefit from videotaping of the lessons as they are taught. Additionally, there are qualitative questions about the content of feedback, the time devoted to coaching versus the time spent during the mentoring session on other things, and whether the coaching focuses on what Step I preservice teachers are learning in the course that could be studied.

Implications for Teacher Educators

The study has several implications for teacher educators. As has been noted, the existing literature related to peer mentoring is small. This study was devised to explore

the experiences and perceptions of participants in the peer mentoring process. It is important to note that the results of this study may not be easily generalized to any other peer mentoring effort because the study examined the perspectives of a small group of peer mentors and mentees within a particular program at a specific point in time. That being said, this study adds to the current literature in ways that can suggest considerations for other teacher educators interested in implementing peer mentoring programs.

The current study suggests that a peer-mentoring component can add to the knowledge of mentors and mentees enrolled in preservice education programs. Our universities and colleges are struggling with budget cuts that mean fewer educators are being hired to work with preparing teachers. One impetus for the addition of a peer mentoring component to the program under study was that the small number of master teachers could no longer supply enough personal support for all the students enrolled in the program. Drawing upon the experiences and knowledge of peer mentors, while limited, helps increase the learning of both mentors and mentees as they are learning to teach. and could enhance the learning of preservice teachers enrolled in any program.

The literature and the experiences of mentors in the current study suggest that peer-mentoring will be enhanced when mentors receive appropriate professional development for the role. Based upon the needs of the mentors in the current study a comprehensive orientation might include information about the basic responsibilities of peer mentors, an introduction to skills to enhance the effectiveness of the mentors, such as ways to build trusting relationships, effective communication and listening skills, and effective feedback skills,. The experiences also underline the importance of professional

development related to instructional skills. The nature of such supports should be drawn from literature on mentoring and coaching, as well as the specifics of the program within the local context. The next section provides implications specific to the local context for the current study but the ideas presented may apply to others with similar contextual features.

Implications for UFTeach

These findings reveal that the peer-mentoring component of the program could be enhanced by changes in the format and content of orientation for peer mentors, communication of clear expectations to the peer mentors, development of professional development opportunities, and implementation of a reflection journal.

Require All Mentors to Attend Mentor Orientation

Some of the mentors reported that they were not present for some of the mentor orientation meetings because of schedule conflicts and therefore missed hearing about some of the procedures that were discussed in those meetings. One way to resolve this issue could be to hold an orientation meeting at the beginning of each semester and to make attendance at mentor orientation meetings mandatory. In doing this, it is important to select a time when all mentors are available. Alternately, as the mentor pool grows, multiple orientation meetings could be scheduled with a requirement that each mentor attend one of the meetings.

Make the Procedural Expectations for Mentors More Explicit

The mentors reported that, at times, they were uncertain about whom to report to, how and what to report, and what their specific duties entailed. The master teachers could address these expectations during orientation meetings, and might provide written, detailed instructions for the peer mentors to clear up any confusion they might

experience. Additionally, in one instance a mentor reported that a new master teacher failed to include the mentor in communications with Step I students when sending feedback. This may have been a misunderstanding by the new master teacher. However, orientation for new master teachers should include introduction to the role of the mentors and the importance of clear communication across master teachers, mentors, and Step I students.

Expand the Content Included in Mentor Orientation

Peer mentors also reported that their formal training, conducted during the formal orientation meetings, was the least valuable training they received because it was heavily procedural. Master teachers might consider expanding the content of orientation meetings to include more than procedural information. The content of orientations might include the basic skills of mentoring, suggestions for preparing for mentoring sessions, guidelines for supporting preparation of mentees for mentoring sessions, and resources about pedagogy that might help increase pedagogical knowledge for mentors (a manual that might be used to provide structure and content for the mentor orientation is included in Appendix E).

Provide Ongoing Professional Development for Mentors

The mentors reported that formal training sessions were held once at the beginning of the fall semester. Mentoring literature makes a clear case for the value of continued, job-embedded professional development for peer mentors. The master teachers could consider having two or three scheduled professional development sessions for peer mentors during the semester. The focus of these sessions would be to deepen the mentors' understanding of how to mentor. The professional development sessions might focus on mentoring skills and instructional strategies in a spiraled model,

revisiting basics for any new peer mentors hired during a semester, but also providing activities that would enhance the knowledge and skills of the more seasoned mentors. Sessions might provide more detailed information about various areas identified in the current study and might also include opportunities for mentors to share and explore solutions to their current mentoring dilemmas through protocol-based conversations. Protocols to support these discussions can be found on the website of the National School Reform Faculty (NSRF) (http://www.nsrffharmony.org/protocol/a_z.html). Additionally, these PD sessions could be videotaped to begin an instructional library of videos for new or established peer mentors who feel they need a refresher as they work to enhance their mentoring skills.

Require Mentor Reflection

In the UFTeach peer mentoring program, there is no explicit requirement for mentors to reflect upon their learning as mentors (although reflection about their field experiences is a requirement of the courses in UFTeach). The interviews in the current study appeared to provide a forum for reflection that may have been instrumental in helping the mentors to be explicit about what they are learning. Building a requirement for mentor reflection into the program would be a way to help mentors to become self-reflective about their knowledge and practice.

Peer mentors might be asked to create reflection journals in which they record their thoughts about mentoring before, during, and after the mentoring process, as well as their thoughts about their learning. Requiring the journal seems to be important because, as the mentees mentioned, what isn't required is easily pushed aside. Reflection journals could be shared with the master teachers, who could use the journals to identify the need for further professional development. Or the journals could

be used during professional development sessions as a source for mentor dilemmas to use with NSRF consultancy protocols.

Create Member Support Groups

Several of the peer mentors mentioned that they enjoyed talking with other peer mentors about their responsibilities and learning to be teachers. Peer mentors could be encouraged to develop and lead support group meetings for one another. For example, each mentor could sign up for a topic to research and bring to the group for modeling and discussion. Topics that seemed important to interviewed mentors included methods of building trusting relationships, enhancing team teaching, addressing learning modalities, reducing stress, learning behavior management techniques, and using Web 2.0 tools in instruction. Other topics would emerge as mentors worked together to investigate their own practice and effectiveness.

Create a Manual for Use in UFTeach Mentor Training Sessions

In an effort to address the basic issues that mentors from this study indicated might be included in their initial training, I have created a manual that might be useful for future mentors. To decide what should be included in this manual, the findings were closely examined to determine important areas in which the mentors would need preparation and professional development (a chart outlining these areas can be found in Appendix D). The data revealed several issues that professional development could address, including the need for more initial preparation on procedures and responsibilities related to the expectations for the mentors and additional understanding of the skills of mentoring. Once these areas were determined, a search was conducted to collect appropriate materials to be included in the manual.

The UFTeach Peer Mentor Manual included in Appendix E is intended to provide both procedural information for the mentors and suggestions for activities that might be included in professional development meetings that would enhance the knowledge and skills of the peer mentors. The manual is divided into sections related to what is expected of mentors as they conduct the various aspects of their responsibilities; mentor/mentee relationships; effective communication, including feedback; routines and procedures for the classroom and the school day; and effective questioning strategies. The manual contains a list of resources that mentors can access for further information. Finally, a suggested agenda and suggested topics for mentor orientation and professional development are also included.

Conclusion

This study contributes to the small amount of research about peer mentoring in preservice education programs in general, as well the UFTeach alternative certification program. The findings of this study highlight the ways that peer mentors can help their mentees to develop their knowledge and skill as teachers. The Peer Mentoring Manual provides suggestions for initial and ongoing professional development designed to enhance the skills of peer mentors.

APPENDIX A UFTEACH COURSE DESCRIPTIONS

Step 1

The aim of STEP courses is to attract students to careers in math & science teaching. Master teachers introduce students to examples of high-quality inquiry-based lessons and model the pedagogical concepts to which they are being introduced. In STEP 1 students prepare and teach 3 lessons in elementary classrooms.

Step 2

The aim of STEP courses is to attract students to careers in math & science teaching. Master teachers introduce students to examples of high-quality inquiry-based lessons and model the pedagogical concepts to which they are being introduced. In STEP 2 students prepare and teach 3 lessons in middle school classrooms.

Classroom Interactions

This course moves from a focus on thinking and learning to a focus on teaching and learning. Prospective teachers are introduced to the way in which curriculum and technology are used in classroom settings to build interrelationships among teachers and students. They are taught how content and pedagogy combine to make effective teaching.

Knowing and Learning

This course expands the prospective teacher's understanding of current theories of learning and conceptual development. Students examine their own assumptions about learning. They critically examine the needs of a diverse student population in the classroom.

Perspectives on Science and Mathematics

Faculty in History and Philosophy introduce students to the historical, social, and philosophical implications of mathematics and science through investigations of five significant episodes in science history.

Project-Based Instruction

In this course, students aim to master new technologies for problem-based investigations in math and science classrooms. Students also discuss the use of assessment to improve student learning. Students teach project-based lessons to high school students.

Functions and Modeling (for math majors only)

Students participate in a wide variety of mathematical activities and make regular use of current technologies, software, and physical models.

Reading in the Content Areas

Students prepare to assist struggling readers and to integrate development of reading skills into science and mathematics classrooms.

Research Methods

Students perform four independent inquiries and learn to combine skills from mathematics and science in order to solve research problems.

Apprenticeship Teaching

Students are immersed in the schools to prepare them to confidently assume a teaching position in the public schools.

APPENDIX B INITIAL PEER MENTOR JOB DESCRIPTION

The responsibility of a peer mentor teacher is twofold. You must support and assist all the Step 1 students as they begin their teaching career. You also must assist the master teacher with the development and review of all lessons plans for the Step 1 students.

- **Develop a rapport with the Step 1 students.**
 - Create a relationship where they feel free to email, call or text any questions.
 - Drop by Step 1 classes and let them meet you. The more visible you are to them the more likely they are to come to you. If all they ever know is you through email, it's very impersonal.
 - Follow up after you meet with them

- **Meet with students both during and outside of your fixed hours.**
 - The peer mentors and the Step 1 students are both students and therefore both have crazy course schedules, so meeting on the weekend or in the evening shouldn't necessarily be out of the question. Peer mentors should be willing to make reasonable accommodations for the Step 1 students.

- **Promptly reply to all emails, texts, and phone calls from the Step 1 students.**
 - Keep in contact with the Master teachers and communicate what's going on.
 - This includes 'replying all' to emails that Step 1 students send about meeting with one of the four mentors.

- **Document your work.**
 - Complete all your assigned work when asked. Due dates are an agreement between you and the master teacher.
 - Once you have practiced with a group be sure to sign off on them on the clipboard/electronic document.
 - Document your hours on People Soft and with master teacher

- **Know the lessons.**
 - Make sure you understand the concepts that are being presented in the lesson.
 - Peer mentors should pay close attention to the lesson as it is being taught and offer up suggestions and past experiences.
 - Take any concerns to the Master teachers; don't simply ignore a glaring problem.

