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## **DEVELOPING NEW TEACHERS' PEDAGOGICAL CONTENT AND RELATIONSHIP KNOWLEDGE (PCRK) DURING A ONE-YEAR URBAN RESIDENCY TEACHER PREPARATION PROGRAM**

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**Developing New Teachers' Pedagogical Content and Relationship Knowledge  
(PCRK) During A One-Year Urban Residency Teacher Preparation Program**

A Dissertation Presented

by

DARYL B. ESSENSA

Submitted to the Graduate School of the  
University of Massachusetts Amherst in partial fulfillment  
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## **DEDICATION**

This would not have been possible without the support, love, and encouragement of my parents, Barbara and James Essensa. They instilled in me a belief that anything was within reach if I wanted it and was willing to work for it. “You can do it, Daryl. Go for it”—I did it, Mom!

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To Beth, thanks for standing by me and deeply loving me. I am ygf!

## **ABSTRACT**

### **DEVELOPING NEW TEACHERS' PEDAGOGICAL CONTENT AND RELATIONSHIP KNOWLEDGE (PCRK) DURING A ONE-YEAR URBAN RESIDENCY TEACHER PREPARATION PROGRAM**

MAY 2022

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This study examined how participation in a full public school year-long urban teacher residency program influenced the perceptions of 17 new middle and high school teacher candidates about the use of affective qualities of learning within their classroom practices as teachers—Pedagogical Content and Relationship Knowledge (PCRK). The preservice teachers in this study explored the relationship between pedagogy and student learning of subject matter through a variety of course-related assignments, which included classroom-based application of the pedagogical strategies learned in coursework, readings, and reflections. Individual interviews were used to evaluate how the course and the assignments influenced the instructional practices of the preservice teachers participating in the study. The study examined how preservice teachers assessed their efficacy for creating a positive learning climate in their classroom by enacting the pedagogical approaches stressed in the clinical teaching seminar course, which was focused on the pedagogical integration of the cognitive and affective learning domains.

The study concluded that the preservice teachers valued developing personal relationships with their students, discovered school culture and mentor teachers as obstacles to implementing student-centered teaching methods, and were pleased with the success of strategies integrating the affective and cognitive domains of learning to teach their subject matter. The researcher is encouraged to continue developing the construct of PCRK and to use the results from this study to explore the development of the pedagogical approach with future preservice teachers.

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## CHAPTER 1

### INTRODUCTION

#### Purpose of the Study

The purpose of this study is to explore the interaction between the affective domain of learning (relationships) and the classroom practices of teacher candidates (pedagogy and content) who are enrolled in a one-year urban residency teacher preparation program. Using a mix of qualitative research methods that includes surveys, focus group interviews, researcher notes, and reflections written for a graduate seminar, the study explored the relationship between preservice teachers' beliefs, values, interests, and attitudes toward subject matter, students, and enacted instructional practices in middle and high school settings. By examining how teacher candidates enact and reflect on pedagogy, content, and relationships in their classroom teaching, the study will contribute to the understanding of how college and university teacher preparation programs might integrate the cognitive and affective domains of learning in teacher candidates' pedagogical growth.

This dissertation proposes a new term, invented by the researcher and called "Pedagogical Content and Relationship Knowledge" (PCRK), as a way for teacher educators to unify the teaching and learning concepts of pedagogy, content, and social-emotional learning within the context of college and university programs designed to prepare and license new middle and high school teachers of English, mathematics, science, and history/social studies. PCRK happens when new teacher candidates integrate their knowledge of teaching strategies and approaches (pedagogy) with their subject

matter knowledge (content) and do so by explicitly building effective teacher/student interactions in the classroom (relationships).

As college and university teacher education programs recognize the integrated nature of pedagogy, content, and relationships (i.e., the nexus of the cognitive and affective domains of learning), new teachers will possess the knowledge, skills, attitudes, and readiness to engage students within successful learning environments in school classrooms.

### **Research Questions**

This topic of investigation was framed by the following research questions:

RQ 1: In what ways do teacher candidates enact pedagogical content and relationship knowledge in their classrooms?

RQ 2: What role does pedagogical content and relationship knowledge have in student learning, from the perspective of teacher candidates?

RQ 3: In what ways does teacher education coursework influence teacher candidates' development of pedagogical content and relationship knowledge?

### **Setting of the Study**

This study was conducted with a cohort of 17 master's degree level middle and high school English, mathematics, science, and history/social studies teacher license candidates who were participants in an educational partnership conducted by a major research university and a mid-size city school district located in the northeastern United States during the 2015-2016 academic year. The teacher preparation program examined in the study can be described as a "residency" model (Guha et al., 2017) of teacher preparation because the program provided each graduate student the opportunity to spend

an entire academic year in a middle/high school classroom. The program has operated in an urban district for the past 25 years.

Much like a residency in medical training, the graduate students in this study were interns supported by experienced and highly skilled secondary educators and teacher education faculty. A series of highly structured school-based practicums allowed for a scaffolded progression of observing, analyzing, and practicing instruction under the guidance of several practitioners. Specifically, the preservice teachers in this teacher preparation program were mentored by several practitioners throughout their field-based practicums, and not just a single classroom teacher. Thereby, these preservice teaching interns received feedback, advice, direction, supervision, counseling, and support from a diversity of seasoned professionals.

The teacher candidates participating in this preparation program were full-time graduate students who earned a 36-credit master's degree while serving as teacher interns. The graduate-level coursework was conducted after the school day has concluded, allowing the teacher candidates a comprehensive experience representing a full-time teacher's performative workday.

This teacher preparation program used a cohort model. The structure of the cohort allows the majority of classes to be open only to members of the cohort with only three classes taken outside the cohort with graduate-level teacher licensure students from similar preparation pathways. One intention of structuring the preparation program as a cohort aims to closely integrate theory with practice.

The coursework is intentionally designed and taught with the teaching context/community in mind. Members of the cohort were teaching and developing their

pedagogical skills within the same context; therefore, curriculum is relevant to the urban milieu and the teacher candidates were not isolated in unique field-based experiences. Consequently, the coursework and in-school experiences served as a system of support for pedagogical growth and learning.

### **Significance of the Study**

Teacher and student beliefs, values, interests, and attitudes comprise the affective dimensions of the classroom. Pedagogical relationship knowledge is the teachers' *enacted* beliefs, values, interests, and attitudes about the purpose for teaching subject matter and results in instruction that supports or does not support student learning of the subject matter and students intellectual and social development. Affective responses to subject matter and instruction vary among students; therefore, teachers must be able to recognize the affective states of their students in order to make adjustments in their instruction that meet both the cognitive and affective needs of their students.

The affective domain of learning is a concept first acknowledged by Bloom (1956) and colleagues. This prestigious group of psychologists, university professors, and psychometricians sought to classify educational objectives defined as "actions, feelings and thoughts students are expected to develop as a result of the instructional process" (Krathwohl et al., 1956, p. 4). Their work to classify the objectives of each of those learning domains resulted in two handbooks, one for the cognitive domain (thoughts) and one for the affective domain (feelings). The third domain (actions/psychomotor) handbook was never written.

The cognitive domain handbook is widely used by modern educators; however, the affective domain never gained the same traction. Student feelings, attitudes and

interests remain on the periphery in research on the work of teachers, the preparation of teachers, and within public education reform initiatives that tend to concentrate on the results of standardized tests. Bloom and his prescient colleagues (Krathwohl et al., 1956) recognized the danger of separating the learning domains for classification.

We should note that any classification scheme represents an attempt to abstract and order phenomena and as such probably does some violence to the phenomena as commonly observed in natural settings...It was evident in our work that, although one could place an objective very readily in one of the three major domains or classes, no objective in one class was entirely devoid of some components of the other two classes. (p. 8)

This important distinction, stated above, was lost almost immediately. Instead of valuing the integrated nature of the learning domains, teachers' pedagogy has become almost entirely predicated and measured by student cognitive gains. The irony is that the originators of the taxonomy noted at the inception of the handbooks, how a lack of integration is counterproductive to student learning. Bloom's team stated:

The authors of this work hold the view that under some conditions the development of cognitive behaviors may actually destroy certain desired affective behaviors and that, instead of a positive relation between growth in cognitive and affective behavior, it is conceivable that there may be an inverse relation between growth in the two domains. For example, it is quite possible that many literature courses at the high school and college levels instill knowledge of the history of literature and knowledge of the details of particular works of literature, while at the same time producing an aversion to, or at least a lower level of interest in, literary works. Clearly there is a need for conclusive experimentation and research on the relations between the two domains. (Krathwohl et al., 1956, p. 20)

Clearly, teachers' instructional practices can honor the connection between thinking and feeling, or it can ignore this reality and thereby diminish student interest for the subject matter and their general attitude toward learning. It is also possible that teachers attempt to honor or honor this integration partially and in various ways.

Another entry point for 20<sup>th</sup>-century educational research came from a team of medical doctors led by James P. Comer of the Yale Child Study Center, tasked to lead an initiative bridging child psychiatry with education. Comer began developing his School Development Program (SDP) model in 1968. By the early 1990s, Comer's SDP schools were recognized as an education program that "builds strong and supportive relationships among students, parents, teachers and administrators by recognizing that they all share the same goal: to help children learn" (National Commission on Children, 1991, p. 203). The major themes emerging from Comer's SDP model showed the importance of long-term collaborative relationships among stakeholders (teachers, administrators, parents, and university researchers); progressive professional development of teachers, understanding that change is a process that takes time and effort; and fundamental change requires new approaches and an openness to learn from mistakes.

The literature on teacher knowledge must explore the pedagogical relationships created by teachers whose instructional activity results in optimal levels of cognition as well as optimal levels of emotional involvement with the subject matter. When teachers' pedagogy attends to both mind and heart, content becomes more relevant to the learner, resulting in deeper understanding and more meaningful engagement in learning activities. Research that explores how teachers learn to merge their instructional practices with both the affective and cognitive domains of learning in mind is essential for teacher education. The dynamic systems of interactions in classrooms should be a focus of research on teacher development and effectiveness (Meyer, 2014).

Scholars from within and outside educational research have acknowledged that emotions are a significant aspect of teaching and student learning, yet preservice teachers

receive little or no training in the principles of affect in learning. Recent findings in the literature revealed how the emotional climate of the classroom impacts student achievement, motivation, self-efficacy and interpersonal skills (Meyer, 2014; Pekrun & Linnenbrink-Garcia, 2014). A body of research that embraces a holistic perspective of what constitutes the knowledge base for teaching is beginning to emerge.

This study will contribute to the limited body of research that seeks to broaden the construct of pedagogical content knowledge (PCK)—teacher expertise in subject matter; see definition in section below) by including teachers’ understanding of how the affective dimensions of the classroom impact student learning in the subject matter classes. This study focused on PCRK, (see definition in section below) teacher decision-making about instructional practices, and how the enactment of those practices are influenced by beliefs, values, interests, attitudes and the teachers' understanding of students' intellectual, developmental, social and emotional learning needs.

### **Definition of Terms Relevant to the Study**

The demands of 21<sup>st</sup>-century education require teacher preparation programs to support teacher candidates in developing a knowledge base that is comprehensive enough to support students’ social and interpersonal competencies (collaboration, critical thinking, innovation, communication, and creativity) within the context of the core subject matter fields of English, science, mathematics and history/social studies.

To achieve the goals of 21<sup>st</sup>-century learning, a new vocabulary of educational terms has emerged, including “Whole Child,” “Pedagogical Content Knowledge,” “School Climate,” and “Social-Emotional Learning.” These terms can be defined as follows:

**Pedagogical Content Knowledge (PCK):** Pedagogical content knowledge is a type of knowledge that is unique to teachers and is based on the manner in which teachers relate their pedagogical knowledge (what they know about teaching) to their subject matter knowledge (what they know about what they teach). It is the integration or the synthesis of teachers' pedagogical knowledge and their subject matter knowledge that comprises pedagogical content knowledge. (National Association for Research in Science Teaching, 2018, para. 4)

**School Climate.** School climate refers to the quality and character of school life.

School climate is based on patterns of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. (National School Climate Center, 2021, para. 3)

**Social-Emotional Learning.** According to the Collaborative for Academic, Social, and Emotional Learning ([CASEL], 2020), “Social and emotional learning is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” (para. 1).