- **Working with Master Teachers**
 - Meet together at least once a week to review personal assignments and concerns. Best if both peer mentors and master teacher can meet at one time.
 - Will need to develop common lesson plans for semester 2 as well as identify appropriate activities for semester 1, lesson 3.
 - Assist step 1 students with the question development of lesson 2 and the 5 E lesson plan for lesson 3
 - Share any concerns you have about a student immediately.

- **Considerations when observing a practice session.**
 - Questions to ask yourself while watching the lesson:
 - How can this lesson be better?
 - Are there enough higher order questions?
 - Does one person dominating over the other?
 - Are both students speaking loud enough to be heard in the back of the class?
 - Are the Step 1 students referring to each other by their last name?

 - Make the Step 1 students do a dry run of their lesson. Don't just sit there and allow them to *tell* you what they are going to do. Make them *do* it! *Show* me!
 - Think about every aspect of the lesson, (even what's not written down) and offer appropriate advice.
 - Many times Step 1 students will assume... Make sure they know not to ever assume the classroom teacher will have a specific material ready for you (unless you have spoken with them prior). Make sure you confirm they have sent their lesson to the cooperating teacher and are sure they will have all necessary materials.

APPENDIX C
INTERVIEW PROTOCOL

Interview Protocol for Interviews with Peer Mentors

1. How long have you been a peer mentor? (just to establish for the record)
2. Explain to me what sort of training you received before beginning your work as a peer mentor? Was there anything that you found particularly useful in that training? Why was it useful to you?

What sorts of resources do you have available to you as you work with Step I students? What is most helpful to you? Can you tell me more about that?

Probes: Was there anything in the training you received that you felt was not useful? If so, why?

Is there anything that you would like to see included in peer mentor training for new peer mentors? Why? Are there any resources you feel you could use as you work with Step I students that you don't currently have access to? Why would that (they) be useful to you?

3. Let's look at the lesson plan from a recent mentoring session that you brought to show me. Walk me through your last mentoring session from beginning to end. Start with what you did first, and when you get to your conversation about the lesson plan, use the lesson plan to help you remember what you talked about with your mentee. Tell me everything you and your mentees did. Was that a typical session? How was it similar to or different from other sessions you have had with your mentees?

Probes: Are there topics that you feel really well prepared to discuss? Are there topics you feel uncomfortable with?

4. Tell me about the best mentoring session you think you've ever led. Tell me what helps you know it was a great session. Tell me what happened in that session. Do you think your mentees felt the same way? Why?

Probes: How do you prepare for your mentoring sessions?

5. What do you think Step I students are learning from their mentoring sessions with you?

Probes: Can you tell me more about ... (each thing mentioned)

6. Are there any things that you would like to change in the ways peer mentors mentor students?

Probes: If so, what are they? Why would such a change help?

7. Is there anything that you feel you are learning about teaching by serving as a mentor? Give me some specific examples.

Probes: Do you think that mentoring Step I students has helped your own practice as a teacher? Can you tell me more about that?

8. Did you have a session that you found particularly challenging? Tell me more about that. Has a mentee ever asked you a question you couldn't answer? Tell me how you dealt with that.

Probe: Do you feel there are any challenges to mentoring Step I students? Give me some examples. Why do you feel these things are challenges? How do you feel we could do things differently to resolve these challenges? Can you tell me more about that?

9. When you work with Step I students, it is almost always in pairs or triads. How well does that work, in your view? Tell me the ways you think this enhances the mentoring sessions. Tell me about the challenges it presents. Probe for specific examples of benefits and challenges (i.e., things that happened in a session)

Probe: Have you ever felt it would be more helpful to work with Step I students one at a time? Tell me more about that.

8. Is there anything further that you would like to say about being a peer mentor?

Interview Protocol for Interviews with Step I Students

1. How do you choose the peer mentor with whom you would like to practice? What things do you consider in making that decision – are some more important than others?

Probes: Have you practiced with the same peer mentor each time, or did you switch the peer mentor with whom you practiced for your next lesson(s)? Why, or why didn't you, elect to stay with the first peer mentor with whom you worked for your subsequent lesson(s)?

2. Let's look at the lesson plan from a recent mentoring session that you brought to show me. Walk me through your last mentoring session from beginning to end.

Start with what you did first, and when you get to your conversation about the lesson plan, use the lesson plan to help you remember what you talked about with your mentor. Tell me everything you and your mentor did. Was that a typical session? How was it similar to or different from other sessions you have had with your mentor?

3. What sort of advice does your peer mentor give you during a peer mentoring session? Is there anything you found to be useful in the advice that you have received from your peer mentor(s)? Can you tell me more about that? Can you tell me about a session you had with a peer mentor that you felt was particularly valuable for you? Why? Tell me more about that. Was there anything you found that has not been particularly useful to you in the advice you have received? Can you tell me more about that?
4. Can you tell me if there has ever been a particular session that may have been challenging for you? If so, why was it challenging? Tell me more about that. Has there ever been anything that you were uncomfortable talking about with your peer mentor? Tell me more about that. Would you have been more comfortable talking about that with one of the master teachers? Why? Can you tell me more about that? Are there any other topics of issues that you would feel more comfortable talking with a master teacher about than a peer mentor? What are they? Why would you prefer to discuss these things with a master teacher more than with a peer mentor? Can you tell me more about that?
5. Are there any challenges that you have faced in the mentoring process?

Probes: If so, what are they? Why were they challenges for you? What do you think would have helped to overcome any challenges you may have experienced? Can you tell me more about that?

6. A typical session with a peer mentor includes both you and your partner(s). How does that work? In what ways is this helpful? In what ways does it present challenges? (Probe for specifics).
7. Do you think working with a peer mentor impacts your own teaching? How? Give me some examples. Are there any other things you think you've learned? (Probe: Maybe it's not related to teaching?)

Probe: If not, why do you feel that way? Can you tell me more about that?

8. Is there anything else that you want to tell me about your experiences in Step I with your peer mentor(s)?

APPENDIX D
CONNECTIONS TO THE MANUAL

What the Data Showed . . .	Topics Included in the Manual	Pages
Some, but not all, mentors received orientation to procedural expectations and responsibilities.	Procedural expectations and paperwork	8-16
	Responsibilities of mentors	31-35
Mentors needed introduction to the required format for mentoring sessions.	Outline of required elements in tutoring sessions	19-20
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APPENDIX E
MANUAL

UFTeach Peer Mentor Manual

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2012

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*“Mentoring is a
brain to pick, an
ear to listen,
and a push in
the right
direction.”*

John Crosby

WELCOME!

You have been invited to become a part of an important support group in UFTeach – the peer mentors.

With your help UFTeach preservice teachers will learn to teach their students more effectively. This manual is designed to make your job easier by providing all you need to know as you begin your journey as a peer mentor.

Thanks for joining our team!

Using This Manual and Preparing for Your Orientation Session

This manual has lots of information that will help you as a mentor. Your orientation has been divided into two sessions, each lasting a little less than four hours. To get the most out of your mentoring experience, it is important that you come to each session prepared. Below you will find a description of how to prepare for Session I and Session 2.

Session I

1. Complete the Test Your Knowledge about Mentoring pre-assessment on page 8. Record your answers.
2. Go online to the UF College of Education library site and view the video *Mentoring, Guiding, Coaching, and Sustaining Beginning Teachers* (Stenhouse, 2003). Make notes about your thinking related to the following questions as you watch the video:
 - a. “Mentors are effective questioners and active listeners.” What does this statement mean to you?
 - b. Why is reflective practice so important to mentors and mentees?
 - c. Charlotte Jones describes the goals she has for mentoring Andrew, the beginning teacher. What are those goals, and why are they important?
 - d. This video suggests that mentoring does five things that may be important for mentees: provide emotional/professional support, cut the attrition rate for beginning teachers by 50%, provide more instructional strategies, model more effective classroom and school day management skills, and improve student learning. Of these five, pick three and explain why they are so important using examples from the video.

Session 2

1. Go online to the UF College of Education library site and view the video *Feedback and Target Setting* (Teachers TV/UK Department of Education, 2008).. As you watch the video, make notes in your Reflection Journal about effective listening techniques that are discussed in the video. After viewing the video, in your journal write about what you feel are the three most important things that are key to providing good feedback.

3.

TEST YOUR KNOWLEDGE ABOUT MENTORING

Time for This Activity: 15 minutes for Discussion

TRUE, OR FALSE? See how much you know about mentors, what they know, and what they do. Work with a partner to answer the questions and THEN provide a strong rationale and explanation for your answer. We will discuss your answers together as a class.

- _____ A mentor is someone with years of experience to share with someone else.
- _____ Mentors should keep everything having to do with a mentee confidential.
- _____ You have to be a math major to mentor Step I math teams.
- _____ Maintaining eye contact while listening is important.
- _____ Feedback involves praise and constructive criticism.
- _____ In the mentoring relationship reflection is something that the mentee does.
- _____ A mentor should be able to answer each question the mentee asks about teaching.
- _____ The mentor learns about teaching from the mentoring process.

What Do Peer Mentors Do?

Peer mentors fill an important need as they work with UFTeach Step I students. Peer mentors

- model mini-lessons during UFTeach classes.
- prepare materials for lessons and UFTeach classes.
- speak in mathematics and science classes to promote UFTeach.
- read and offer revision suggestions for lessons submitted by teaching teams.
- practice lessons with teaching teams prior to their scheduled teaching time, providing feedback to help them refine their lessons.
- write lessons in collaboration with UFTeach master teachers.

Details about each of the responsibilities are found in the next section.

YOUR RESPONSIBILITIES⁴

⁴ A description of the responsibilities of previous mentors had been communicated orally. This manual is drawn from my knowledge of the program as well as descriptions of mentoring by the participants of the current study to create a comprehensive written description of responsibilities.

Attending UFTeach Classes

You will be asked to attend at least one of the UFTeach classes regularly through the semester as a part of your peer mentor duties. This class will be a Step I or Step I/II Combo class. Your roles include the following:

- Monitor attendance. Notify master teachers and TA's of any absences. Collect any documentation for absences (doctor slips) and give it to the master teachers.
- Teach mini lessons as directed by the master teachers. You will model the parts of the 5 E Lesson Plan during these mini-lessons. Make sure you are prepared with all supplies and materials for teaching the mini-lesson before beginning class.
- Assist master teachers by distributing materials, taking pictures of class activities (as needed), collecting and putting away materials, and straightening up the classroom before leaving.
- Assist students as they write lessons and plan for instruction. Share from your experiences any techniques or strategies that might enhance the lesson. Understand that you should not TELL students what to do. Build their confidence by offering possible ideas and suggestions based on your prior experiences. Praise students for what they have done well, and remember not to overwhelm them by pointing out every little thing that is not done well. Pick one or two key issues that they can address without becoming overwhelmed, and remember to review these with them the next time the class meets to check for progress.
- Remember to record your thoughts about these help sessions in your Reflection Journal. This will help you to review how you conducted the help session, what you and your mentees did, and what you want to ask them about at the next class regarding their goals for improvement.

Keep the Master Teachers in the Loop

- Copy the master teachers each time you respond to emails from mentees. The master teachers need to know what is going on with you and your mentees.
- Make sure that the master teachers are aware of any issues between members of the teaching team, or with any individual member. Remember, the goal is to help Step I students design and deliver an effective lesson. Addressing issues before they escalate will help your mentees be more successful.



Materials and Supplies

- Check with the master teachers two-three weeks before mentees teach their lessons to find out which materials and supplies mentees will need to use for the lesson. Make sure materials are prepared and ready for mentees to use when practicing, and while teaching.
- Practice using the materials yourself before the lesson to be certain you know how to use them and will be prepared to answer any questions mentees might have about them.
- After practice sessions return all supplies to the central storage location so that they are available for others to use during practices.
- Periodically straighten up the materials storage location(s). Notify master teachers if any materials or supplies need to be replenished.



Documentation

You should document that you practiced with your mentees for each lesson using the Practice Session Verification Form (samples are included in this manual). Make sure to turn the form in to a master teacher as soon as possible after practice sessions.

You should use your Reflection Journal to document what occurred during practice sessions, your thoughts and ideas for helping your mentees to become better teachers, and your goals for your learning and teaching.

You should also document your hours each week. Mentors verify their time through PeopleSoft, which is then sent to the master teachers for approval, and then to Payroll so that you can be paid. Make sure to document your time weekly, or you will not be paid.



Promoting UFTeach

From time to time you will be asked to speak briefly to groups of students about UFTeach. The master teachers will set up schedules and let you know where to be and at what times. You generally will speak for about five minutes to these groups.

Some things to remember:

- Smile! Let your audience know that you enjoy being in this program.
- Introduce yourself.
- Tell students a little about your own history with UFTeach. Be enthusiastic. You are selling our program.
- Tell them briefly about the coursework in the minor.
- Explain the field experiences.
- Let them know about scholarship and employment opportunities available to UFTeach students. Check with the master teacher and Dr. Flesner for promotional materials to give to students.

Remember to honor the time you have been given to speak. We want professors to love UFTeach! Therefore, plan for a 5-8 minute presentation. Dr. Flesner has promotional materials to distribute at the end of your presentation. Make sure you have some of these to share. Be sure to thank the professor for allowing you to share with his class. Notify Dr. Flesner by email to confirm that you have spoken to any class.

The Reflection Journal

Research shows that teachers should be reflective about their practice and their learning. Your reflection journal is the place where you will record your thoughts about mentoring and about teaching, ideas and strategies that you want to share with your mentees, goals that your mentees develop so that you can help them to meet them, your own goals for improving your practice, and a record of conversations and the learning that takes place when you meet with other mentors.

As part of your responsibilities as a mentor, you will be required to keep such a journal. Have it with you when you come to Step I classes and when you practice with your mentees and make sure to record things during and after classes, sessions, and mentor meetings so that you have a record of what happened and your thoughts about what happened.

PRACTICE SESSIONS

Watching How It's Done: Mentoring

Time for This Activity: Preparation (45 minutes to view the video) before the session, then 20 minutes (for discussion – Session I)

Research suggests that the role of mentors has changed over the years (Le Cornu, 2005). At one time, mentors were “top-down” managers, telling their mentees exactly what they should do to fix problems. Now, however, many mentors are becoming collaborators with their mentees, helping them to add to their knowledge and skills as teachers, and learning themselves as well in the process. Previous mentors have suggested that they regarded themselves as guides:

“I’m looking for invalid math statements. . . and I’ll. . . ask them. . . ‘How is that true?’ and then [they realize] that’s not true. . . so if they realize it on their own then they’ll be more likely to not make that mistake in class” (Pamela, UFTeach mentor)

“I expect you to be ready to teach the lesson, but you know that’s why are meeting with me, so that we can go over things, so that we can talk about things, using the experience that I’ve had” (Pier, UFTeach mentor)

In preparation for becoming mentors, **you watched** the video *Mentoring: Guiding, Coaching, and Sustaining Beginning Teachers* (Stenhouse, 2003). Using the notes you took as you watched the video compare your answers to the viewing questions with others in your group.

1. “Mentors are effective questioners and active listeners.” What does this statement mean to you?
2. Why is reflective practice so important to mentors and mentees?
3. Charlotte Jones describes the goals she has for mentoring Andrew, the beginning teacher. What are those goals, and why are they important?
4. This video suggests that mentoring does five things that may be important for mentees: provide emotional/professional support, cut the attrition rate for beginning teachers by 50%, provide more instructional strategies, model more effective classroom and school day management skills, and improve student learning. Of these five, pick three and explain why they are so important using examples from the video.
5. What additional questions do you have about mentoring after watching the video?

General Guidelines for Working With Teaching Teams

Time for This Activity: Review (10 minutes – Session I)

When talking about their peer mentors, Step I students talk about the ways that their mentor helps them with planning and with teaching. Intentional planning and developing a clear structure for the mentoring session are important in assuring these positive outcomes for your mentees.

“We asked if we showed [the peer mentor] the comments we had received of how to fix our lesson,. . . maybe he would be able to. . . describe in more detail [for us]. . he gave us suggestions of how we could fix it [that were more clear]” (Stella, Step I student)
“[She told me] ‘This might take too much time, you might want to go and do something totally different, or you might want to make modifications” (Staria, Step I student)

This checklist outlines the procedures for practicing with teaching teams. Use it to plan for your session.

- ___ At the beginning of each semester provide the master teachers with your class schedule and the times that you will be devoting to your responsibilities as a peer mentor.
- ___ Contact teaching teams to confirm their practice time and to determine where the practice will take place. Make sure the location you have chosen is an appropriate one in which to practice their specific lesson (e.g. use the UFTeach lab for science lessons or the study room in the Education Library if you need a Smart board). Remember to reserve your practice spot. Ask what materials or equipment teams may need for the practice session, and make sure materials are available at practice time.
- ___ Prepare for the mentoring session by reading the lesson draft, making note of any revisions master teachers have recommended, and gathering any additional professional resources (for example, if mentees are struggling with classroom routines, seek professional resources related to routines)
- ___ During the practice session, make sure that teams make revisions and include them in their instruction as they practice. Provide help as needed.
- ___ Record your thoughts about teaching strategies you will share with your mentees during the practice session in your Reflection Journal.
- ___ Remember to be careful when giving advice to mentees about the program. You are not an advisor! Direct specific questions to the master teachers.
- ___ After practicing with teams sign the Practice Preparation Form to show that they have practiced with you. Make sure the form is returned to one of the master teachers.
- ___ Remind teams to email their lesson plans to their mentor teachers and to the TA at least two (2) days before teaching if they have not already done so.

___ Return materials and supplies that teams have used while practicing to their proper storage places so that they will be available for the next group to use.

Specific Suggestions For Conducting Practice Sessions

Time for This Activity: 45 minutes (Review Suggestions 15 minutes, discuss Lesson Plan Sample, Things to Consider as You Review Lesson Drafts, and Practice Session Verification Form 30 minutes – Session I)

Strong mentors help their mentees understand how students will respond to a lesson. Petra, a UFTeach mentor, said it this way:

“Mainly what I am looking for when I look at the lessons is just what the students . . . have done and what seems like it could use some more explanation” (Petra, UFTeach mentor)

Mentees explained that their mentors took on the role of student during practice sessions, but also stepped out of that role and offered clear guidance:

“We started talking to her as if she was one of the students, and then at some point during the lesson she topped us and asked us a question about what we were doing . . .” (Steele, Step I student)

“She’ll clarify or she’ll say, ‘Ok, you never really told me. . .you never handed me this worksheet’ or ‘Your need to give them the instructions before you hand them out,’ . . .so just general advice like that but it’s always good to hear [mentors] say it because they’ve been through it. You like to make sure to remember to do stuff that they say” (Stockard, Step I student)

The following is a compilation of suggestions you should consider before, during, and after mentoring sessions. These come from personal observation of previous mentors, suggestions made by master teachers in Step I classes, and comments made by previous peer mentors and mentees.

- Carefully read drafts of the lessons prepared by your mentees before practice sessions. Make notes of ideas you might share. Here are the key points to attend to in each lesson. (A sample lesson plan with revision comments can be found on page 23 along with a commentary on the revision comments the master teacher made on page 33. Use this sample as you think about the key points discussed below.)

Lesson I

- Mentees have written the Engagement and Exploration sections of their lesson plans.
- Make sure that their engagement lasts only five to eight minutes and that it is an engagement, not an active teaching time.
- During the Exploration portion of the lesson, the plan should reflect student inquiry, not active teaching about the topic.

Lesson 2

- Mentees have written the Engagement, Exploration, and Explanation portions of the lesson.
- Make sure that mentees are:
 - reinforcing key vocabulary
 - focusing on the essential questions for the lesson
 - reinforcing the answers to key questions with students
 - correcting any misconceptions that might have occurred during the Exploration portion of the lesson.

Lesson 3

- Mentees have developed the entire lesson. Please be aware that because of time issues, many teams don't get to the Elaboration portion of the lesson, but they are asked to write it anyway so that they can see how a lesson might flow from start to finish.
 - In this lesson, help your mentees to focus on everything from Lessons 1 and 2
 - Make sure that their Evaluation is appropriate for the lesson and covers the performance objectives they chose for the lesson.
- Make sure that teams actually practice the lesson for you. Remember, the whole point is for them to SHOW, not TELL.
- Pretend you are a student in their class, and act accordingly. Do everything you can to make the practice session as real as possible. Use materials just as if you were a student.
- The following questions and suggestions are reminders of ideas you and the mentees have learned from the master teachers in Step I classes. Ask yourself the following questions while watching the lesson, and then help mentees to make corrections or revisions as needed:
- How could this lesson be better?
 - Have students created nametags for their class, and are they addressing students by name?
 - Are students being asked to think critically about the topic through the use of the essential questions for the lesson? Have the mentees posted those essential questions in a prominent place?
 - Are the questions being asked mostly higher-order questions?
 - Are mentees sharing the teaching duties equally?
 - Are mentees speaking slowly and loudly enough?
 - Are mentees using their last names as they refer to each other?
 - Are mentees making use of teaching strategies such as cooperative learning, including small group instruction along with whole group instruction, letting students explore the topic on their own before teaching, deliberately using key vocabulary and making sure students understand the definitions of the vocabulary?