### **Definition of Terms Used in this Study**

**Affect** includes moods, attitudes, preferences, and dispositions. Affective phenomena last for longer durations than emotions.

**Affective dimensions of the classroom** are comprised of teacher and student beliefs, values, interests, and attitudes.

**Affective domain of learning:** The attitudes and values that are developed by students during instruction. Also, the manner in which a student learns—with feelings, attitude, values and appreciation or interest towards subject matter, content, peers, and teacher.

**Classroom climate:** The emotional tones associated with patterns of instructional interaction between students and teacher and between peers; teacher attitudinal and behavioral responses in the classroom. For example, positive classroom

climates can be supportive, inclusive, and empowering. Negative classroom climates can be competitive, punitive, hostile, anxiety-provoking, or alienating.

**Co-Teaching:** In this study, the preservice teachers and their mentor teachers used this specific model (co-teaching) in the student-teaching practicum. The co-teaching model prepares student teachers and their mentors to work collaboratively by co-planning, co-instruction, and co-assessing student learning throughout the entire practicum. This is achieved through training that identifies roles, expectations, and skills in the seven co-teaching strategies. Most importantly, the co-teaching model stresses how to build a professional relationship for effective teaching and learning during the practicum. (Heck, 2015)

**Emotion:** Emotion researchers generally view emotions as short-lived episodes that are evoked by a variety of stimuli. Emotions are considered subjective experiences, that is, they are primarily known to the person experiencing them, hence, emotions are expressed in a variety of ways. Emotions are multi-componential meaning they can be subjective (I am afraid), have avoidance action tendency (I don't want to be here), be expressed physiologically and/or with motor activity (I feel jittery), and can come with appraisals (I am not prepared). (Shuman & Scherer, 2014)

**Pedagogical Content and Relationship Knowledge (PCRK):** PCRK is a framework for understanding teacher decision-making about subject matter-specific instructional practices and how the enactment of those practices are influenced by teacher beliefs, values, interests, attitudes, and teachers understanding of students' intellectual, developmental, and emotional learning needs. PCRK highlights the integrated nature of the cognitive and affective domains of learning and the reciprocal nature between teacher and student beliefs, values, interests, and attitudes toward subject matter.

**Pedagogical Relationship Knowledge in Teaching:** Pedagogical Relationship Knowledge in the classroom is the teacher's knowledge and awareness of the affective dimension of learning and is enacted pedagogically. Teacher relationship knowledge is demonstrated by the affective state of the classroom and is facilitated through instructional activity, student-teacher relationships, and patterns of emotional experience in the classroom (see classroom climate).

**Relational Environment of the Classroom:** This construct honors the complexity of the myriad relationships that students experience in their school contexts and the ways in which classroom environments can both support and inhibit student learning. (Raider-Roth, 2005)

**Student-Teacher Relationships:** Classroom contexts and students' social motivational beliefs can shape relationship quality and motivation to learn in classrooms. How teachers create the quality of relationships through students'

perceptions of the instructional and affective context in the classroom and through student perceptions of teacher support is also part of this dynamic. (Davis, 2003)

**Teacher Residency Program:** Residency programs in teacher preparation are modeled in some distinct ways on the medical profession's residency. Teacher candidates in residency programs follow the same schedule as a full-time teacher under contract in a public school district, for the entire academic year. The extensive practicum experience is the hallmark of a residency model for teacher preparation. The length and intensity of the student-teaching practicum (full-time co-teaching), followed by an additional clinical practicum, where teacher candidates take a lead role (under the guidance of several mentors) in planning, instruction, and assessment in the classroom, allows for "full immersion" in the practice of teaching. Graduate coursework is closely tied to the day-to-day experiences in the classroom, and teacher candidates receive constant feedback and coaching (NYU Steinhart, 2018).

**Whole Child:** An approach to learning that recognizes the demands of the 21<sup>st</sup> century require a paradigm shift in educational policy and practice that redefines what a successful learner is and how that success is measured. It is a balanced approach that posits education is more than just measuring academic achievement. Whole child advocates believe that education should help students learn and practice a healthy lifestyle; provide a physically and emotionally safe learning environment; ensure that every student is engaged in learning and connected to the school and broader community; each student has access to personalized learning and is supported by caring adults and is challenged academically and prepared for success in further study, employment, and participation in a global society. These tenets work together with academic achievement, encompassing a broader definition of accountability.

## CHAPTER 2

### REVIEW OF LITERATURE

This literature review consists of three main parts. The first part offers a historical overview of research on the knowledge base for teaching from 1985 to the present. The second part outlines research into the impact of emotions in classrooms and learning. The final section focuses on psychology's influence on educational approaches and PK-12 schooling.

#### **Part 1—Pedagogical Content Knowledge**

*“Those who can, do. Those who understand, teach.”* (Shulman, 1986, p. 14)

In his 1985 presidential address to the membership of the American Educational Research Association, Lee Shulman proposed a new focal point for researching the nature of teaching and teacher effectiveness. Although he acknowledged the valuable contributions of an extant research base designed to identify teacher behaviors, tasks, and functions most associated with improved student learning, Shulman and his colleagues in the “Knowledge Growth in Teaching” research project noted how the body of literature “ignored one central aspect of classroom life: subject matter” (Shulman, 1986, p. 6). Shulman called the absence of focus on subject matter for the study of teaching as the “missing paradigm” (p. 7). He suggested a new focus in research on teaching that would reflect the connection between teachers’ knowledge of subject matter and the pedagogical methods they chose to implement in their teaching. He believed several questions about teaching had yet to be asked—questions about the actual content of the lessons taught, the questions and explanations offered by the teacher:

Where do teacher explanations come from? How do teachers decide what to teach, how to represent it, how to question students about it and how to deal with problems of misunderstanding? (p. 8).

Shulman (1986) drew attention to the missing paradigm by positing that most research on teaching at the time was focused on general pedagogical competence, such as how teachers manage their classrooms, organize activities, and ascribe blame and praise. Shulman encouraged research to shift away from technocratic perspectives on teaching to a focus on the sources of teachers' subject matter knowledge and how that knowledge "is transformed from the knowledge of the teacher into the content of instruction" (p. 6). Shulman summarized the missing paradigm as the blind spot in existing research on teaching and teacher knowledge. Questions, like those above, led to a call for research that investigated the sources of teacher knowledge and how this knowledge is transformed into skills that facilitate learning in students, in other words, *how knowledge grows in teaching* (Shulman, 1986). For example, when a novice (1-3 years of experience) physical education (PE) teacher is asked to teach content they have never become skilled at or taught before, how does this teacher prepare for student learning? And ultimately how does learning for teaching occur?

Other educational researchers in the mid-1980s (also with the support of the Spencer Foundation) embarked on what Berliner (1986) deemed the second stage of the research base on teacher knowledge by shifting from identifying effective teacher functions (knowing *that*) to asking questions allowing the examination of the nuances of those practices. In other words, how do teachers know *when* to use those functions, *how* to use them, and *why* teachers choose to use them sometimes and not others.

The point...is that a first stage of scientific investigation in a field of inquiry might be judged completely successful if what we learn is merely where to look

further. In the study of teaching over the last 20 or so years, we have moved well into that first stage. But after that stage, it becomes more important to ask different questions about the phenomena that have been identified as worth looking at. (p. 5)

To proceed with a research agenda that asked new questions, Shulman and his colleagues needed to develop a theoretical framework for researching the complexities of teacher knowledge.

### **Defining PCK**

Shulman (1987) reported a theoretical framework that he and his colleagues developed for answering new questions about the nature of teacher understanding. He outlined seven categories comprising the knowledge base for teaching. He codified the knowledge base as follows:

Content knowledge, general pedagogical knowledge, curriculum knowledge, pedagogical content knowledge, knowledge of learners and their characteristics, knowledge of educational contexts, knowledge of educational ends, purposes, and values and their philosophical and historical grounds. (p. 8)

Of special interest was pedagogical content knowledge. Shulman (1987) introduced the construct as “that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding” (p. 8). PCK represents the blending of content and pedagogy into an understanding of how particular topics, problems, or issues are organized, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction.

Shulman (1986) initially conceptualized PCK as one of three components of content knowledge, with subject matter knowledge and curricular knowledge as the other two components comprising content knowledge. He described PCK as subject matter

knowledge *for teaching*, which was a deliberate separation of the subject matter *knower* from the subject matter *teacher*.

I speak of content knowledge here, but of the particular form of content knowledge that embodies the aspects of content most germane to its teachability...the most useful forms of representations of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations-in a word, the ways of representing and formulating the subject that make it comprehensible to others. (p. 9)

Ultimately, PCK became its own construct within Shulman's (1987) framework, demonstrating the sea change occurring in the ways the systematic study of teaching was approached and how the act of teaching was deconstructed. Shulman's PCK construct supported the call for a shift in how the practice of teaching was viewed from a perspective that sees the teacher only as a subject matter expert to one that demonstrates teachers as:

able to comprehend subject matter for themselves, to becoming able to elucidate subject matter in new ways, reorganize and partition it, clothe it in activities and emotions, in metaphors and exercises, and in examples and demonstrations, so that it can be grasped by students. (p. 13)

Put simply, pedagogical content knowledge is the instructional act of transforming subject matter for learning.

In his efforts to create a codified framework for the knowledge teachers' use in their classrooms to teach their students, Shulman (1987) worked to professionalize the act of teaching by outlining the complexities of what it looks like to help students learn. By defining a framework of the knowledge base for teaching, and in particular, introducing pedagogical content knowledge as a new construct in that knowledge base, Shulman distinguished the subject matter expert from the teacher of subject matter. This important separation was meant to push back on the growing criticism of teacher education and the

politically fueled educational reforms calling for alternative routes to teacher training involving less time and on the job training with the recruitment of bright college graduates (Bullough, 2001; Darling-Hammond, 2000; Deng 2007; Grossman, 1990; Shulman, 1987) that claimed teachers need only demonstrate evidence of their subject matter knowledge, their good character, raw intelligence, and their ability to communicate with youngsters in order to qualify for teaching (Berliner, 2000; Grossman, 1989). The construct of PCK pushes back on this conception of teaching by distinguishing those who are mere subject matter “knowers” from those who are subject matter “teachers” (Berliner, 1986; Fernandez-Balboa & Stiehl, 1995; Rovegno, 2003).

Locating pedagogical content knowledge within the political debates surrounding teacher testing and certification, Shulman (1986) made a case not only that teaching requires a substantial, wide-ranging knowledge base but that teachers must know their subject matter in ways that surpass what other subject area experts would need to know—teachers must also possess *pedagogical* content knowledge. (Rovegno, 1994, p. 269, emphasis in original)

Shulman’s (1986) original speech was the impetus for 25 years of research and development on the idea of PCK, maintaining its status as a kind of teacher knowledge that delineates how we separate subject experts from master teachers, since PCK re-examines subject matter knowledge through the lens of student learning (Ben-Peretz, 2011; Grossman, 1990; Grossman & Richert, 1988; Gudmundsdottir, 1987). Shulman and his colleagues’ influential work in the Knowledge Growth in Teaching Project permanently launched pedagogical content knowledge into a commonly accepted construct in the educational lexicon (Gess-Newsome, 1999) and remains of special interest in educational research today.

## **PCK as Theoretical Framework**

Under the guidance of Shulman (1986, 1987), several doctoral students served as researchers for studies conducted by the Knowledge Growth in Teaching Project. Case studies involving both novice and expert teachers in the subject matter disciplines of English, social studies, math, and science comprised the early research on PCK. As evidenced in this literature, researchers focused on improving teacher education and teacher development using Shulman's framework of teacher knowledge, focusing on how teachers acquire PCK. As the project moved forward, the theoretical framework for the study of PCK evolved.

Much of this early research was framed by conceptualizations developed by Shulman and his colleagues (Grossman, 1989; Grossman & Richert, 1988; Gudmundsdottir, 1987; Hashweh, 1987; Marks, 1990;). These theoretical models broke the concept of PCK into knowledge domains that were integrated and then enacted through a teacher's planning and instruction of lessons. Grossman's (1990) conceptual framework of PCK is referenced by most studies on teacher knowledge as the theoretical model of PCK (Chen, 2004; Gudmundsdottir, 1987; Marks, 1990; McCaughtry, 2004; McCaughtry & Rovegno, 2003; Schempp et al., 1998; Tamir, 1988; Tom, 1992).

Grossman's (1990) definition breaks PCK into four components: (1) knowledge and beliefs about the purposes for teaching a subject at different grade levels, (2) knowledge of students' understandings, conceptions, and misconceptions of particular topics in a subject matter, (3) curricular knowledge, and (4) knowledge of instructional strategies and representations for teaching particular topics. According to Grossman's model, the teaching context, a teacher's experience, the level of subject matter

knowledge, and the teacher's training influence these components of PCK. Grossman identified the four "cornerstones" of teacher knowledge as (a) pedagogical knowledge; (b) subject matter knowledge; (c) pedagogical content knowledge; and (d) knowledge of context. A major contribution of this formulation of the knowledge base for teaching is its acknowledgment of the importance of subject-specific knowledge in effective teaching (Gess-Newsome & Lederman, 1999).

It is also important to note that many scholars, (Gess-Newsome, 1999; Grossman, 1990; Hashweh, 2005; Magnusson et al., 1999; Shulman, 1986, 1987; Van Driel et al., 2007) have acknowledged teacher beliefs as a tacit dimension of each domain of teacher knowledge. "When information from any of the knowledge domains is accessed for teaching, that information may be an *amalgam* of knowledge and beliefs" (Gess-Newsome & Lederman, 1999, p. 127, emphasis in original). Therefore, PCK integrates different forms of knowledge, beliefs, and values, all of which are essential to the development of professional expertise (Amade-Escot, 2000).

Since Shulman (1986, 1987) and his colleagues conceptualized the idea of PCK, much has been studied and debated on how it manifests itself in teaching; how scholars define the critical aspects; how it may or may not be different among academic disciplines, and what its implications are for teacher education. Many studies on PCK have appeared in the various subject matter disciplines: mathematics (Ball, 1993; Borko & Livingston, 1989; Foss & Kleinsasser, 1996; Kinach, 2002; Marks, 1990; McDiarmid et al., 1989; Shushua et al., 2004), social studies (Gudmundsdottir, 1990; Gudmundsdottir & Shulman, 1987), science (Abell, 2008; Barnett & Hodson, 2001; Van Dijk & Kattmann, 2007; Hashweh, 1987; Johnston & Ahtee, 2006; Loughram et al., 2004;

Magnusson et al., 1999; Van Driel & De Vos, 1998; Van Driel, et al., 2000), and English (Grossman, 1989, 1990). The focus of the PCK research in all disciplines is comparable in that the studies examined for this literature review were all specifically designed to investigate the influence of subject matter on teaching.

### **Expert/Novice PCK Research in Physical Education**

This section of the literature review will focus on an overview of PCK research that has been conducted in the subject matter field of Physical Education. PE has been chosen for two reasons: 1) a pilot study for this dissertation was conducted with a PE teacher; and 2) insights from PCK research in PE are transferable to PCK research with teachers in other disciplines, including math, science, English/Language Arts, and history/social studies, the subject fields of the participants of the overall dissertation study; and 3) the line of inquiry for PCK research in PE is the same as other disciplines, that is, What do we mean by transformation of subject matter for teaching? And how is pedagogical content knowledge related to knowledge of subject matter?

### **Preservice/Inservice Teacher (Novice/Expert) PCK Research in Physical Education**

Studies comparing expert and novice teachers will be included in the research review to introduce the historical progression and manifestation of the PE research on teacher knowledge and because the expert/novice teacher research is, in many ways, connected to research that is focused more specifically on PCK. The subsequent headings of this section of the literature review will center on extant PCK research in PE in three broad categories: 1) PCK development in preservice teachers, 2) manifestations of PCK for inservice teachers, and 3) expanding the dimensions of the PCK construct within a PE context.

Early studies conducted on teacher expertise in PE were focused on the cognitive and behavioral differences between experienced and inexperienced teachers. This research focused on mirrored studies in teacher expertise conducted outside of PE, comparing how novice and experienced teachers plan (Borko & Livingston, 1989), teach (Berliner, 1986; Borko & Livingston, 1989; Leinhardt & Greeno, 1986), think (Sabers et al., 1991), and reflect (Borko & Livingston, 1989) on their teaching. The expert/novice research paradigm was an attempt to expand the research that previously had been centered on teacher behavior and how it is related to student achievement (Brophy & Good, 1986) to investigations focused on what teachers think. Almost all the expertise literature in teaching is grounded in cognitive theory (Siedentop & Eldar, 1989). In essence, the expert/novice research paradigm attempts to connect teacher thinking to action by examining teacher thinking as it relates to behavior during instruction.

Few expert/novice studies exist in PE and interestingly, of the five studies reviewed, all were comparisons involving elementary level physical educators. Each study used years of teaching experience as the main criterion for considering teachers as experts. Using years of experience in teaching is a starting point; however, over time, experience alone should not be the only criterion used to determine expertise because:

Berliner's seminal article lays out convincingly the reasons for studying expert teachers, yet seems less than satisfactory when specifying criteria for identifying expert teachers. One is confronted immediately with the sticky task of distinguishing between effectiveness and expertise, which is even more confounded when experience is factored in the equation. (Siedentop & Eldar, 1989, p. 254)

Were our veterans [teachers] to be considered expert solely because they were effective and had extensive experience? The terms effectiveness and expertise have been used interchangeably too often. It is our sense that if expertise simply

means *experienced effectiveness*, then that is what it should be called. (p. 255, emphasis in original)

Expert/novice studies in PE may be further flawed by supplementary criteria used to justify teachers as experts, especially because those criteria had little to do with instruction. The expert/novice studies were conducted in a research genre that intended to study teachers' thoughts as they related to action (classroom instructional behavior). The supplemental criteria included: (a) awards/recognitions, (b) recommendation by a principal or other administrator, (c) successful supervision of student teachers, (d) serving in a formal capacity in a state or national professional organization, and (e) presenting conference workshop(s). Although one could argue that many professionals who are considered experts may be involved in any or all of the above, these criteria can also be political, social or seniority-based positions, titles, or accomplishments that have no direct connection to highly skilled teaching/instruction. Therefore, results from these studies may demonstrate clearer examples of effective teachers rather than expert teachers. "Expertise does exist in teaching; however, effectiveness and experience are necessary but not sufficient conditions for demonstrating it" (p. 257).

The expert/novice studies included in this review claim they are comparing experts with novices, but they do not make a strong case for why the teachers in their studies are considered to be experts. For example, one study supported how they analyzed their data by referring to a technique used by cognitive psychologists called the analysis of expertise (Glaser, 1976, in Housner & Griffey, 1985):

In its simplest form, the analysis of expertise is characterized by the examination of the cognitive processes employed by subjects classified as experts and novices in a particular subject-matter domain as they perform domain-specific tasks. (Housner & Griffey, 1985, p. 48)

This same study gave no criteria for “expert” other than they were teachers with “five or more years of teaching experience” (Housner & Griffey, 1985, p. 46). This is problematic because it is too simplistic. In these early attempts to explore expertise in PE teaching, researchers grappled with the difficult task of studying expertise in teaching when concurrently, a definition of expert teaching was beginning to be formulated. Shulman’s (1986; 1987) conceptualization of PCK was precisely an attempt to codify the multifaceted and complex art and science of teaching. At the minimum, these studies helped to differentiate experienced effectiveness from expertise as well as to give a clear depiction of the importance of subject matter knowledge in the development of highly skilled teaching. Their attempts to outline criteria on which to judge expertise, although a limitation, contributed by exposing the thorny undertaking of describing and classifying expertise in teacher research.

Much of the early expert/novice studies appear to assume a naïve interpretation of experience, as if time spent in the position of teacher assures the development of expertise in teaching. There are many other disciplines outside teaching that have researched experts and novices.

Studies conducted on the acquisition of expertise in the arts, sciences, sports, and games suggest that a minimum of 10 years of practice and experience in a domain is necessary to develop elite performance (Ericsson, 1996; French & McPherson, 2004). Furthermore, expert scholars apply the theory of *deliberate* practice to the development of elite performance. Deliberate practice is defined as maximal efforts made to improve performance in a domain through an optimal distribution that limits practice duration to avoid burnout (Ericsson et al., 1993).

In teaching, two models of deliberate practice have been posited. Marzano (2011) applied the construct of deliberate practice to teaching with a framework consisting of four major components: 1) a common language of instruction, 2) a focus on specific teaching strategies, 3) tracking progress, and 4) opportunities to observe and reflect on expert teaching. In other words, deliberate practice requires activities that are designed to improve teaching performance, challenge teachers as learners, and provide feedback (Marzano et al., 2011). The second model of deliberate practice found in teaching is called the *Teaching Cycle*, which has three parts: (1) detailed planning of the process and content of the pedagogical event, (2) careful practice of the planned event, and (3) thoughtful post-event assessment of the process and content. The study in which this model was proposed was a case study of an experienced and successful teacher learning a new teaching method (Paideia Seminar) in her classroom. The study's findings concluded that teaching practice only improves when it takes place consistently within a full Teaching Cycle of deliberate planning, careful practice, and thoughtful assessment (Billings & Roberts, 2006).

Clearly, novice/expert studies in PE appear to conflate *experience* and *expertise*, which is conceptually challenging. Much like the process-product studies that Shulman (1986) claimed were limited in defining the complexities of teaching, these studies give a detailed account of the differences between novice and expert teachers, but they do not necessarily define expertise, nor do they address how expertise in teaching PE develops. For example, Griffey and Housner (1991) demonstrated the differences in how experienced and novice teachers planned and thought about their lessons and how this thinking and planning process resulted in the types of instruction delivered. Results

revealed experienced teachers were more able to mediate lesson activities with a fidelity to the goals for the lesson and attention to the individual characteristics of students. Undoubtedly, some novice/expert studies in PE elucidate what novice teachers lack, therefore providing opportunities to consider how teacher training can address those inadequacies.

Other studies reported teachers in the expert group were not necessarily more effective than those in the novice group. One study (Van der Mars et al., 1995) compared three levels of teachers (novice, competent, and expert), based on years of teaching experience, using five indicators of effective teaching: (1) class time allotted to subject matter motor activities, (2) transition time, (3) academic learning time, (4) student off-task behavior, and (5) percentage of negative feedback. Their study showed that although teachers in the expert group had more advanced thought processes, they did not behave significantly differently from the novice group. The authors concluded that their data support Siedentop and Eldar's (1989) notion of "experienced effectiveness," (p. 255) and that the data indicate that novices can be trained to be at least as effective as those who have been teaching for a number of years.

The expert/novice studies in PE demonstrated that there are critical differences between effective teachers and expert teachers: however, the studies also exposed weaknesses in the research methods employed and leave important questions unanswered: (1) How does expertise in teaching develop? (2) How is expertise in teaching qualified or quantified? (3) How do teachers maintain their expertise? Studies that explore both the development leading to expertise and the characteristics (environmental and personal) that mediate this development are necessary. Much like the

research in the development of expertise in sport, a shift from describing the characteristics and behaviors of elite performers or expert teachers to trying to discover the mechanisms that underlie the development of sport or teaching expertise is needed (French & McPherson, 2004). Agreement on a definition of expert teaching is also required.