- Are mentees thinking through classroom management issues such as how to handle materials, creating student groups, controlling student behavior and student movement during the lesson?
- Are mentees devoting appropriate time to each component of the lesson?
- Offer suggestions, tips, and techniques that will improve the lesson. You've been through this – share what you know! Help them to remember to use some of the following:
 - Teacher movement in the classroom – make sure they aren't anchoring themselves to a desk or podium at the front of the classroom. Remind them to move around the classroom during the entire lesson.
 - Teacher voice – remind them that every student in the classroom should be able to hear them clearly, so they need to develop a teacher voice to use during instruction (stress that this does not mean yelling, however!). Remind them to engage students through the use of inflection in their voices at various points in the lesson.
 - PowerPoint or Smart board applications, charts, posters – they should use these types of visual aids during the lesson to maintain lesson flow and emphasize important instructions and teaching points.
 - Student names – controlling the behavior in the class is easier if a teacher uses student names. Remind them to make nametags that are easily seen whether students are at their desks or up moving during a lesson.
 - Transitions – the mentees should think carefully through transitions from one part of the lesson to the next so that the lesson flows smoothly from section to section. Help them remember to help students transition by reminding them of how much time is left for an activity and giving explicit instructions (with periodic reminders) for each activity.
- Remind students to email their lessons to their mentor teachers and to the TA for the class at least two days prior to their scheduled teaching time.
- Sign the Practice Session Verification Form saying that your mentees have practiced and are ready to teach.

Sample Lesson Plan:

UFTeach preservice teachers are provided with lesson templates tailored for each lesson. In Lesson I students are required to write the Engagement and Exploration sections of the lesson plan, focusing on questioning. This is an excerpt of Lesson Plan #2. Mentees were asked to complete the Engagement, Exploration, and Explanation sections of the lesson, focusing again on questioning and on teaching during the Explanation portion. Draft revision comments made by a master teacher are in red. The portion of the plan referenced in the comments is highlighted in yellow. In preparation for each practice session, you will review the lesson plan, paying careful attention to the revision comments made by the master teacher. A commentary explaining some of the master teacher's comments has been provided after the lesson to help you think about what might be missing from this lesson plan.

Sample 5E Lesson Plan

Author(s): UFTeach Master Teacher

1. Teaching Partners: Terry Teacher and Tina Teacher
2. Title of Lesson: Tracing Energy within a Food Chains
3. Date of Lesson : Oct. 3-7
4. Length of Lesson: 50 Minutes
5. Grade: 4th grade
6. Source of the Lesson: Adapted from Duval County Public Schools Annually Assessed Benchmark Investigations
7. Concepts: This lesson will introduce the idea that organisms must have a source of energy to sustain their life functions. Students will identify the source of all energy as the sun and other objects as producers (produce their own food, i.e. energy using the energy from the Sun) or consumers (eat other objects for food, i.e. energy). The consumers will be further broken down into herbivores (eat only plants), carnivores (eat other animals), and omnivores (eat both plants and animals). Students will identify the arrows as the directional path the energy flows in a food chain and explain why they are aligned that way. The study of a food chain will be presented as an example of a natural system that science is able to study because we can observe and measure it.
8. State Standards (including cognitive complexity):

Benchmark Number	Benchmark Description
SC.4.L.17.3	Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers. Cognitive Complexity: Moderate
SC.4.N.2.1	Explain that science focuses solely on the natural world. Cognitive Complexity: Moderate

Performance Objectives:

Student will be able to do:

- Trace the flow of energy from the sun through a food chain.
- Trace the flow of energy through examples of 3 different ecosystems (farm, forest, tropical) food chains.
- Identify the characteristics of a producer from a consumer
- Apply the proper use of the terms carnivore, herbivore, and omnivore.
- Demonstrate how science focuses on the study of the natural world

Safety Considerations: none noted

Materials List and Advanced Preparations:

- Copy, laminate, and cut cards into specific ecosystems including labels and arrows
- Copy student engagement and assessments sheets (1 per student)
- Prepare envelopes for each ecosystem and include 10 arrows and labels for producers, consumers, herbivores, carnivores, and omnivores (1 ecosystem per group)
- Chart paper
- Sticky notes

Lesson Plan

ENGAGEMENT		Time: 10 Minutes
What the Teacher Will Do	Teacher Instructions and Probing/Eliciting Questions	Student Responses and Potential Misconceptions
<p>Prepare a set of pictures on sticky notes or chart paper to represent a simple food chain (sun, corn, chicken, person). Write names on each picture. Direct students to individually complete student engagement sheet. Circulate to see what students are writing. Do not correct responses or answer their questions specifically.</p>	<p>I want you to take a look at these pictures as I ask you a few questions.</p> <ul style="list-style-type: none"> • Write down what each picture represents. • Why is each thing important to the other things? • What do these series of pictures represent? • What do the arrows mean? <p>Have them share what they wrote.</p> <p>Now, manipulate the pictures and ask:</p> <ul style="list-style-type: none"> • What would happen to me if I took away the chicken? (remove the picture of the chicken) • What about the corn? (put the chicken back and take away the corn) <p>What about the sun? (put the corn back and take away the sun)</p>	<p>Students will share what is on their sheets. Do not let them add to sheet or change any answers.</p> <p>This is an example of a simple food chain. Listen to what students say to evaluate their background knowledge. Use your findings to guide the rest of the lesson.</p>

<p>Tell them what the goal is for today.</p>	<p>Today we are going to explore the important relationships between organisms. This includes plants and animals. By the end of today's lesson you will be able to build a simple food chain when you are given organisms within an environment, identify their role in the food chain, and trace the flow of energy in the food chain. Do you have any questions?</p>	<p>How do I know which way the arrows go? Is that important?</p> <p>Food chains are easy, we know it all!</p>
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EXPLORATION		Time: 15 Minutes
What the Teacher Will Do	Teacher Instructions and Probing/Eliciting Questions	Student Responses and Potential Misconceptions
<p>Divide the students into groups of 3. Distribute an envelope of organisms within an ecosystem to each group. Make sure that you have at least 2 of each ecosystem but do not have them seated next to one another.</p> <p>Divide ecosystems into producers and consumers and then compare two different ecosystems for similarities and differences.</p> <p>Circulate to observe, listen, and ask probing questions.</p>	<p>I need to know what you will say to the students to make all this happen. When we divide the class, we will randomly count them off to go to a specific table as they enter the classroom, just as Ms. Brady did during our observation.</p> <p>What will you say to them? Maybe: I am going to give you a baggie with some pictures and words in it. I want your group to open your baggie and lay out all the pictures.</p> <ul style="list-style-type: none"> • John, what do you have to do? • Mattie how many words did you find in your bag? <p>Now I want you to find and use the 2 words Producer and Consumer (post those somewhere) and divide your pictures up into those 2 categories.</p> <ul style="list-style-type: none"> • How did you decide what was a producer? • Did everyone in your group agree? <p>We will tell them to separate the organisms into two groups: producers and consumers.</p> <p>All done? Now I want you to look at your neighbors cards.</p> <ul style="list-style-type: none"> • Is it the same as yours? • Do your produces and consumers seem to have anything in common? <p>After the students separate the organisms into what they believe to be producers and consumers, we will compare the different</p>	<p>Students may believe that producers and consumers are “black and white” in a way, when there are gray areas where an organism can be both.</p> <p>[What is being produced is energy in different forms.]</p> <p>[This produced energy they may call it food but you will teach them that science speaks of it as energy when you get to the explanation. is being consumed and transferred through different means.]</p> <p>[Consumers are dependent on producers, and that determines the direction of energy flow.]</p>

	<p>ecosystems with the whole class.</p> <p>What is actually being “produced” by the producers? What is being consumed? What qualities make them similar or different?it is ok to ask these questions but you must NOT TEACH just listen to their answers</p>	
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<p>Do the same but now divide the consumers into herbivores, carnivores and omnivores.</p> <p>Circulate to observe, listen, and ask probing questions.</p>	<p>You fix this section using what I did above as a model. With the correct classifications of producers and consumers, each group of students will be asked to go back and group the pictures into three categories: herbivores, carnivores, and omnivores.</p> <p>After they group the pictures to their knowledge, we will review the answers as a class and say why each picture fits into their category.</p> <p>Move to Explanation</p> <p>Afterwards, we will field any questions they may have. you circulate and answer any questions they have right then as you ask them questions too</p> <p>What have you seen [this animal] eat? What physical qualities does it have that help it eat in this way? What is its native environment?</p> <p>WHEN ARE THEY GETTING THE STUDENT WORKSHEET? IT HAS TO BE BEFORE THEY CONSTRUCT THEIR FOOD CHAINS BUT THERE ARE SOME QUESTIONS THAT THEY COULD BE ANSWERING IN THESE SECTIONS TOO.</p>	<p>Students might confuse the classifications of some organisms such as green algae.</p> <p>[We might find a giraffe eating leaves or other plants.]</p> <p>[The long necks of the giraffes help them reach food higher up on trees.]</p> <p>[Native environments of giraffes include grasslands and savannahs, mostly in Africa.]</p>
<p>Have students construct a food chain in their ecosystem using at least 3 pictures now and place the arrows to show the direction of energy flow. Have them write their food chains in the boxes at the bottom of their student sheet.</p>	<p>Use my model to fix this section too. Make an appointment with me if you need additional help. We will instruct each ecosystem group to come up with at least one possible food chain showing the flow of energy between organisms. We will note to the students that there are many different possibilities and have them try to consider different possibilities as they do the</p>	<p>The students may confuse the ordering of symbiotic animals. They may also point the arrow in the wrong direction, inferring a big animal eats a small animal or vice versa.</p>

<p>Have students construct more than 1 food chain if there is time.</p> <p>Leave enough time for same ecosystems to compare their food chains.</p>	<p>activity. Where are they doing this? (on the paper, on their desks, or both). Once everyone is done with their food chain, we will display how do you plan to do that? and review all of the ecosystems in the class.</p> <p>What makes this a chain? Where does the energy begin and end? Which animal (between two) is higher on the chain? This belongs in the explanation not the explore. You can ask these questions as you circulate when they are making their food chains and listen to how they decided what to put where but DO NOT TEACH IN THIS SECTION</p>	<p>[It is a chain because it originates from a source and transfers throughout the ecosystem.]</p> <p>[It begins in the producers and is continuously transferred in the chain/cycle.]</p> <p>[For example, a bat is higher on the chain than an ant.]</p>
<p>Discuss why a food chain is appropriate and important for science to study even though it is not part of a controlled investigation. I don't see this anywhere in the next column. Understanding how the natural world works is a basic premise for science and is your nature of science benchmark for this lesson and a performance objective.</p>	<p>What activities does energy help us do?</p> <p>We will discuss why energy is important for all living things, and therefore why it is important to understand the flow of energy from one organism to another.it is important that they recognize that energy flows in one direction in a food chain, not that it is important.</p> <ul style="list-style-type: none"> • Which way did your arrows go? • Would they ever go the other way? Why? <p>How do animals in ecosystems other than the ones we've presented interact? Similarly? Start by asking the students if consumers and producers are part of the natural world? Do you think it is important for humans to understand how food chains work? Why?</p>	<p>[Energy is responsible for all of the things we do, which is why it is so important to study.]</p> <p>[Organisms in an ecosystem such as a desert or ocean, interact in similar ways to organisms in the farm, forest, and tropical food chains, because they all have producers who transfer energy to consumers.]</p>

Things to Think About as You Review Lesson Drafts

Comments on Excerpt From the Sample Lesson Plan

This commentary is provided to explain why the master teacher made certain comments on the sample lesson plan. The comments focus on errors that mentees often make as they are writing lesson plans, such as trying to teach without having thought specifically about what they will say, how materials will be managed, how students will move during the lesson, and what types of questions and what level of questions they will be asking. This commentary will help you to think about how you might review lesson plans yourself when asked to do so.