Unlike most novice/expert studies in PE that focused on comparisons of teacher thinking and subsequent instructional behaviors, Siedentop and Elder (1989) embraced the complex task of qualifying expertise in PE teaching. They speculated that expertise in teaching does exist and that effectiveness and experience are necessary but not sufficient conditions for demonstrating it.

Expertise is to be found at the nexus of skillful teaching and thorough command of the subject matter. The expert teacher combines high levels of teaching skill with high levels of subject matter competence, both applied through experience to a particular context. In this sense, Shulman's (1986) pedagogical content knowledge is the most appropriate domain for understanding expertise. (p. 257).

Their conclusion supports Shulman's (1986, 1987) PCK construct as a better way to conceptualize the complexities of knowing how to transfer subject matter knowledge through meaningful representations for student understanding. Siedentop and Elder (1989) also encouraged future research to explore beyond cognitive characteristics of expert teaching to inquiry that examines performance and behavior.

We believe expertise is performance oriented. All of the examples of expertise cited by Berliner (1986) and Bloom (1986) were clearly performers. There may be instances when the relevant performance is primarily cognitive, for example the expert literary critic, but we do not believe that the essence of expertise is in the ability to articulate or rationalize performance but rather in the performance itself. Expert teachers perform differently than effective teachers. (p. 257)

A critical finding from the Siedentop and Elder (1989) study was, “at least for the PE specialists, it was the subject matter mastery that was the critical element in expertise” (p. 258). All the teachers in their study were considered effective, but only a few demonstrated expertise, and then, only in one content area of the curriculum. The researchers concluded that the teachers who demonstrated expertise were the teachers who had personal experience in the content through a long history of participation and/or coaching and other training. This observation is congruent with Shulman’s (1987) PCK framework. Shulman posited that teachers must have a rich and thorough understanding of their subject matter to exhibit PCK. (Wilson et al., 1987)

Perhaps the most significant contribution of Siedentop and Eldar’s (1989) examination of expertise, experience, and effectiveness was the strong case they made for shifting the focus of teacher research in PE from delineating effective teachers to examining teachers' PCK and how it is acquired. Their synthesis of expertise, experience, and effectiveness verified the difference between effectiveness and highly skilled teaching. Mastery in teaching is knowing how to transform the subject matter for learning; when to use certain representations to impart those understandings, and why to choose this one, on this day, with this student, and something different the next. Master teachers can perform these tasks with ease or automaticity Bloom (1986). These edicts leave PCK as the more appropriate lens through which to examine teaching expertise.

### **Empirical PCK Research in PE**

#### **PCK Research in PE: Preservice Teachers**

According to You (2011), PE has devoted little effort and attention to research on PCK. Of the limited numbers of studies (18), most have focused on PCK development in

preservice teachers. For example, several case studies have identified problematic aspects of PCK development of novice teachers in PE teacher education. Several of those studies examined PCK development in preservice field-based methods courses and student teaching (Chen, 2004; Jenkins & Veal, 2002; McCaughtry & Rovegno, 2003; Rovegno, 1992, 1993, 1994, 1995; Sebren, 1995; Tsangaridou, 2002).

Rovegno (1994) studied how aspects of school culture were connected to the PCK that emerged and persisted for two student teachers. Both student teachers in the study retreated to a “curricular zone of safety” (p. 278) when faced with the realities of the school context. The zones boundaries defined what and how content was taught, demonstrating how teachers’ pedagogical actions are embedded in the school culture. Although the two student teachers set goals for student learning, the cooperating teachers’ low expectations, the perceived administrative indifference for PE, and the students’ attitudes toward content “brought to salience a zone of curricular safety” (p. 277), that is, the student teachers’ content knowledge existed in the relations among their own individual goals and capabilities, the activity of teaching and the school culture. Therefore, PCK was located in the relations among the individual, the activity of teaching, and the school culture (p. 272).

According to Rovegno (1994), this zone of safety expands and contracts as teachers negotiate ways to represent, structure, and sequence content around what they perceive as manageable ways to teach it. This does not mean that the student teachers made no effort to transform their content for student learning; they just did so within a perceived zone of safety. Thus, the student teachers' opportunity for PCK development was limited by their inadequate entering PCK and the school culture. This study supports

the research outside of PE that indicates the complex nature of PCK as a form of teacher knowledge that is highly topic-, person-, and situation-specific (Abell, 2007; Griffin et al., 1996; Kind, 2009; Van Driel & Berry, 2010, 2012)

PCK is complex because of its integrative nature. PCK is integrative in that it blends the knowledge of subject matter, general pedagogical knowledge, knowledge of how students learn subject matter, instructional strategies, curricular knowledge, and purposes for teaching the subject matter (Grossman, 1990; Gudmundsdottir, 1990; Marks, 1990). Other studies exploring PCK development in novice PE teachers found that their entering PCK was insufficient for instruction based on their understanding of learners. For example, two studies (McCaughtry & Rovegno, 2003; Sebren, 1995) examined how preservice teachers tended to plan lessons beyond the skill level of their students. When the students did not perform at the expected level, the novice teachers blamed the students, citing lack of effort, interest, and attitude as the reasons for poor performance and not because of their own incomplete knowledge and ineffective instruction (McCaughtry & Rovegno, 2003; Sebren, 1995).

This “blaming-students pitfall” (McCaughtry & Rovegno, 2003, p. 366) is of concern for PCK development. The novice teachers had not yet gone “beyond knowledge of subject matter per say [sic] to the dimensions of subject matter knowledge *for teaching*” (Shulman, 1986, p. 9). Results from one of the studies indicated ways of helping novice teachers move from immature PCK to more mature PCK by ensuring that experienced mentors become aware of beginner teacher tendencies to blame students and offer alternative solutions and other explanations for student struggles (McCaughtry & Rovegno, 2003). Both studies demonstrated the importance of mentor teachers and

teacher education faculty in providing interventions that support a beginning teachers' shift from immature (underdeveloped) to mature (developed) PCK (Ayvazo & Ward, 2011; McCaughtry & Rovegno, 2003; Siedentop & Elder, 1989).

Sebren's study (1995) looked specifically at the intervention of guided reflection and its role in preservice teachers PCK development. The reflective process engaged in as part of the student-teaching experience in this study suggests that preservice teachers' learning "progresses from disconnected ideas about classroom management, subject matter and children to more integrated understandings" (p. 279). The interventions in these studies address how teacher educators can help novice teachers "shorten the time it takes for the journey from novice to expert" (Graham et al., 1993, p. 213) within teacher education programs. Even though all novice teachers in the studies experienced shifts in their thinking about tasks in the content of their lessons and their students' developmental skill level, this recognition did not immediately result in a pedagogically appropriate response. These results point to the problematic nature of PCK development in teacher education programs, especially since teacher education faculty have a limited amount of time in which to build the knowledge base of future teachers (Ball & McDiarmid, 1990; Grossman et al., 1989; Jenkins & Veal, 2002; Lortie, 1975).

### **PCK Research in PE: Inservice Teachers**

In the limited number of studies examining inservice or experienced teachers PCK, there were more similarities in the ways PCK was observed by researchers and demonstrated by teachers than differences. One ethnographic case study (Schempp, 1993) focused on an experienced physical educator (16 years teaching) and the sources of his professional knowledge. Similar to empirical research conducted with preservice

teachers, this inservice teacher's daily experience in a high school was bounded by the school's culture. Colleagues, administrators, students, and the daily patterns of school life influenced how the teacher engaged with content, curriculum, and pedagogy. For example, students' expectations for subject matter had a noticeable impact on the teachers' construction and selection of activities and pedagogical practices. This is much like Rovegno's (1994) "curricular zone of safety," (p. 278) a term she used to describe how student teachers' PCK was limited to the boundary determined by what was expected and acceptable in the context in which they taught. Therefore, Schempp's (1993) case study of an experienced PE teacher demonstrated no difference between a veteran teacher and a novice when looking at the influence of school culture. What may be drawn from these findings is the entering level or existing level of PCK a teacher possesses is more powerfully mediated by context and not by how long the teacher has taught.

In Grossman's (1990) conceptual model of PCK, knowledge and beliefs about the purposes for teaching subject matter are foundational to the other components of PCK (knowledge of students, curriculum and instructional strategies) and therefore are supported by the knowledge and beliefs of that teacher. The teacher in Schempp's (1993) study held a strong belief that teachers learned their craft entirely in the practice of teaching. This belief influenced how he mentored a student-teacher, using an apprenticeship of observation approach (Lortie, 1975)—one lacking an exchange of ideas on instructional strategies, curriculum, and student learning, or how content for teaching the curriculum was selected. The mentor teacher assumed the student-teacher already knew, from her K-12 experiences, the content and curriculum of a PE program. In other

words, the teacher believed experience was the real teacher of teachers (Schempp, 1993), resulting in a lack of growth for both of them. It appeared that this teacher's beliefs of how knowledge for teaching PE is constructed severely limited the development of PCK. Much like the novice teachers in Grossman's (1990) study, who believed that classroom experience attributed most to their own acquisition of knowledge, empirical evidence demonstrates the opposite.

A small number of studies compared how subject matter expertise and non-expertise affected the PCK of experienced PE teachers (Ayvazo & Ward, 2011; Schempp et al., 1998). One study focused on 10 middle school teachers who could demonstrate that they had expertise in at least one physical activity area of the curriculum. The study was designed to identify any differences between their teaching of expert and non-expert subject areas. Results revealed teachers teaching subjects they had little or no expertise encountered similar difficulties as novices. When their knowledge of the subject matter was nominal, experienced teachers cited students as the primary cause for learning problems, had difficulties planning and organizing content, and lacked a variety of instructional strategies to meet learners' needs.

In a quantitative study on PCK in PE, Ayvazo and Ward (2011) used functional analysis to examine how the relationship of teacher's pedagogical action, specifically task adaptations, varied between stronger versus weaker instruction units. These researchers discovered that experienced teachers better tailored instruction in their stronger content area by providing more appropriate adaptations than they provided in weaker units. For example, the teachers in the study used multiple task adaptations, tailored specifically to individual student characteristics with greater frequency and appropriateness than in

lesser-known content areas. The variety of adaptations in the stronger units and the resultant correct performances by students demonstrated a more developed PCK compared to the weaker units. Again, these findings suggest that PCK may be less developed by experience than by other factors, such as, in this case, subject matter knowledge, further supporting the dictum that experience does not necessarily equal expertise. As Berliner (1994) indicated, the development of expertise typically requires experience, but there are practitioners in all fields who are experienced but have not achieved the status of expert.

It is our view that expertise is to be found at the nexus of skillful teaching and thorough command of the subject matter. The expert teacher combines high levels of teaching skill with high levels of subject matter competence, both applied through experience to a particular context. In this sense, Shulman's (1986) pedagogical content knowledge is the most appropriate domain for understanding expertise. (Siedentop & Eldar, 1989, p. 257)

The findings from both studies of inservice PE teachers' PCK in stronger versus weaker instructional units (Ayvazo & Ward, 2011; Schempp et al., 1998) are consistent with expert/novice studies conducted within the PE discipline (Graham et al., 1993; Griffey & Housner, 1991; Hastie & Vlasisavljevic, 1999; Housner & Griffey, 1985; Manross & Templeton, 1987; O'Sullivan & Doutsis, 1994; Schempp, 1987; Siedentop & Elder, 1989) and expert/novice studies in other disciplines as well (Borko & Livingston, 1989; Hasweh, 1987; Leinhardt & Greeno, 1986; Leinhardt & Smith, 1985; Livingston & Borko, 1989). All these studies make one thing clear: without adequate content knowledge, effective teaching in all subject matters cannot be guaranteed (Ayvazo & Ward, 2011; Johnston & Ahtee, 2006).

Subject matter knowledge is the basis for the development of PCK; in other words, expertise in teaching cannot develop without the comprehensive understanding, appreciation, and command of subject matter alongside highly skilled pedagogy. According to Grossman's (1990) conceptual framework, subject matter knowledge is not a specific component of PCK, but it is a cornerstone of teacher knowledge. Shulman (1986) deemed the neglect of the centrality of subject matter as the "missing paradigm" (p. 6) in the research on teaching. Shulman (1986, 1987) and colleagues in The Knowledge Growth in Teaching Project conceived that an adequate conceptualization of teaching accommodates the fact that teaching is an interaction between at least three elements: teacher, student, and subject matter (Feiman-Nemser & Parker, 1990; Hashweh, 1987). Shulman (1986) posited:

Where the teacher cognition [research] program has clearly fallen short is in the elucidation of teachers' cognitive understanding of subject matter content and the relationships between such understanding and the instruction teachers provide for students (p. 25).

In Shulman's (1987) PCK construct, there is an underlying assumption that teachers will grasp subject matter at an adequate level, and then, they must understand learners, topic-specific instructional strategies and curriculum in order to teach (transforming content to make it teachable).

Three PCK studies in the PE discipline explored inservice teachers' knowledge of teaching specific subject matter (lacrosse cradle, hand dribbling, and overhand throwing) at grade levels, and its relationship to PCK (Barrett & Collie, 1996; Rovegno et al., 2003; Walkwitz & Lee, 1992).

Barrett and Collie (1996) provided experienced teachers with an 8-hour workshop designed to focus on pedagogical content knowledge specific to lacrosse skills taught to

4<sup>th</sup> and 5<sup>th</sup> grade students. The workshop delivered was first piloted and then scrutinized, refined, and modified until the researchers believed it was a model of teaching methods reflective of mature PCK. This study is the only one of its kind, revealing teachers' PCK by analyzing students' movement patterns in relation to teachers' actions. Their findings suggest that PCK for isolated movement skills (lacrosse cradle) can be delineated by experts and taught to teachers with little or no experience teaching or performing the skill. The workshop design taught lacrosse-specific PCK and "integrated three concepts: developmental sequences, Newell's (1986) notion of constraints, and Halverson's (1966) idea of setting the situation to elicit the desired movement response" (Barrett & Collie, 1996, p. 306).

"This is important because these concepts highlight the importance of task design and make explicit how each aspect of the task has the potential to affect a child's movement response dramatically" (Barrett & Collie, 1996, p. 306). These statements make clear the depth of knowledge necessary and the complexity of high-level PCK needed for teachers to affect motor development. Therefore, teachers' understanding of subject matter needs to be flexible, that is, understanding interactions between the child, environment, and task characteristics (Newell, 1996, cited in Barrett & Collie, 1996) to elicit the desired learning outcomes. The researchers concluded if teachers struggle to teach lacrosse using a PCK-specific model, children's success in advancing their individual skill level will be limited. Although these findings are important, the validity of examining PCK through the lens of students' movement patterns in relation to teacher's actions has not been sufficiently replicated by other studies.

Claiming the extant research had focused on more general characteristics of PCK and expertise, Rovegno et al. (2003) described experienced teachers' *enacted* PCK within a specific content area (hand dribble). The concept of enacted PCK defines the pedagogical, action-based part of knowing subject matter for teaching. In other words, enacted PCK describes the *action* of transforming the subject matter for teaching and learning as observed in praxis. In their study, the accomplished teachers (7+ years in teaching, recipients of state-wide teaching awards, authored papers in professional journals, mentoring student teachers, and serving in leadership positions in professional organizations) consistently connected lesson content (hand dribble) to the broader subject matter (basketball), other content in the overall curriculum, and to the students' lives outside of school. The teachers made connections to help students understand the meaning of lesson content as part of a greater whole, thus presenting content in a context that gave the content meaning (Rovegno et al., 2003). The study authors concluded that the study of experienced and accomplished teachers' PCK can offer the field more specific explications of how teachers transform their subject matter for learning. By examining "knowledge in practice," (p. 444) the researchers made explicit how enacted PCK is indeed an integrated process, "where the teachers paid careful attention to the children's movement, cognitive, and affective responses and intervened, critiqued, gave feedback, and made accurate information and cognitive processes explicit" (Rovegno et al., 2003, p. 445).

The only other study in the discipline of PE to focus on inservice teachers' PCK (Walkwitz & Lee, 1992) has been criticized in the literature for "lack of specificity" (Graber, 2001, p. 496) and lacking fidelity to Shulman's (1987) action-based definition of

PCK mainly because the data collected for analysis consisted of teachers' verbal self-reports on how they taught their lessons and for the teachers' lack of experience and expertise in the domain specific task (Housner, 1992). This study and subsequent criticisms beg the question, just what have we learned from the paltry research on PCK in PE?

### **PCK: Expanding the Construct in PE**

Some of the research on PCK conducted outside of the PE discipline has reconceptualized Shulman's (1987) original framework of PCK. Cochran et al. (1993) emphasized a constructivist view of teaching and learning processes to expand the construct of PCK to something more action-based, renaming PCK as pedagogical content knowing (PCKg). Barnett and Hodson (2001) modified PCK by demonstrating its dependence on the classroom construct, and one of Shulman's colleagues in the Knowledge Growth in Teaching Project (Hashweh, 2005) reconfigured PCK from how it was originally proposed, viewing it as a collection of pedagogical constructions that are acquired when repeatedly teaching a topic. McEwan and Bull (1991) challenged the very core of Shulman's posit that subject-specific knowledge for teaching (PCK) is different from subject matter expertise developed and used outside of pedagogy. The authors rejected Shulman's dualistic theory and propose an alternative: all knowledge is pedagogic (McEwan & Bull, 1991).

In the last decade, the research on PCK in PE has taken a more critical approach of understanding the construct as it applies to teaching and learning in the PE classroom. The initial research literature on PCK in PE was predominantly situated in teacher education. Although this is an obvious and important line of inquiry, it may have limited

the advancement and understanding of PCK and how it develops in physical educators because it focused on: 1) preservice teachers who typically lack mature forms of PCK and 2) studies conducted with inservice teachers mostly outlined the differences between experienced and inexperienced physical educators. As studies revealed the complexity of the development and acquisition of PCK during preservice teacher education, researchers began to explore how experienced teachers acquire, elaborate, and transform their PCK (Tsangaridou, 2006). It has been this line of inquiry that has produced more insight into the topic-, person- and context-specific nature of PCK in PE.

Two scholars have made their own attempts to elaborate new ways to view and understand the PCK construct in PE. One study stands out because it specifically confronts the notion of PCK as a purely cognitive construct. McCaughtry (2004, 2005) proposed that the focus of research on the cognitive nature of PCK in teaching and learning was limiting because it overlooked how teachers' emotional and social knowledge of students interacts with more disciplinary-based thinking and instruction. Results revealed the PE teacher in his case study used her knowledge of students' emotional and social lives, inside and outside of school, to make decisions about content, curriculum, and pedagogy. McCaughtry's studies suggest that Grossman's (1990) conceptualization of the knowledge of student's component of her PCK model may not be broad enough to capture the diverse ways teachers may understand students and the ways that this knowledge can influence their teaching.

The second PE scholar, You (2011), made an effort to define pedagogical content knowledge in physical education (PE-PCK). In her research report, You (2011) explained that most previous studies on PCK rarely identify and clarify how the construct of PCK

(a critical component of teaching expertise) can be applied to specific subject matter disciplines. She claimed that although several scholars have worked on defining PCK (Cochran et al., 1993; Grossman, 1990; Gudmundsdottir, 1990; Hashweh, 2005; Marks, 1990; McEwan & Bull, 1991; Shulman, 1986, 1987), they have not explicitly considered whether there are characteristics or elements of PCK that are unique to individual subject matter disciplines (This could be argued otherwise—see PCK as Theoretical Framework in this literature review). Your research is an exploration of what subject-specific PCK might look like in the PE discipline.

Unlike scholars from other disciplines who integrate their disciplines content within the construct of PCK (Grossman, 1990; Gudmundsdottir, 1987; Hashweh, 1987; Magnusson et al., 1999; Marks, 1990; McCaughtry, 2004; Rovegno & McCaughtry, 2003), You redefined the PCK construct to fit her definition of PE content. You stated, “PE-PCK is an action-based knowledge of how to meaningfully teach intended educational contents in PE so that students could holistically understand, perform, and appreciate physical activity” (You, 2007, p.103). You delineated and briefly defined six components that compose her framework of PE-PCK. Her components appear to mirror the generally accepted model for PCK originally developed by Shulman (1986, 1987) and Grossman (1990).

You (2007) included subject matter knowledge and the purposes for teaching the discipline, curriculum, instructional strategies, knowledge of student understanding, and context as the components in her PE-PCK model. The only component in her framework that does not explicitly line up with the universally accepted framework for PCK is her addition of assessment as a separate component. Although You argued that her

components provided a “visible map of teachers’ professional learning in the area of expertise essential to teaching excellence in physical education” (p. 106), she failed to separate her model from Shulman’s original construct of PCK while concurrently claiming to re-interpret and re-evaluate the PCK construct since it was first introduced in 1987. However, You made an important contribution to the literature by identifying the paucity of research on PCK in PE and the need to make PCK more meaningful and useful to the research and teaching communities in the PE discipline.

### **Conclusion to Literature Review Part 1**

In this section, I started with a historical overview of the origins of pedagogical content knowledge and how it is situated in the body of literature on teacher knowledge. From there, PCK as a theoretical framework for researching teaching was defined and described. Finally, a comprehensive synopsis of the PCK research in PE was broken down into the following subcategories: 1) expert/novice, 2) preservice teachers, 3) inservice teachers, and 4) expanding the meaning of PCK within PE.

As this body of research elucidates, PCK is still an evolving construct, as the very definition has yet to be completely settled (Cochran et al., 1993; Fernandez-Balboa & Stiehl, 1995; Gess-Newsome & Lederman, 1999; Hashweh, 2005; McEwan & Bull, 1991; Van Driel & Berry 2012; Van Driel et al., 2001). The significance of Shulman’s (1987) adopted framework was its signal to educational researchers to conduct studies that made explicit the complexities of teaching. PCK research endeavors to answer the questions: What do expert teachers do and how do they think, act, and facilitate learning in their students?

It is important for researchers to recognize that the research should not end at defining the behaviors and thinking processes of expert teaching. Feiman-Nemser and Remillard (1996) stated, “[T]here is a big difference between *knowing* what effective [expert] teachers do and *understanding how* they learn to do what they do.” The extant research on PCK may have missed this mark. PCK researchers need to examine PCK from the perspective of how it is developed and acted out by teachers. Total knowledge integration is a prerequisite for teaching effectively, as PCK comprises both adequate content knowledge and specific pedagogical skill (Griffin et al., 1996; Rickard & Boswell, 1991; Van Dijk & Kattmann, 2007). Feiman-Nemser and Remillard’s pronouncement is an indication for researchers to shift the current focus of PCK research to studies that address the development and operational aspects of PCK.

The research reveals that PCK is not a concrete teaching skill. It is a highly integrated, multifaceted, and complex process that is action based and is acquired overtime. It can only be developed, not taught. The irony is that Shulman (1987) stated this long ago.

As we have come to view teaching, it begins with an act of reason, continues with a process of reasoning, culminates in performances of imparting, eliciting, involving or enticing, and is then thought about some more until the process can begin again...the goal of teacher education is not to indoctrinate or train teachers to act in prescribed ways, but to educate teachers to reason soundly about their teaching, as well as to perform skillfully. (p. 13)

Researchers need to design studies so that PCK research can be more effective in informing teacher education and practitioner level instruction because understanding how PCK is operationalized in teaching can facilitate the development of expertise for all

teachers, not just those who utilize their time in teaching (experience) in productive (deliberate practice) and therefore effective ways.