Master Teacher Comment:

“I need to know what you will say . . .” Page 28

The teaching team is being instructed to make their thinking visible on the lesson plan. Very often teams don't think through exactly what they will say as they teach. This will help them to be sure just what they will say and predict how effectively students will be able to divide into their table groups.

“What will you say to them? Maybe: I am going . . .” Page 28

The teaching team is telling, rather than showing, what they will do when they say “We will tell them to separate . . .” The team could think about putting their instructions into a Power Point to be shown on the Smart board. The comment is intended to help them to understand that they must be very specific as they give instructions. The comments are also intended to help the team understand that instruction must be given in increments, not several instructions all at once, since the more specific teachers are in their directions, the better students will respond.

“All done? Now I want you to look at . . .” Page 29

This comment directs students to work cooperatively to determine similarities and differences in the ways the various groups have categorized their pictures.

“When are they getting the student worksheet?” Page 30

The comments here are intended to make the team think about how *they* will manage materials to be used in the lesson (in this case, a worksheet to be used during the lab). Quite often teams do not realize just how much time passing out materials can take.

“Where are they doing this?” Page 31

This comment is intended to make the team think about how *students* will manage materials to be used in the lesson. Thinking ahead about things like this will help the team to be more specific in their directions to students, leading to a much better flow in the lesson.

“I don’t see this anywhere in the next column. . .Understanding how the natural world works . . .” Page 32

This comment is intended to remind the team that what they are teaching should actually align with the benchmark(s) for the lesson, as well as the performance objectives for the lesson.

“Which way did your arrows go? Would they ever go the other way? Why?” Page 32

The master teacher is modeling movement from lower-order to higher-order questions for the team.

Practice Session Verification Form

This form is a program document developed by the master teachers. You will be asked to fill out and sign the bottom portion of this form each time that you practice with your mentees. If you have to have two practice sessions with mentees because you are not satisfied with their lesson, please fill out a second one when you practice with them again. Remember that this is a sample. The master teachers will supply you and Step I preservice teachers with a different form tailored to each lesson. All Practice Session Verification Forms should be returned to a master teacher as soon as possible after the practice session. Please note: You can write on this if necessary. A clean copy has been provided in the Resources section of this manual.

Sample Form

Students will fill out this section:

Teaching Team Names:

Peer Mentor Name:

Date of Practice Session:

Lesson Title:

___ We have met as a team to discuss and to plan for this lesson

___ The concept that this lesson is built around is

The key questions for this lesson are:

___ This lesson meets the following Sunshine State Standards:

___ Examples of three higher-order questions we will ask during our lesson:

___ We need help in the following area(s):

___ We have emailed our lesson to our mentor teacher and to the TA for this class.

Signatures of Teaching Team

The Peer Mentor will fill out this section:

___ The teaching team has been shown how to use equipment and materials for this lesson as needed.

___ The teaching team received my help with the following:

___ Suggestions I made to this team:

___ This team is ready to teach.

___ This team needs another practice session and it has been scheduled for

Signature of Peer Mentor

Reflecting About High-Quality Mentoring Sessions

Time for This Activity: Preparation (15 minutes reading the article and answering questions, then 15 minutes (for discussion – Session 1)

To further your knowledge about things that effective mentors do, **read** the article *What Good Coaches Do*. The questions **below will** help you to think about what you will do as you conduct your mentoring sessions.

Knight, J. (2011). What good coaches do. *Educational Leadership*, 69(2), 18-22.

Answer the following questions in your Reflection Journal as you read the article *What Good Coaches Do*. Be prepared to discuss your answers with the whole group (Session I).

- Knight makes the statement “I . . . have come to believe that how we *think* about coaching significantly enhances or interferes with our success as a coach” (p. 18). What do you think he means by this?
- Knight supports Partnership Principle #1, *Equality*, with the other six Partnership Principals. He notes that *respect* is the foundation of a good partnership. Why is respect so important in a mentoring relationship?
- What does the phrase “When you insist, they will resist” (p. 20) mean to you?
- How would videotaping mentor sessions be helpful?
- Knight quotes Liu (2004): “It’s never one size fits all. It’s one size fits one.” What do you think he means by this in the coaching context?
- One of the previous peer mentors said,
“If I don’t know the answer to something I’ll just run over and ask one of the master teachers. I don’t really mind showing [my mentees] that I don’t know the answer to a question. [I tell them] ‘I’m still in the program as well. . . I’ll make sure I’m saying whether something is an opinion – let them know that they don’t necessarily have to do it the way I suggested it”
(Petra, Mentor)

She is describing what Knight refers to as *partnership feedback*. What is the difference between *top-down feedback* and *partnership feedback*? Which one do you think is more effective? Why?

RELATIONSHIPS

Reflection Activity: Building Relationships Takes Work

Time for This Activity: 15 Minutes – Session I

Read these quotes. Then, in your reflection journal, write a sentence explaining what the words of each mentor or mentee suggest about building good relationships.

“I make sure [mentees] have enough time [to fully practice their lessons]” (Pier, UFTeach mentor)

“I feel like I got very truthful advice” (Stuart, Step I student)

“Whenever I make suggestions verbally during their practice I always put it like, ‘This is your lesson. You’re going to be the one to make the ultimate decision but here’s what I am suggesting’” (Pamela, UFTeach mentor)

“I had been to the first UFTeach [student organization] meeting and I saw her [the mentor] there, and I liked the way that she was presenting herself” (Stephanie, Step I student)

“I think the bottom line is being able to feel comfortable going through the lesson and feeling comfortable talking it over with [the mentor] and being able to get really good feedback, things to work on, maybe if you have some questions to improve your lesson, that’s a big thing” (Stuart, Step I student)



Research tells us that mentoring success depends in large part on the relationships that are formed between mentors and those they work with. You will need to think carefully about how to develop a relationship with those you mentor.

Building Effective Relationships

Time for This Activity (10 minutes for discussion - Session I)

➤ Be trustworthy

“I’m more comfortable talking to her because while she is someone who’s like a senior to me she’s not so much older than me that she’s unapproachable. I feel fairly comfortable asking my peer mentor pretty much anything because I think we’ve built up a good line of communication where I don’t feel stupid asking” (Staria, Step I student)

Mentees need to know that you have their best interests at heart. To help create trust, adopt a welcoming attitude. Spend time getting to know your mentee as a person. Find out what you might have in common with him or her. You are both students, you likely share a field of study, maybe you have other things in common. Ask questions to get to know your mentee, and share information about yourself, including a few of the challenges you faced as you began your journey toward being a teacher. Let your mentee know that it is okay to struggle – struggle stimulates growth. Always act professionally.

➤ Be discrete

Never share personal information you might learn while working with a teaching team with any other students or peer mentors. At the same time, ask for permission to share any issues of concern with the master teachers so that they can quickly work to resolve them.

➤ Be careful

“I think the worst thing you can do is tell [mentees] something wrong, so I try to shy away from that” (Petra, UFTeach mentor)

Know your limitations. Your task is to work with Step I students as they prepare for and teach their lessons. Your suggestions and comments to mentees should be related to lesson planning, content knowledge, teaching strategies, materials usage, and the like. They may ask you for guidance about which courses to take in the minor. Remember that you are not an advisor, and your suggestions may be more harmful than helpful. Refer all such questions to the master teachers.

➤ Be dependable

“We were meeting in the study room in the library here [because the mentees had planned to use a Smart board for instruction, and there is one in that room]” (Pier, UFTeach mentor)

Stay in contact with your mentees. Contact teams to confirm their scheduled practice times. Your mentees are just as busy as you are. Honor their time by answering emails, texts, or phone calls promptly, and being on time for scheduled practices. Be flexible. Be sure to offer some evening or weekend times for practicing. Try to meet in places that are convenient to your mentees, such as libraries on campus, the UFTeach lab, in dorms, or in any other place that is conducive to practicing lessons. Keep the master teachers aware of everything related to the lessons mentees will teach.

➤ Be knowledgeable

“Because I have a pretty good understanding of the lesson, but then hit problem areas that students might find in lessons, so I have to know more than just the lesson. So once I get the lesson down then I’m like, ‘Ok, where are the students going to struggle, or where’s the teaching pair going to mess up or not emphasize enough?’” (Pamela, UFTeach mentor)

Know the concepts that are being presented in the lesson your teaching teams will be teaching. Be sure to read lesson drafts submitted by the teams before you practice with them to familiarize yourself with how they plan to teach the lessons, the materials they will be using, and revision comments that have been made by the master teachers. Help your mentees prepare to revise their lessons by making sure they understand what they are being asked to revise.

Reflection Exercise: Building Effective Relationships

Time for This Activity: 15 minutes (5 minutes writing, 10 minutes discussion – Session I)

Thinking about the video you have watched that showed effective mentoring (*Mentoring: Guiding, Coaching, and Sustaining Beginning Teachers*), and the quotations that you see in this chapter, write a short reflection in your journal about the strategies that mentors use to make their relationships with their mentees effective. How will you incorporate these strategies into your own mentoring practice? Be ready to discuss this with the whole group.

COMMUNICATION

Good Listening Habits

Time for this Activity: 10 minutes discussion – Session I

Peer mentors know that listening is the foundation of strong mentoring.

*“I think I just try to read their face after I tell them [feedback], how they are looking.”
(Petra, UFTeach mentor)*

“I felt like we almost rewrote that lesson, because they had so many [questions]. . . their questions were all over the place, and we just kind of aligned them. . . I give a lot of feedback, [and] they end up making a lot of changes” (Pia, UFTeach mentor)

Peer mentors have mentioned that communication involves both actively listening to what their mentees are saying and careful attention to how they phrase and deliver feedback to those mentees. Here are some good habits for active listening gleaned from research about active listening (Awaya et al., 2002; Boreen & Niday, 2000; Young and Cates, 2004).

- Focus on the speaker. Make eye contact. Good listening cannot be hurried. Take your time to really *hear* what the speaker is saying, both verbally and non-verbally.
- Practice “echoing” or “mirroring what the speaker has said as you check for your own comprehension. Use phrases like, “So I heard you say . . .” or “I understand what you said means . . .” and repeat or paraphrase the speaker’s words.
- Indicate with your body language that you are listening to the speaker. Make eye contact. Relax. Smile. Nod. Sit still.
- *Think* before you speak. What did your speaker say? What is your first response? Decide if it would lead your mentees to feel affirmed or defensive.
- Listen more than you talk.
- Act on what you have heard. Mentees want action that addresses their concerns, not just easy agreement. Find a way to help.

Communication Activity: *How to Talk So Teachers Listen*

Time for This Activity: 45 minutes – Session I

Being a good communicator is essential for mentors, who know that communication is as much about what you say and how you say it as it is about listening.