### **Literature Review Part 2: Emotion Research**

This section of the review has been organized to intentionally demonstrate 1) the short history of emotions research conducted by teacher educators as well as other educational researchers and 2) how inquiry to emotions in education lacks concentration in any specific methodology, theoretical or conceptual framework, developmental level, for example, elementary, preservice, students, teachers, or by topic. There are very few education researchers who have focused on the affective dimensions of teaching and learning, although, in the short history contained in this review, there are signs that scholarly interest is growing. The review is also organized chronologically because it best demonstrates the nascent nature of this line of inquiry and shows the efforts made by researchers to find common theoretical ground as well as identify various methodological challenges.

This section of the review is organized into four major parts. The first section, “Beginning research on teacher knowledge grounded in the cognitive domain” is focused on the predominate line of inquiry on teacher knowledge conducted in the 1980s. The section illustrates the historical overemphasis on technical efficiency and rationality in schools (Hargreaves, 1994).

In the second section, “Emotions research,” I show how while emotions research blossomed within educational psychology research conducted in the 1980s, little, if any, of that emotions research crossed over to educational scholarship. With the advent of a new decade, emotions research debuted in a special edition of an educational journal as

well as with two studies by scholars (one feminist and the other a sociologist) who started to explore the topic of emotions in teachers' knowledge using Noddings' (1984) seminal work on the theory of caring in teaching as a framework.

The third section is titled, "Stories of hope, caring, and affect in teaching and teacher education." This section details the first significant acknowledgement that the study of emotions in the profession of teaching was a legitimate line of inquiry, no longer marginalized or relegated to a few scholars. This period marks a strong sentiment among researchers that it had become clear that emotions were an integral part of educational settings (Fullan, 1997; Goldstein, 1999; Hargreaves, 1998; Nias, 1996; Noddings, 1996). The title of this section also implies the varied nature of the research conducted on emotions and teaching.

The last section, "Understanding the nature of emotions in educational contexts" is divided into the following sub-sections: 1) teachers' emotional experiences, 2) emotion and student learning, 3) emotion in PE research, and 4) emotion and pedagogical content knowledge. The sub-sections reveal that the research on emotions in teaching and teacher education research has grown in such a way that allows for some categorical structure. For the last decade and a half, there have been more inquiries into the nature of the affective dimensions of not only teaching but learning as well. What is most significant about this most recent body of work, however, is the way it has integrated emotions into teacher knowledge. In the 2000s, researchers interested in teaching and learning in the classroom context could no longer ignore emotional issues. Emotions are intimately involved in virtually every aspect of the teaching and learning process and, therefore, an

understanding of the nature of emotions within the school context is essential (Schutz & Lanehart, 2002).

### **Beginning Research on Teacher Knowledge Grounded in the Cognitive Domain**

“Knowledge of teachers’ emotions is essential in understanding teachers and teaching” (Sutton & Wheatley, 2003, p. 332). According to some education researchers, emotions are fundamental in the act of teaching (Elbaz, 1992; Hargreaves, 1998; Nias, 1996; Noddings, 1992; Rosiek, 2003; Zembylas, 2002a) because the school environment creates a context for a variety of emotional experiences that have the potential to influence teaching and learning processes (Garner, 2010; Hargreaves, 2000; McCaughtry 2005; Rosiek, 2003; Schutz & DeCuir, 2002). However, due to the paucity of research on teaching and emotions, there is surprisingly little known about the role emotions play in teachers’ instruction and in student learning.

Teacher knowledge research developed and grew out of research conducted in cognitive psychology. The research carried out in cognitive psychology stimulated a body of research aimed at understanding how teachers learn to teach (Sutton & Wheatley, 2003). Early research on teacher knowledge carried out by educational psychologists and teacher education researchers was concentrated on the technical performance of teachers’ instruction (Elbaz, 1992; Fenstermacher, 1990; McCaughtry, 2004; Rosiek, 2003). Much of the original teacher knowledge research focused on teachers’ beliefs and attitudes (Calderhead, 1996; Pajares, 1992; Richardson, 1996), teacher behavior and student achievement (Brophy & Good, 1986), student learning and instruction (Shuell, 1986), best practice and essential knowledge for teaching (Clandinin & Connelly, 1996;

Fenstermacher, 1994; Leinhardt, 1990), school effects (Good & Brophy, 1986), teacher reflection (Schon, 1983), and teaching functions (Rosenshine & Stevens, 1986).

Important as each of these teacher knowledge domains is individually, collectively they have led to a preoccupation with the cognitive aspects of teaching (Hargreaves & Tucker, 1991). In the mid-1980s, a shift in teacher knowledge research began when Shulman (1986) noted a “missing paradigm” (p. 6) in teacher knowledge investigations. The missing paradigm was a call for the exploration of how teachers transform their knowledge of a subject for student learning. Although this shift stimulated research questions more attentive to deeply nuanced and richly descriptive inquiry into the multifaceted world of teacher decision-making, the particular line of inquiry remained largely focused on teachers’ cognitively based pedagogical actions.

### **Emotions as a Topic for Research**

Emotions as a topic in the research literature blossomed in the 1980s within the psychology discipline, yet little of that work informed research on teaching (Lewis et al., 2010; Sutton & Wheatley, 2003). Before the publication of the special issue of *The Cambridge Journal of Education* edited by Nias (1996), the topic of emotions in teachers’ professional lives, careers, and classroom behavior was a significantly neglected area in the research on teaching. However, it is important to note that two articles (Elbaz, 1992; Hargreaves & Tucker, 1991) were centered on affective dimensions of teachers work before the special issue was published.

Hargreaves and Tucker (1991) emphasized that research on teacher thinking had been helpful in revealing *how* teachers are cognitively able to understand, perform, and select (or not select) effective instructional behaviors but insufficient in explaining *why*

teachers select and sustain effective behaviors. Hargreaves and Tucker separated teacher knowledge into three domains: 1) cognitive, 2) contextual, and 3) personal. They reasoned that the teacher thinking research (cognitive) had overlooked two of the three domains: the *context* of teaching and the *self* of the teacher. They proposed that teachers sometimes choose not to teach in ways they know they should because of key factors in the context of teaching, that is, how many special education students are mainstreamed in my classroom and what supports do I have to deal with them? There are aspects of the teacher as a person that explain the choices that teachers make. For example, am I comfortable with this new technique and does it fit my personal style?

The paper continues with the presentation of *symbolic interactionism*, an alternative tradition that brings the self and the context together in developing an understanding of teaching.

It is a tradition which, like teacher cognition, also connects mental states to action, but which does so by understanding the person performing the action and by connecting him or her to the motivating or demotivating context in which action takes place. This is a tradition not of teacher *thinking* but of teacher *feeling*. (Hargreaves & Tucker, 1991, p. 492, emphasis in original)

The tradition of symbolic interactionism originates in sociology and social psychology and integrates teachers' actions with the teachers' self and the context within which they teach. In other words, teachers' feeling and teachers' thinking are critical connectors of person, context, and action. In the remainder of their paper, Hargreaves and Tucker (1991) analyzed the relationship between teaching and one of the more frequently experienced negative emotions in teaching—guilt (Nias, 1989). Ultimately, they argued that teachers' feeling as well as teacher thinking should be considered in the efforts to understand *why* teachers choose certain instructional actions over others.

In the second paper, Elbaz (1992) also pointed to the research on teacher thinking as concentrated in cognitive aspects and posits a moral dimension to teachers' knowledge. Elbaz gave several reasons for the absence of research on the moral in teaching: 1) fear that non-cognitive aspects of teaching and learning will be dismissed as anecdotal, 2) the methods necessary to explore the affective dimensions of teachers work requires researchers to employ methods outside of traditional boundaries, and 3) the risk of diminishing the professionalism of teaching by talking about such non-academic constructs, like relationships and caring. Elbaz expressed the purpose of her study as the exploration of thinking that grows out of pedagogical work to see what can be learned from the moral aspects of teachers' thoughts.

Our task in studying and giving voice to teachers' knowledge is not merely one of recognizing and describing this knowledge, but calls for the invention of a language and conceptual categories which will support new ways of talking about teachers' work and thought. (p. 423)

Elbaz (1992), through her study of preservice teachers' written stories, categorizes what she described as the moral dimensions of teacher thinking into three categories; hope, attentiveness, and caring for difference. She described hope as teachers' ability to foster naturally occurring growth in children and welcoming the changes that children experience in their schooling. Attentiveness exists in the details of celebrating the complexities of children's growth and the ability of teachers to notice small details so they can use this information at the right time—sometimes called pedagogical watchfulness. Caring for difference means that teachers remember that they are bound to act in a way that meets difference with fairness and justice. To conclude, Elbaz postulated that all research that considers teachers' work deals with morals and that the study of this dimension of teaching is counter to the technocratic and patriarchal discourse permeating

western culture and its scholarship. She encouraged researchers to “provide a forum within which [the moral] voice may be heard” (p. 431).

In both these early papers, the results of the research presented that teachers’ actions are both cognitively and emotionally driven, that we cannot separate the human from the pedagogy, and how we cannot ignore the context within which teaching occurs. Fenstermacher, an educational philosopher and scholar, takes an even stronger stance than Elbaz (1992) and Hargreaves and Tucker (1991) when he challenged the dominant discourse of the teacher research of the time by describing it as “professionalization literature” (Fenstermacher, 1990, p. 131). He illustrated how the technical treatment of teaching in research and the efforts to expand the knowledge base of teaching to legitimize it as a profession is dangerously misguided.

The rhetoric of the professionalization of teaching is grounded primarily in the knowledge base of teaching, not the moral base. Therefore, it is a rhetoric that clusters around notions pertinent to knowledge, such as expertise, skill, competence, objectivity, validity, and assessment. Yet, as we have seen, these are not the concepts that capture the essential meaning of teaching. Without the specification of the moral principles and purposes of teaching, the concept amounts to little more than a technical performance to no particular point. Just as a physician who has no idea of why or to what end he or she practices medicine or a lawyer who lacks any sense of the rule of law in the just society, a teacher without moral purpose is aimless, as open to incivility and harm as to good. (Fenstermacher, 1990, p. 132)

Fenstermacher (1990) continued his argument by delineating the profession of teaching as unique because, although it is skill-based and requires specific knowledge, it is different from law or medicine since teaching requires that the teacher give his or her knowledge away to the learner, teachers cannot teach well and ignore the many dimensions of the lives of their students, and a reciprocity of effort is required.

The capacity of the teacher for moral development is seriously impaired by the kind of professionalization that is so rooted in expertise and skilled practice that it increases distance between teacher and student, hides needed knowledge from the student, and places the student in the role of passive recipient of skilled treatment. (p. 138)

Although Fenstermacher (1990) was critical of the technical aspect of teacher research, he did not dismiss its value. His writing resembles a more cautionary tale that reflects that in the urgency to professionalize the teaching profession, and the politicized agenda motivating the creation of a knowledge base for the teaching profession, “we may too easily lose sight of the fact that teaching is defined not by the technical skills of its practitioners but by the educative intentions and moral purpose with which [teachers] undertake their work” (p. 139). These influential scholars, along with their writing and research, sparked a renewed effort to examine the affective domain of teaching and learning processes.

### **Stories of Hope, Caring, and Affect in Teaching and Teacher Education**

Beginning in the mid-1990s, several theoretical and research articles began to confront the perceived avoidance of affect in education and claimed an inauguration of a new era in teacher research that promotes a balance between reason and emotion in professional life (Noddings, 1996). Noddings advocated for an increase in the use of stories as a means of enhancing both students’ and teachers’ connections with the subject matter and classroom ecology. She began with examples of how the use of teachers’ stories in educator preparation programs can help preservice teachers explicitly recognize the emotionality of teaching.