“It seemed like the comments [made by the master teachers] were ‘we want the nitty gritty of everything you are going to say, every word,’ and then [their mentor] kind of explained it as ‘It’s just we know what you’re saying here but we want to make sure you know what you’re saying,’ . . . So it’s just to make sure that we’re all on the same track” (Stella, UFTeach mentor)

“I think she’s very professional [in her conversations with the mentee]” (Stuart, Step I student)

“You know, in the beginning you have 75% of the control [in the classroom] and they [the students] have 25%. . .and then once you get to the Exploration, it should be them 75% and you 25%. They could be completely leading, you probing. Then it should be 50%-50% for the Explanation. . .” (Pia, UFTeach mentor)

“[I’m learning] how to be a good listener. I like to talk. . .[but] I’ve learned that maybe my idea is not the best idea and their idea either would work just as well even though it’s different, or it could even work better.” (Pamela, UFTeach mentor)

Listening is only one component of effective communication. Mentors need to know how to communicate with mentees so that they will really *hear* what the mentor is saying. You will cooperate with other mentors in the training session to jigsaw the reading of the article *How to Talk So Teachers Listen*, and then discuss how to talk effectively with mentees.

Everyone will read pages 30 and 31 of the article, Then you and a partner will be assigned two of the article sections about effective communication strategies to read and make notes on. During the discussion you will share what you have learned with others who did not read it. As you prepare for that discussion, keep in mind the quotes given above, and how they demonstrate effective talking by mentors.

Watching How It's Done: Feedback

Time for This Activity: Preparation (25 minutes viewing the video and recording a reflection, then 20 minutes for discussion – Session 2)

Previous mentors indicated that learning to give good feedback is a challenge and that they worked to learn how to do it.

“And we want to tell them the same things that the [master] teachers are telling them in their classes, why it’s important and what the point of all this is. . . I also sit down and talk to [mentees after the practice session] ‘Now I really think we’ve got a lot of work to go, this is not ready to be taught.’ So that can be a little challenging because I don’t want to have to be the bearer of bad news.” (Petra, UFTeach mentor)

In preparation for learning to give good feedback, you viewed the video *Feedback and Target Setting* (Teachers TV/UK Department of Education, 2008) and made notes in your Reflection Journal about effective listening techniques. Use your journal entry to discuss what you have written with the whole group.

Giving Effective Feedback to Your Mentees

Time for This Activity: Review (10 minutes)

This advice is a compilation of suggestions made by previous mentors, guidance provided by the master teachers in Step I, the video you have just viewed, and the article *How to Talk So Teachers Listen*. Keep these ideas in mind as you plan for giving feedback to your mentees.

- Give feedback as soon as practice of the lesson is over in a private place so that mentees are comfortable. Don't rush your feedback – it is one of the most important things you will do as mentor. Make sure that you schedule enough time to provide good feedback, or schedule an additional time to conduct your feedback debriefing within one day.
- Put your mentees at ease. Invite them to tell you at the start of the debriefing what they thought went well about the lesson, and then what they would like to improve.. If your mentees begin by telling you all the things they thought went wrong with the lesson, stop them and encourage them again to tell you what went well. Provide encouragement for two or three things that went well, and then invite them to talk about what they would like to improve. If they fail to identify an area you believe could be improved, indicate that your experience suggests they might want to work a bit on [the issue].
- Listen to your mentees. Remember to practice good listening habits. Make eye contact as they speak, watch for non-verbal clues that indicate what they are feeling, make sure your own body language reflects attentive listening.
- Review with them goals they may have set during previous debriefing sessions. Ask if they have anything they would like to work on for the next lesson. If not, give them one or two suggestions of things on which they might focus. Don't overload them with suggestions – too many suggestions can be overwhelming and frustrating.
- Provide your mentees with a written summary of what you have discussed (this can be informal, just jot down items as they come up). This written summary will help them to remember what you have discussed with them, and the goals they have set.

- Remember that Step I students are new to the program and may have only been in the classroom once before (or never!). Help them to make their goals realistic.
- Consider videotaping the practice session or the lesson itself if you have opportunity to see them actually teach the lesson. Then play the tape during the debriefing session, pausing to give encouragement, or suggestions as needed. Video cameras are available in the Supply Room.
- End the session on a positive note. You want them to welcome your feedback, not dread it. Ending the session on a high note can help this to happen.
- Remember to record your thoughts and ideas in your reflection journal after the debriefing is over. This will help you plan for your next mentoring session with them.

Feedback That Fits

Time for This Activity: 45 minutes - Preparation (15 minutes to read *Feedback that Fits* and the vignette, then 30 minutes for discussion - Session 2)

Previous mentors have struggled with how to coach mentees to better performance when the mentor believes that the mentor is making errors. Giving feedback is one of the most challenging parts of coaching. The following vignette has been designed to provoke your thinking about coaching and the provision of feedback.

Read the vignette below and the article *Feedback that Fits*.

Brookhart, S. (2008). Feedback that fits. *Educational Leadership*, 65(4), 54-59.

Alisha arrives at the practice session for Erik and Monique. Because of conflicts in their schedules, Alisha has been unable to meet with them until today, and they will be teaching their lesson tomorrow. Having read their lesson draft in preparation for this session, Alisha noted the comments about the lesson made by the master teacher who reviewed their rough draft: the pair has an engagement that takes almost 20 minutes, and they have written too many low-order recall questions to be used during their lesson. She decides that because time is short, she will only focus on the question issue. She allows the teaching team to run through their lesson, and then begins to provide feedback to them.

Alisha: Good job! How do you think that went?

Monique: I think it went great. You made a really good student – you were able to answer all the questions that we asked. I think the lesson will go fine.

Erik: Yeah. I was afraid that the lesson would take too much time, but we finished practicing it in 35 minutes, and we have 55 minutes to teach it. I think we'll get through everything we should.

Alisha: Mrs. Smith [the master teacher] made several comments on your lesson draft about potential problems with this lesson. But I think we need to focus on the questions. That run-through wasn't bad. But those questions! They're all lower-order questions. You have *got* to use more higher-order questions. Don't you know how to write higher-order questions?

Erik: Yeah. We've been learning how to write them in Step I. But these questions don't take a lot of time, and we want to make sure the lesson doesn't go over 55 minutes. I know the students will know the answers to them, so we can just ask them, and then move on.

Monique: Right. We don't want to make the questions too hard. What if they can't answer them? We'll never get through the lesson.

Alisha: Well, we really don't have time to work on the questions together. Here. I've rewritten your questions. What you wrote isn't all bad, but just use these – they are higher-order questions. I guarantee you the students will be able to answer them. See you later!⁵

⁵ This fictionalized vignette was created to emphasize how providing effective feedback can be a challenge.

Now, answer the questions below in your reflection journal.

Questions: Make notes in response to the following questions in your reflection journal to prepare for discussion with the whole group.

1. Did Alisha follow Brookhart’s suggestion about determining the topic to be discussed in the feedback?
2. Did Alisha use an appropriate mode of feedback? Why or why not?
3. Did Alisha use praise appropriately? Why or why not?
4. According to what Brookhart says in the article, does Alisha describe, or does she judge? What is the difference, and why does this distinction matter?
5. What sort of tone does Alisha use to deliver her feedback? Why does tone matter?
6. Brookhart suggests that feedback should give the student enough information that he or she will know what to do next. Does Alisha provide enough information for Erik and Monique to know what their next steps are? Explain.

Evaluating Feedback Statements

The chart below includes some sample comments a mentor might make in giving feedback. Work with a partner and use the chart below to write a short summary telling what is best about the feedback statements provided (see the chart on page 58 of the article for an example). Be prepared to discuss your summary with the whole group.

Examples of Effective Feedback	
Possible Mentor Comments	What’s Best About This Feedback
Great job, Monique. You have really written some good, higher-order questions. They will help students to think carefully about the lesson.	
Think about the comments made on your lesson draft by the master teacher. There are three things she wants you to work on as you revise your lesson. Which one do you want to start with?	
I see you asked this question, “What do the marbles represent?” What if we changed it to “Why are teeth beneficial? What might happen if we didn’t have teeth?” How does that change the cognitive level of the question?	
I think you are having some trouble coming up with higher-order questions. Here is a good tool to use, the Questioning Template. It provides you with question	

stems that help you to develop good higher-order questions.	
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ROUTINES AND PROCEDURES

Watch How It's Done: Routines and Procedures

Time for this Activity: Preparation (30 minutes for viewing video and reflection, then 15 minutes for discussion – Session 2)

Establishing routines and procedures for in the classroom and throughout the school day is important. Research suggests that this is one of the major concerns of beginning teachers (Ingersoll & Smith, 2004). Because of their own experiences, mentors can be valuable resources as mentees learn to manage student behaviors and movement during instruction.

“I think the first thing I always try to do [is] make sure that they learn. . .the logistics . . .making sure you have everything prepared ahead of time, things cut out, bags ready, grouped in the right groups. And then [I ask] ‘How are you going to do that? Does the teacher already have the classroom set up in a certain way, or how are you planning to pass out [materials]?’ I can warn them about things ahead of time [from my own experiences]” (Pier, UFTeach mentor)

“I think [mentees learn] classroom management they haven’t experienced yet [from mentors]” (Pia, UFTeach mentor)

You will view the video *Classroom Management (Elementary): A Morning with Linda Kasarjian and Her First Grade Class* (Teachers Network) during this session. Afterward, take five minutes to write in your Reflection Journal about two routines that you see the teacher has incorporated into her class. Be prepared to discuss the purpose of these routines and what other important routines you have observed in classrooms.

Practicing Effective Routines and Procedures

Time for This Activity: Review 10 minutes

The following suggestions from Step I coursework and the professional literature about the benefits of using effective routines and procedures in the classroom may be helpful as you debrief with your mentees about their teaching experiences. You may choose to share this handout with them. Remind them that classroom management involves the rituals and routines that they establish for materials management, student behaviors, and classroom movement during activities.

- From Day One let your students know the expectations you have for their behavior at all times. *Tell* them. *Post it* in clearly seen, easily read format, and refer to it each day until they learn it. Then, revisit it periodically, especially if students are not following your expectations
- Model the behaviors you expect for students, let them model for you, and then observe them as they do it alone. Make sure students know you are watching them, and provide positive and explicit feedback when they do it correctly. Specific feedback is best. For elementary students you might say something like, “Nisha is showing me that she is ready to listen by looking at me and sitting up straight.” You use the student’s name, and you name the specific behavior.
- Cue standard procedures through established signals such as flipping the lights or clicking a clicker to signal for attention, thumbs up or thumbs down to indicate agreement or understanding, an upside down cup on the desk that indicates the need for your help, a pencil held up to indicate the need to sharpen it or borrow one that is already sharpened. Using a signal allows for effective, yet non-verbal communication between you and the students, and your instruction can continue without interruption.
- Be consistent with your expectations. Always use the same routines for things like passing papers to the teacher after completing an assignment, lining up, or walking to the right of the sidewalk as you travel to the library, the cafeteria, or the playground.
- If students lapse in their use of the rituals and routines, stop them, go over the expectations you have given them, and have them practice them a few times. Remind them before beginning an activity of the behavior you expect, and the level of voice that is appropriate for the activity. In doing this use a firm but level tone of voice.