Personal stories can enhance theoretical discussions of teaching and remind us of the personal nature of the profession. Although Noddings (1996) advocated using stories

to study the work of teachers, she was careful to note that stories must be told for some purpose. This intentionality is central to teacher learning. Noddings supported the use of stories in teacher preparation programs as a means of revealing what ineffective teaching looks and feels like because she used stories to illustrate how teachers, whose actions are no longer guided by emotions, are unsuccessful because the avoidance of “emotions and viscera” (p. 440) creates instructional apathy and burnout.

Noddings (1996) explained how teachers can use stories to invite an affective response so as to enhance students’ connection to the subject matter. This is important because teacher enthusiasm does not necessarily elicit student excitement, and teachers’ advanced knowledge in a subject does not automatically translate in pedagogically useful ways. Using stories as a tool for exploring a subject’s connection with other subjects, relating to students’ individual lives, and as a way to induce existential questions can deepen both students’ and teachers’ affective relation to the subject matter. However, developing students’ emotional connections to the content under study is not adequate. Teacher affinity for the subject is critical. Noddings stated, “[I]t is likely that, if there is no feeling for the subject in the teacher, there will be none in the student” (p. 441). Noddings purported that teachers, like their students, can experience renewed energy for the subject matter through the use of stories that invite affective responses that are personally relevant, professionally diverse and interdisciplinary, and intellectually stimulating.

Ball and Wilson (1996) examined the relationship between teaching as a knowledge endeavor and teaching as a moral enterprise and concluded that in teaching, concerns for the intellectual, and the moral are ultimately inseparable. Through the stories

of their own teaching experiences, Ball and Wilson demonstrated how knowing students is not limited to understanding their cognition. Through their experiences in deliberating over which instructional strategies and representations were best for helping students understand more abstract concepts, they could not avoid the consideration of how their students were feeling. For example, Wilson's 3<sup>rd</sup> grade students introduced the idea of welfare into a social studies class on state capitals, signifying how their ideas are tied to experiences that have deep affective roots. No curriculum or teacher's subject matter expertise provides training for the caring instruction necessary for navigating what students' assumptions about social services might be.

Ball and Wilson (1996) posited what their personal stories offered. They stated: "Balancing the dual commitment to students and to knowledge is never easy" (p. 134).

They agreed with Fenstermacher (1990) when he explained:

Nearly everything that a teacher does while in contact with students carries moral weight. Every response to a question, every assignment handed out, every discussion on issues, every resolution of a dispute, every grade given to a student carries with it the moral character of the teacher. This moral character can be thought of as the *manner* of the teacher. (p. 134)

As the story told by one of the authors reveals, the moral aspects of teaching is threaded prominently throughout the central decisions of practice (Ball & Wilson, 1996, p. 178).

This is what the moral dimension of teaching means. The authors express that their article is merely an initial foray into the examination of how knowledge and moral merge in practice.

Another study conducted in the mid-1990s makes the argument for epistemological recognition of caring in teaching (Webb & Blond, 1995). These researchers made the case for the acknowledgement of caring as central to what the

teacher knows to extend into educational policymaking, especially policies directed toward teacher development. The argument for epistemological recognition of caring in teaching presented by the authors draws from three fields of research and theorizing: epistemology, teacher knowledge, and caring (Webb & Blond, 1995). Their research is situated among the work of researchers (e.g., see Hollingsworth et al., 1993; Lyons, 1990) who recognize that teaching and learning is a personal and emotional process; therefore, what a teacher knows comes from being in relation with their students. Hollingsworth et al. theorized this as *relational knowing*. Although the researchers recognize Noddings' (1984, 1992) contributions to the notion of caring in teaching and how it informs their theoretical framework, they stated that their epistemological claim for caring in teacher knowledge is more complex.

Webb and Blond (1995) extended theories of the social construction of knowledge (Vygotsky, 1978) to include understanding caring as *knowledge with*, the authors stated, "Our claim is that caring is part of knowing in a teachers' knowledge: The knowing that is *in the relation*" (Webb & Blond, 1995, p. 614. *emphasis in original*). Webb and Blond saw the affective dimension of pedagogy as integrated between the teacher and the student. In their own words, knowing and caring is the "interaction of two sets of knowing, the teachers' and the student's" (p. 614).

The next wave of teacher emotion research came at a time when political and government forces were actively and forcefully calling for educational change and reform. Hargreaves (1998) positions his own and others' research on teacher emotions as work that has "helped elucidate the emotional qualities of teaching, especially those qualities that represent teaching at its best...and counterpose it to more dominant

discourses on educational reform and their preoccupation with knowledge and skill” (p. 836). However, Hargreaves asserted the importance of teacher emotions research that considers how “sociological, political and institutional forces shape and reshape the emotional landscapes of teaching for good or for ill, in different ways under different conditions” (Hargreaves, 1998, p. 836). Regarding the literature that proposes teacher knowledge as both practical and personal, Hargreaves cautioned teachers’ emotions researchers to look beyond the idea that the emotional dimensions of teaching are only a matter of personal and moral choice and to recognize teachers’ emotional commitments to students as situated in the contexts in which teachers work. The idea that context plays a role in instruction alongside the person who is teaching is termed symbolic interactionism, a construct he developed in an earlier paper (Hargreaves & Tucker, 1991).

Despite the lack of attention to context in the research on emotions, Hargreaves (1996) pointed to what he called a second strand of teacher emotion research that actually does address one contextual factor in teaching—gender. Feminist scholar Nel Noddings (1992) articulated the caring orientation that many women teachers embrace in their work, in a profession in which women are numerically but not politically dominate. Hargreaves explained that until recently, most research that included emotional themes tended to be incidental and did not emphasize teachers’ emotions in the context of how their work is organized. The research about teaching within a change-centered and reform-centered educational landscape treats educators as if they “think and act but never really feel” (Hargreaves, 1998, p. 837).

Hargreaves (1998) used a sociological framework from which to observe and analyze how emotions exist in teachers’ relationships with students. His conceptual frame

includes four interrelated points: 1) teaching is an emotional practice, 2) teaching and learning involve emotional understanding, 3) teaching is a form of emotional labor, 4) teachers' emotions are inseparable from their moral purposes and their ability to achieve those purposes. Together, the elements in the framework present a compelling case for conceiving the emotions as central rather than an ephemeral part of teaching and schooling, and therefore worthy of more attention in educational policy and reform (Hargreaves, 1998, p. 841). The study concludes that teaching cannot be reduced to technical competence or clinical standards and calls for definitions of teaching "to come to terms with and embrace the emotional dimensions of teaching and learning" (p. 850).

Goldstein and Lake (1999) argued for the exploration of the affective nature of teacher-student relationships by describing the caring encounters between teachers and students while co-constructing knowledge. Goldstein (1999) observed that Vygotsky and other scholars from a variety of disciplines suggested that the process of cognitive growth is inherently relational. Goldstein used Vygotsky's zone of proximal development (ZPD) to "depict the affective, volitional face of the co-construction of knowledge" (p. 648) and used Noddings' conception of a caring encounter between teacher and student to describe the interpersonal character of the ZPD. Briefly, the ZPD is defined as, "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

In portraying how the ZPD closely resembles a caring encounter, Goldstein (1999) made the effort to broaden the dominant conception of the teaching-learning process as a strictly cognitive process by revealing the role that "affect, volition, and

relationship” (p. 649) maintain in student learning. Goldstein made a strong case for the centrality of affect in cognitive experiences by describing how the ZPD happens in a socially mediated space and suggested that it is formed by the relationship connecting teacher and student.

The teacher and the learner interact to create the zone through a process know as intersubjectivity. Each participant begins any given task with different understandings of the task, and, through a process of negotiation, conversation, compromise, and shared experience, each comes to a new, mutually held understanding. (p. 649)

She argued that making the distinction between cognition and affect is problematic because “there is no thinking without feeling or feeling without thought” (p. 670).

### **Understanding the Nature of Emotions in Educational Contexts**

By far, the new millennium brought an insurgence of emotion-focused literature to the research in education. The idea of teaching as purely a skill-based profession and student learning as merely a cognitive experience is no longer tenable for the study of teaching and learning. Once neglected, the emotional dimensions of teachers’ and students’ educational experiences are now well documented in the literature. For example, the publication of edited volumes on the topic (Schutz & Pekrun, 2007; Schutz & Zembylas, 2009), several special issues in peer-reviewed journals (Efklides & Volet, 2005; Linnenbrink, 2006b; Schutz & Lanehart, 2002; van Veen & Lasky, 2005), research reviews (Garner, 2010; Sutton & Wheatley, 2003), handbooks (Barrett et al., 2016; Pekrun & Linnenbrink-Garcia, 2014), and symposia (e.g., Emotional Processes of Classroom Teacher Symposium, Teachers’ Emotions, Identities, and Beliefs in the Age of School Reform, and Inquiry Into the Research Methods Used in the Study of Emotion

in Education at the 2008 annual conference of the American Educational Research Association).

Although emotions research has proliferated in the past decade, the reader of this literature review may notice that there are a limited number of researchers whose focus is on emotions in educational contexts. There have been a number of reasons noted in the literature as potential reasons for the under-representation, namely, the complexities of measuring something as dynamic as emotions (methodology), Western cultures' adherence to the emotion-cognition binary, and the association of affect as a feminist or women-grounded notion, hence its exclusion from rationalistic and scientific knowledge discourse. The next four sections of this review will outline the theoretical and methodological trends of the current research on emotions in education.

### **Teachers' Emotional Experiences**

Exposing a rationale that sees emotion, cognition, and action as integrally connected, Hargreaves (2000) highlighted the importance of emotions "as a field of inquiry for deepening our understanding of the nature, conditions and consequences of teaching, learning and leading in schools," (p. 811) particularly in the context of educational reform. Hargreaves cautioned researchers of the importance of engaging with the emotional dimensions in education *critically*, and not in romanticized or sentimental ways.

Hargreaves (2000) used four key concepts that emerged from emotions research, as a framework for data analysis. They are as follows: emotional intelligence, emotional labor, emotional understanding, and emotional geographies. The study reported results by comparing elementary and secondary teachers' *emotional geographies*, that is, the

closeness or distance of human interactions and relationships. Hargreaves used the comparisons to support his view that emotional understanding between teachers and students is foundational to achieving more productive academic environments. The results of his research indicate that, although teaching and learning may not be solely emotional practices, they are always emotional in character, in a good way or bad way, by design or default because emotions are embedded and expressed in human interactions and relationships (p. 812). Emotional understanding is a necessary component for improved performance among students and the adults working in schools, and emotional understanding can be enhanced or undermined by what the school expects of teachers emotionally and how teachers expect themselves to be emotionally. Thus, organizational conditions and professional expectations that increase emotional understanding among teachers and their students create conditions for achieving high standards.

Zembylas (2004) explored the emotional characteristics of teaching through a 3-year ethnographic study of one elementary school teacher. Zembylas's findings emphasized how emotions are a sociocultural construction, thereby in agreement with Hargreaves's (2000) assertion that teachers' emotions are not just private or personal dispositions but are "constructed in social relationships and systems of values in their families, cultures and school situations" (Zembylas, 2004, p. 186). The study questioned how teachers construct emotions about pedagogy and self and how those emotions influence teaching. Zembylas did so with the intention of identifying emotional characteristics needing further investigation in the research and not with the purpose of generalizing. Findings revealed evidence for three characteristics of emotions in teaching: evaluative, interpersonal, and political. What is most significant about his findings is the

emphasis he placed on how each of the characteristics is related to the other, therefore, “to understand an emotion, it is necessary to look at a personal experience in an integrated and comprehensive manner” (p. 191).

My concern is to avoid treating each aspect as independent of the other aspects and to emphasize how our knowledge about the experience and communication of teachers’ emotions is constructed within a particular social and political context. (p. 191).