- Provide positive feedback to students who are appropriately following a routine. Feedback should be given frequently at first, and then on a diminishing scale as the routine becomes ingrained.

QUESTIONING

Questioning Strategies

Time for This Activity: 15 minutes initial discussion, 10 minutes for Practice What You've Learned, 15 minutes for final discussion – Session 2

Previous UFTeach peer mentors have suggested that questioning is one topic with which almost every mentee needs help. Higher-order questions foster the critical thinking and problem-solving abilities of students.

“Most of them. . .their questioning is not developed. . .they’re very low-level questions . . .you can see the questions that they just sound like [mentees] pulled them from somewhere” (Pia, UFTeach mentor)

There are different cognitive levels in the questions that teachers use during instruction. They range from questions that ask a student to show that he or she remembers something (Recall questions) to questions that ask a student to pick a position and justify that position (Evaluation questions). A teacher may use questions from any or all of the cognitive levels during a particular lesson. The following template may be useful to you and your mentees in creating questions.

Question Template

Recall	
<p>Note: Any question becomes a recall question if the answer has already been explicitly provided to the student in class or in the text.</p> <p>When did _____ take place?</p> <p>List the _____.</p>	<p>Define the term _____.</p> <p>What is a _____?</p> <p>Who did _____?</p> <p>Name _____</p>
Analysis	
<p>How does _____ work?</p> <p>Sort these _____.</p> <p>Use the table to determine _____.</p> <p>Graph _____.</p> <p>What caused _____?</p>	<p>What does _____ symbolize?</p> <p>Find examples of [a literary device] in your reading.</p> <p>Analyze the _____ in _____.</p> <p>Classify these _____ according to _____.</p> <p>Separate the _____ from the _____.</p>

<p>What is another possible cause of ____?</p> <p>Outline the _____.</p> <p>Based on the written description, draw a diagram.</p> <p>Draw your own map of _____ without tracing or copying.</p> <p>Use the map to determine _____.</p> <p>In what sequence did ____ happen? Break _____ down into its component parts.</p> <p>Give an example of _____.</p> <p>What literary form is being used?</p> <p>What technique is being used?</p> <p>Is the information relevant?</p> <p>Into what groups can you organize these?</p> <p>Draw a picture that illustrates what is described in the story.</p> <p>Build a model of _____.</p> <p>Measure _____.</p>	<p>Translate _____.</p> <p>Analyze how _____.</p> <p>Explain how _____ works.</p> <p>What was the author's point of view?</p> <p>How did the author convey _____?</p> <p>What words does the author use to paint an image of _____ in your mind? How were _____ used to _____?</p> <p>What kind of a _____ is this?</p> <p>Which one doesn't belong in this group?</p> <p>What is the function of _____?</p> <p>What is the purpose of _____?</p> <p>What is the relationship between _____ and _____?</p> <p>What is the pattern?</p> <p>Use manipulatives to illustration [a concept].</p>
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Comparison

<p>How is _____ like _____?</p> <p>How are _____ and _____ different?</p> <p>Compare the _____ before and after _____.</p> <p>Compare the character _____ at the beginning of the story and at the end.</p>	<p>Distinguish between _____ and _____.</p> <p>Compare _____ with _____.</p> <p>On what dimensions might you compare _____ and _____?</p> <p>Which one is the biggest/oldest/tallest?</p>
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Inference

Hypothesize what will happen if _____.

Predict what will happen if _____.

Apply the rule to _____.

Solve the problem _____.

Predict how the story _____ will end.

What is the main idea of the story _____?

What is the overall theme of _____?

What is the moral of the story?

Develop a plan to _____.

Propose and describe an invention that fills some need.

Write a research paper on _____.

Based on your reading, what can you conclude about _____?

What was the author's point of view?

Solve a logic puzzle.

What if _____?

What rule applies here?

What generalization can you make from this information?

Create a _____.

Design a _____.

Propose a solution to the problem of _____.

Evaluation

Was _____ worth the cost? Explain your answer.

Was the argument convincing? What makes you think so?

Did _____ behave appropriately? Why?

What would you have done in this situation? Why?

Write a critique of _____.

Was this experiment well-designed? Defend your answer.

Judge which is the best solution to the problem of _____. Why do you think so?

Did _____ choose a wise course of action? Give reasons.

Apply a scoring rubric to this piece of work. Explain why you are assigning each score.

Review a book, performance, or exhibit. Justify your evaluation.

Which _____ is the best? Why do you think so?

Whose arguments/evidence was more convincing? Why?

If you were the judge, what would your decision be? Why?

Give and justify your opinion on _____/

How well are the conclusions supported by the data/facts/evidence? Explain	
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Boonshoft School of Medicine, Wright State University

http://www.med.wright.edu/sites/default/files/aa/facdev/_Files/PDFfiles/QuestionTemplates.pdf

Practice What You Have Learned

Time for This Activity: 30 minutes

Using the Question Template, identify what cognitive level the following questions represent. Use your reflection journal to record your answers. Be prepared to discuss your choices with the group.

1. Ramon just ate his lunch of a peanut butter and jelly sandwich and a carton of milk. Explain the stages that his lunch will go through as he digests what he ate.
2. Of the three garden plots shown, which has the biggest area?
3. List the steps that you went through to solve this problem.
4. Sort these pictures into two categories: Providers and Consumers.
5. Will the rocket go further if we stomp harder on the rocket launcher?
6. Now that you have completed your experiment, do you think it was well-designed? Why?
7. What is the definition of symbiosis?
8. What is a habitat?
9. What caused the soda to spew out of the bottle when you dropped the Mento tablet into it?
10. How are perimeter and area different?
11. What are the process skills in science?
12. Using these tangrams, how would you create the attached picture?
13. Which type of tree would be best to plant in a sunny yard in Florida?
14. What does it mean to make thinking visible. Draw a picture that illustrates the process you used to arrive at the answer to this problem.
15. What are the characteristics of a deciduous tree?

RESOURCES

Peer Mentoring Resource Booklet

<http://www.csun.edu/eop/htdocs/peermentoring.pdf>

This mentoring booklet contains among other things an excellent Self-Inventory of Listening Habits that will help you to gauge your own listening habits and offers suggestions for improving your listening skills. It also contains a list of websites that provide mentoring resources from universities across the nation.

Video: Mentoring: Guiding, Coaching, and Sustaining Beginning Teachers Stenhouse, 2003.

This video is designed for mentors of beginning teachers, but can be useful as you think about your job as a peer mentor for other preservice teachers. It gives good examples of pre- and post-observation conferences that you can use as a model for your own. Be particularly aware of the listening tips. Check out the viewing guide for thought-provoking questions to consider as you watch the video.

Video: Classroom Management (elementary): A Morning with Linda Kasarjian and Her First Grade Class Teachers Network

This video is designed for elementary teachers looking for ways to improve their classroom management, but the skills shown are applicable for teachers of students of any age. Ms. Kasarjian stresses three earmarks of good classroom management: consistency, clear expectations, and routines that are modeled and practiced over and over again so that students are comfortable with them.

Video: *Feedback and Target Setting* Teachers TV/UK Department of Education, 2008

This video was designed, again, for mentors working with beginning teachers. However, there are some good tips for giving effective feedback to those whom you mentor.

Sample Practice Session Verification Form⁶

Students will fill out this section:

Teaching Team Names:

Peer Mentor Name:

Date of Practice Session:

Lesson Title:

___ We have met as a team to discuss and to plan for this lesson

___ The concept that this lesson is built around is

The key questions for this lesson are:

___ This lesson meets the following Sunshine State Standards:

___ Examples of three higher-order questions we will ask during our lesson:

___ We need help in the following area(s):

___ We have emailed our lesson to our mentor teacher and to the TA for this class.

⁶ This is a clean copy of the form provided earlier in the manual. It is included here so that you can make copies of it more easily.

Signatures of Teaching Team

The Peer Mentor will fill out this section:

___ The teaching team has been shown how to use equipment and materials for this lesson as needed.

___ The teaching team received my help with the following:

___ Suggestions I made to this team:

___ This team is ready to teach.

___ This team needs another practice session and it has been scheduled for

Signature of Peer Mentor

SUGGESTED ACTIVITIES FOR ORIENTATION AND
PROFESSIONAL DEVELOPMENT MEETINGS
USING THIS MANUAL

UFTEach Mentor Preparation Professional Development Session Agenda

Session 1 (3 hours, 50 minutes)

Introductions (5 minutes)

Responsibilities of Mentors – Test Your Knowledge About Mentoring, and Review of Responsibilities (15 minutes)

Watching How It's Done: *Mentoring: Guiding, Coaching, and Sustaining Beginning* discussion (20 minutes)

General Guidelines for Working with Teaching Teams – Review (10 minutes)

Specific Suggestions for Conducting Practice Sessions, Sample Lesson Plan, Practice Session Verification Form (45 minutes)

Refreshing Break (10 minutes)

Reflecting About High-Quality Mentoring Sessions discussion (30 minutes)

Reflection Activity: Building Relationships Takes Work Reflection (15 minutes)

Building Effective Relationships discussion (10 minutes)

Reflection and Discussion: Building Effective Relationships (15 minutes)

Good Listening Habits discussion (10 minutes)

Communication Activity: *How to Talk So Teachers Listen* Jigsaw and Discussion (45 minutes)

Session 2 (3 hours, 10 minutes)

Watch How It's Done: *Feedback and Target Setting* Reflection and Discussion (45 minutes)

Giving Effective Feedback to Your Mentees (10 minutes)

Feedback that Fits Partner activity and Discussion (30 minutes)

Watch How It's Done: *Classroom Management: A Morning with Linda Kasarjian and Her First Grade Class* Reflection and Discussion (45 minutes)

Refreshing Break (10 minutes)

Practicing Effective Routines and Procedures discussion (10 minutes)

Questioning Strategies Activity and Discussion (40 minutes)

Teacher's Guide for the Use of the Manual

These are suggested activities for orientation using this UFTeach Peer Mentoring Manual.

Test Your Knowledge about Mentoring

Time for this Activity: 15 minutes

This is a good beginning activity to set the purpose for the orientation meeting with peer mentors. The mentors would work with a partner, or alternatively with a group of three or four, to answer the questions, and then prepare to discuss them with the group.

Methods of Discussion

- Allow participants to choose a partner or partners (triads, quads).
- If the orientation group is small, assign each pair, or group, a number of the questions to discuss as the whole group reconvenes.
- If there are enough peer mentors present for the orientation meeting, have them number off from one to ten, repeating as necessary. Form pairs or groups as before, and have them discuss their answers to all the questions in their pairs or groups. Then, when the whole group reconvenes, each person will provide a report for the whole group of the discussion related to their numbered question (e.g. the person(s) numbered "one" will report to the whole group on the discussion related to the first question, the person(s) numbered "two" will report to the whole group on the discussion related to the second question, and so on.)

Some Elaboration:

- Make learning transparent for mentors by telling the group how you have chosen to group them in pairs, triads, or quads. How to create groups is one of the topics in Step I, and modeling this for the peer mentors will help them to help their mentees to find creative ways to group students.

Preparation for and Conducting of Practice Sessions

Time for This Activity: 30 minutes

Knight, J. (2011). What good coaches do. *Educational Leadership*, 69(2), 18-22.

Summary: This article was chosen because it provides a good discussion of coaching principles that have application to UFTeach peer mentors.

Key Statement: “When coaches and teachers interact equally as partners, good things happen.”

How we *think* about coaching enhances or interferes with our success as a coach.

Seven Principles of Coaching

- Equality – coaches need to be sensitive to how they communicate respect for the teachers with whom they collaborate.
- Choice – coaches position the teachers with whom they work as the final decision makers (fosters change)
- Voice – teachers feel free to express their enthusiasm and concerns. Coaches seek out and act on teachers’ opinions.
- Reflection – coaches as *thinking partners*
- Dialogue – the goal is for the best *idea* (not who thought of it) to win. Freire: dialogue is a mutually humanizing form of communication that involves humility and radical honesty
- Praxis – applying new knowledge and skills
- Reciprocity – eagerly learning from each other

Actions of Good Coaches

- Coaches relinquish power
- Coaches “enroll” teachers, not force them to participate
- Coaches work to build a community of learners in a school (or group of teachers)
- Coaches help teachers to identify their own goals for learning
- Coaches ask clarifying questions and really listen to the answers
- Coaches explain teaching practices clearly, and invite teachers to think about how to use the practices in their own classrooms to the best effect
- Coaches provide feedback by inviting a collaborative exploration of the data that shows what teachers are doing right, and helps them to identify ways that their practice can be improved

Activity:

1. The mentors will read the article *What Good Coaches Do* in preparation for discussion. Mentors should consider their role as coaches as they read.

2. Reflection questions are provided below for mentors to use as they read. Mentors should use their Reflection Journals to record their answers.

Reflection Questions

- Knight makes the statement “I . . . have come to believe that how we *think* about coaching significantly enhances or interferes with our success as a coach” (p. 18). What do you think he means by this?
 - Knight supports Partnership Principle #1, *Equality*, with the other six Partnership Principles. He notes that *respect* is the foundation of a good partnership. Why is respect so important in a mentoring relationship?
 - What does the phrase “When you insist, they will resist” (p. 20) mean to you?
 - How would videotaping mentor sessions be helpful?
 - Knight quotes Liu (2004): “It’s never one size fits all. It’s one size fits one.” What do you think he means by this in the coaching context?
 - What is the difference between *top-down feedback* and *partnership feedback*? Which one do you think is more effective?
3. After mentors have had a chance to read and respond to the questions, the master teacher will select a few questions to discuss further in class.

Communication Activity: How to Talk So Teachers Listen

Activity Time: 45 Minutes

Mentors need to learn to communicate in ways that their mentees will listen. In order to learn to communicate effectively, mentors can familiarize themselves with the strategies of Learning-Focused Consulting taken from the article, *How to Talk So Teachers Listen*.

Lipton, L.; & Wellman, B. (2007). How to talk so teachers listen. *Educational Leadership*, 65(1), 30-34.

Summary: This article was chosen because it provides a discussion of the three “hats” that mentors wear, and how their language reflects those roles.

Key Statement: “[Instructional specialists’] manner of talking can determine whether they’re seen as well-meaning colleagues who dispense advice or teacher leaders who ignite learning.”

Three stances that help coaching by creating a psychologically safe environment, helping to provide a clear focus, and alternately coaching, consulting, and collaborating as the conversation indicates:

- That of a *coach* – inviting the teacher to become a part of a collaborative effort to improve student achievement - “What are some of the things you notice?”
 - Mediating the underlying thinking that drives the observable behaviors of teaching
 - Determine the level of knowledge, experience, and understanding in order to know what stance to use next
 - Can cause frustration if the teacher does not possess the knowledge to be self-reflective and the coach resorts to a “telling” stance
- That of a *consultant* – pointing out potential causes for the problem, and inviting teacher conversation about them – “A few things might contribute to . . . On the basis of what you know about your class, which of these seems most likely?”
 - Thinking aloud about cause/effect
 - Helping the teacher to make connections to new material based on prior knowledge and experience
 - Suggesting solutions
 - Making learning transparent
 - Can cause dependency if coach adopts a “telling” stance, rather than a “showing” stance
- That of a *collaborator* – inviting the teacher to look at student work to determine next steps – “Let’s examine . . . What strategies could you use to help this student to . . .?”
 - Coach and teacher work together to come up with ideas and analyze situations
 - Can degenerate into simply giving advice

The purpose of a coach: To stimulate the exploration of instructional practice, to increase receptivity to new ideas, and to help forge connections between prior knowledge and new initiatives

Skills that sustain collaborating thinking:

- Fully attending to the conversation cognitively, emotionally, and physically (making eye contact and offering other nonverbal acknowledgements)
- Listening to understand the other's perspective
- Purposefully choosing to use exploratory language and a cordial intonation

Establishing a clear focus as a part of a safe environment:

- Use student work as the discussion point (not what the teacher does)

Activity:

1. Everyone will read page 30 and page 31 of the article down to "Making it Safe."
2. Each mentor should select a partner, and then the pair will jigsaw the article. Assign two sections of the article for each pair to read, summarize and report to the group about.
3. After each section, the facilitator should monitor the group as they discuss what has been presented.

Feedback that Fits Activity

Time for This Activity: 45 minutes (15 minutes preparation reading, then 30 minutes for partners to summarize, and discussion)

Mentors will read the article *Feedback that Fits* and the following vignette in preparation for this activity. While this article discusses providing feedback to students, the tips and strategies discussed by the author apply as readily to feedback given in the mentoring relationship. Mentors will respond in their reflection journals to the questions in preparation for a discussion during the professional development meeting.

Brookhart, S. (2008). Feedback that fits. *Educational Leadership*, 65(4), 54-59.

Summary: This article was chosen because of the way it presents feedback as a part of formative assessment.

Key Statement: “Good formative assessment gives students information they need to understand where they are in their learning and develops student feelings of control over their learning.

Effective Ways to Give Feedback

- Determine the level of need – immediate or long-term. Immediate feedback is needed when the learner can't go on without corrective feedback (or will continue doing things wrong, as in an arithmetic problem). Long-term feedback can be given when there is opportunity to observe progress over time and make suggestions for refining the way teachers teach.
- Determine how much feedback to give – ask the teacher what she would like to work to improve, and then offer feedback on that alone.
- Determine if individual or group feedback is appropriate.
- Focus on the work, and not the teacher (this creates a psychologically safe environment). Point out improvement over past performance.
- Use precise language. Deliberately choose words that communicate respect, and a cordial tone of voice. Use language that helps the teacher to come up with next steps, and doesn't simply tell her what to do.
- Continually relate feedback to pre-set goals.

Vignette:

Alisha arrives at the practice session for Erik and Monique. Because of conflicts in their schedules, Alisha has been unable to meet with them until today, and they will be teaching their lesson tomorrow. Having read their lesson draft in preparation for this session, Alisha noted the comments about the lesson made by the master teacher who reviewed their rough draft: the pair has an engagement that takes almost 20 minutes, and they have written too many low-order recall questions to be used during their

lesson. She decides that because time is short, she will only focus on the question issue. She allows the teaching team to run through their lesson, and then begins to provide feedback to them.

Alisha: Good job! How do you think that went?

Monique: I think it went great. You made a really good student – you were able to answer all the questions that we asked. I think the lesson will go fine.

Erik: Yeah. I was afraid that the lesson would take too much time, but we finished practicing it in 35 minutes, and we have 55 minutes to teach it. I think we'll get through everything we should.

Alisha: Mrs. Smith [the master teacher] made several comments on your lesson draft about potential problems with this lesson. But I think we need to focus on the questions. That run-through wasn't bad. But those questions! They're all lower-order questions. You have *got* to use more higher-order questions. Don't you know how to write higher-order questions?

Erik: Yeah. We've been learning how to write them in Step I. But these questions don't take a lot of time, and we want to make sure the lesson doesn't go over 55 minutes. I know the students will know the answers to them, so we can just ask them, and then move on.

Monique: Right. We don't want to make the questions too hard. What if they can't answer them? We'll never get through the lesson.

Alisha: Well, we really don't have time to work on the questions together. Here. I've rewritten your questions. What you wrote isn't all bad, but just use these – they are higher-order questions. I guarantee you the students will be able to answer them. See you later!

Questions: Answer these questions in your reflection journal, and then be prepared make your thinking visible by working with a partner to draw a picture that represents effective feedback, as modeled in the article *Making Thinking Visible*.

1. Did Alisha follow Brookhart's suggestion about determining the topic to be discussed in the feedback?
2. Did Alisha use an appropriate mode of feedback? Why or why not?
3. Did Alisha use praise appropriately? Why or why not?
4. According to what Brookhart says in the article, does Alisha describe, or does she judge? What is the difference, and why does this distinction matter?
5. What sort of tone does Alisha use to deliver her feedback? Why does tone matter?

6. Brookhart suggests that feedback should give the student enough information that he or she will know what to do next. Does Alisha provide enough information for Erik and Monique to know what their next steps are? Explain.
7. Using the chart below, you and a friend will write a short summary telling what is best about the feedback statements provided (see the chart on page 58 of the article for an example).

Examples of Effective Feedback	
Possible Mentor Comments	What's Best About This Feedback
Great job, Monique. You have really written some good, higher-order questions. They will help students to think carefully about the lesson.	
Think about the comments made on your lesson draft by the master teacher. There are three things she wants you to work on as you revise your lesson. Which one do you want to start with?	
I see you asked this question, "What do the marbles represent?" What if we changed it to "Why are teeth beneficial? What might happen if we didn't have teeth?" How does that change the cognitive level of the question?	
I think you are having some trouble coming up with higher-order questions. Here is a good tool to use, the Questioning Template. It provides you with question stems that help you to develop good higher-order questions.	

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BIOGRAPHICAL SKETCH

Katrina Graham Short was born in Marietta, Georgia, and grew up in Jacksonville, Florida. She graduated from Sandalwood Junior-Senior High School. After graduating from high school, she attended Florida Junior College and the University of North Florida, where she graduated in 1977 with a Bachelor of Arts in Literature and in 1991 with a Master of Arts in Secondary English Education. She taught English Language Arts and Reading at Landmark Middle School and Lake Shore Middle School in Duval County, and served as Literacy Coach at Lake Shore. During this time, her love of working with preservice teachers began, and she made the decision to pursue a doctoral degree. In 2006 she graduated with a Specialist in Education in curriculum and instruction from the University of Florida, and in 2012 with her Doctor of Education in curriculum and instruction. She went on to Piedmont College where she was an Assistant Professor of Middle Grades Education.