His case study indicates how school organization and culture enables and shapes teachers’ emotional experiences. The teacher in the study used these emotional experiences to initiate changes in her pedagogy (evaluative), how teaching will take place and what is taught to students (relational) and in deciding how she negotiated the accepted emotional rules within her teaching context (political). Zembylas (2004) concluded that

Acknowledging the power of emotions enables teachers to better transform their relations to their students and to the subject-matter itself so that they can create emotional connections with students...providing a dynamic process for subverting the dismissability that teachers often feel about their abilities to teach effectively (p. 199).

Zembylas continued this line of inquiry by collaborating with a P-12 teacher to further explore the emotionality of teaching. Isenbarger and Zembylas (2006) conducted a 2-year action research study to explore the emotional labor of one teacher’s caring approach in creating an inclusive classroom. As noted earlier in this review, Hargreaves (1998) contended that teaching is a form of emotional labor and used this construct as one of four interrelated points in his conceptual frame for studying emotions in teacher-student relationships.

The construct of emotional labor was developed by Hochschild (1983), a sociologist and researcher. Hochschild defined emotional labor as enhancing, faking, and/or suppressing emotions to modify one's emotional expression. Zembylas (2002b) and Hargreaves (1999) operationalize the construct in the following manner, "When emotions are underplayed, overplayed, neutralized or changed according to specific emotional rules and in order to advance educational goals, teachers perform emotional labor" (Isenbarger & Zembylas, 2006, p. 122). Isenbarger and Zembylas situated teachers' performance of emotional labor within Noddings' (1992) conception of caring in teaching and posited that emotional labor is related to a teacher's professional and philosophical stance about the role of caring in teaching and learning. They concluded that the analysis of the data from their study showed that emotional labor is an "inextricable part of caring teaching" (Isenbarger & Zembylas, 2006, p. 132). They also claimed that their view of caring in teaching differed from Noddings' because the results show that caring can be both an approach and an emotion, "and as such, it requires not only love but also labor" (p. 132).

This collaborative research extends the concept of caring as a form of emotion in teaching by acknowledging how teachers, in the act of caring, can be liberated as much as they can be alienated. They point to how teachers' performance of emotional labor, that is, caring in teaching, is an emotional investment relevant to a teachers intellectual, professional, and philosophical stance and that it affects their self-image, satisfaction, and commitment to teaching. Thus, the researchers viewed emotional labor as either potentially positive or negative. They noted that the related research on teacher burnout may be limited by viewing teacher caring as having the potential for only one outcome—

negative. The authors acknowledged suppressing emotions based on contextual norms can result in burnout; however, as their case study demonstrated, depending on the teachers philosophical and professional stance, caring teaching may be enjoyable despite the emotional management involved.

### **Emotions and Student Learning**

In this sub-section of the review on emotions in school-based contexts, it is clear how emotion plays a considerable role in student learning (Garner, 2010; Linnenbrink, 2006a; Schuh & Rea, 2001). A total of five research papers/studies are included. Three of the articles come from different special issue journals noted in this section's introduction, with the remaining papers/studies situated in STEM education and 6<sup>th</sup> grade student-teacher classroom interactions. Of the five articles reviewed, two were qualitative research studies, and the third, a proposal for empirical research of a computer-based affective model of emotions and learning.

The first article reviewed a theoretical paper, based on several studies conducted by the authors, speaks to the lack of theoretical cohesion that exist in the research on emotions and motivation and to the researchers' discovery of the interdependence of motivation, cognition, and emotion in learning processes. "The authors take the view that there are bi-directional, reciprocal relations among motivation, affect, and cognition. This perspective calls for a dynamic, integrated model in which neither motivation, affect, nor cognition is given precedence--but rather all three are critical variables for understanding students' educational experiences" (Linnenbrink, 2006, p. 311)

A sizeable amount of research was conducted on the role motivation plays in learning. One paper (Meyer & Turner, 2002) was included in this review of literature for

the following reasons: 1) all the research used to support the authors' argument was situated specifically in P-12 classrooms; 2) the research referenced by the article was conducted by the authors over a 10-year span, which outlines their discovery of the integrated nature of emotions, cognition, and motivation; 3) the paper's focus was the role emotions play in the learning processes of students; and 4) the paper was included in one of the seminal special edition journals spotlighting emotions in educational contexts.

Many motivation theorists and researchers treat the components of human learning (cognition, motivation, and emotion) as separate processes, with cognition and motivation playing a central position in understanding motivational theories and patterns of human learning. Two motivation researchers (Meyer & Turner, 2002) challenge some of the theoretical and methodological assumptions made in their own research on motivation, citing the integrated nature of emotion, motivation, and cognition in the social process of learning. The researchers attribute their recognition of the pivotal role emotion plays in the motivation to learn through their observations of instructional interactions, in real classrooms.

We failed to consider the affective process during instructional interactions and how these experiences contributed to motivation to learn in a classroom. However, each research study was situated in real classrooms. Therefore, we gleaned answers to questions we originally had not planned to ask, and these answers always involved emotion. (p. 108)

Through studying student-teacher interactions, the authors explained how their conceptualization of what constitutes motivation to learn evolved as data revealed emotions as essential to learning and teaching. "Comprehensive theoretical work that articulates how emotion, motivation, and cognition interact within classroom contexts is needed if understanding learning is to move forward" (p. 112).

Meyer and Turner's (2002) research corroborates what other emotions researchers have discovered in the following ways: 1) emotions are inextricably linked to learning processes; 2) optimal learning experiences require a balance between contextual (classroom events and activities) and individual factors (teacher affect); and 3) emotion, cognition, and motivation (engagement or action) are inseparable in classroom contexts. Their findings clearly support the notion that emotions cannot and should not be viewed as separate from cognitive processes and student-teacher interactions. They concluded, "[W]e find emotion, motivation, and cognition inseparable in classroom contexts" (p.112).

Another theoretical paper addressing emotions in learning emphasizes the methodological importance of studying students in the context of their classrooms. Similar to Meyer and Turner's (2002) discovery of the integrated nature of emotions in learning from their 10 years of motivation research in live classrooms, two educational psychologists used a socio-constructivist perspective to explain how students' affective processes are no longer treated as the positive or negative side effects of learning. Op't Eynde and Turner (2006) addressed the interplay of emotions, motivation, and cognition and explained how these processes are integrated with learning processes, thereby calling for a shift in the research methods and instruments used to investigate the role of emotions in classroom learning. The authors presented a dynamical component systems approach as a framework that provides a comprehensive conceptualization that can help provide a more complete understanding of student emotions in classroom learning processes. They do so based on the need to better understand the nature of emotions.

Current emotion theory and research has been struggling with a conceptualization of emotions that addresses: a) both the phenomenological distinctiveness and the

intricate interweaving of cognition and emotion, b) both the dynamic nature of emotional processes and the existence of steady states that can be labeled with discrete terms (e.g., anger, happy, proud), and c) both the psychobiological nature of emotion and its cultural constitution (p. 363).

Op't Eynde and Turner (2006) then provided a rationale, comprising three main principles as the basis for their recommendation of the dynamic component systems approach as an “integrative conceptualization of students’ emotions within school learning” (p. 373). The principles are as follows: 1) this approach emphasizes emotion-related processes that characterizes emotions as an emotional episode within which different component systems co-regulate and co-act; 2) dynamical component systems approaches point to the social nature of emotions, and 3) dynamical component systems approaches to the study of academic emotions point to the non-chaotic nature of inherent interactive feedback processes, clarifying that emotions self-organize in real time as well as in specific contexts. They concluded that the approaches and methodologies outlined in their paper “provide some idea of what it means to address emotions in their full complexity when studying the roles that emotions play within classroom learning” (p. 373) and that

by further developing a researched understanding of the various interrelated and integrated ways in which cognitive-emotion-conative [motivation] processes function within academic learning, will we be able to remove the perceived wall that superficially exists between the head (cognitions) and the heart (emotions). (p. 374)

The first study reviewed in this section considers the sources of emotional and motivational experiences of secondary school students ( $N = 18$ ) during computer-supported collaborative learning projects. The results show there were five main sources for students’ experienced emotions during computer-supported inquiry learning (self, context, task, performance, and social driven emotions). After categorizing the emotional

expressions experienced by all the students, the researchers used two case students for a detailed analysis of how students expressed and controlled their emotions and motivational experiences in an actual learning situation. The researchers aimed to discover explanations for students' descriptions of the sources of their emotional expressions to better understand how students express and control their emotions in actual learning situations. The findings highlight the importance of volitional emotional control for learning and achievement and show the methodological complexities that exist in emotions research (Jarvenoja & Jarvela, 2005). The researchers concur that the student cases not only show the importance of emotional control in learning but also show how emotions are often invisible when studied with certain methods. They stressed the value of combining different methods in a study.

Researchers have acknowledged that both positive and negative emotions are a normal part of learning processes (Elbaz, 1992; Goldstein, 1999; Webb & Blond, 1995) and according to Kort et al. (2001), expert teachers can recognize these affective states in their students. Those who work in science, math, engineering, and technology (STEM) know that learning naturally involves failure and a host of associated affective responses (Kort et al., 2001). A research proposal put forth by three Massachusetts Institute of Technology researchers (Kort et al., 2001) was used in this review of literature because of their recognition of the cognitive-emotive state of students in learning experiences. Their proposed conceptualization of the impact of emotions in classrooms relates phases of learning to emotion and offers a model for researching pedagogy that addresses emotional states of students and takes action (based on those states) that positively impacts learning. They believe that accurately identifying a learner's emotional/cognitive

state is a critical indicator of how to assist the learner in achieving an understanding of the learning process (Kort et al., 2001).

Their model represents what they describe as a typical learning experience, one that involves a range of emotions (positive and negative) that students cycle through and are reacted to by teachers, thereby creating a successful learning outcome by assisting students through this process, especially after a setback. Interestingly, the proposal for the study is based on the researchers' desire to build a computerized *Learning Companion* that will track a learners' affective state and respond appropriately to it so that learning will proceed at an optimal pace. This paper is critical to this review because it conceptualizes what the authors call a "new educational pedagogy" (Kort et al., 2001, p. 43), one that tends to the constant and naturally cyclical affective state of the learner, acknowledging the undeniable interdependence of cognition and emotion.

Creating a safe learning environment where students are encouraged to enhance their understanding through their own affective/emotional process is a critical component of the classroom (Schuh & Rea, 2001). The final study reviewed for this sub-section describes affect/emotion incidents in three different 6<sup>th</sup>-grade classrooms and what role they play in personal knowledge construction. The researchers looked at the role of the teacher in creating emotionally safe environments where affective/emotional responses are used to augment the learning process. Students demonstrated affective/emotional incidents by word choice (e.g., I like, hate, love); topic (e.g., illness, self-esteem, worth); punctuation (e.g.,! or voice inflection); or description (e.g., describing happiness or sadness without using the words happy or sad) and they serve as knowledge construction links, that is, identified incidents in which learners brought forth prior personal and

sometimes tangential information in current learning experiences (Schuh & Rea, 2001). Teachers can serve as emotional mediators when students express these responses to the content by “understanding the learner’s reality and supporting capacities already existing in the learner to accomplish desired outcomes” (p. 3). Schuh and Rea concluded that their findings support the need to increase teacher awareness that affective/emotional cues exist in learning environments and are central to student meaning-making, thereby greatly impacting what and how much students learn.

### **Emotion-related Constructs and PE Research**

Teachers should assess student knowledge, thoughts, skills, and feelings regularly and use this information to make decisions about pedagogical strategies/classroom instruction (Dyson, 1995, 2006; Graham, 1995; Hopple & Graham, 1995). This statement could be disregarded as self-evident, yet even in the social and intrapersonal environment of PE, the assessment of the affective dimension of games and sport tends to be neglected.

According to Pope (1995), “sport pedagogues cannot afford to pay scant attention to such a vital aspect of learning and instruction” (p. 273). Research in PE classrooms suggests that students’ social interactions and involvement in community are pedagogical goals that enhance learning (Azzarito & Ennis, 2003; Cothran & Ennis, 1999; Fernandez-Balboa, 1997; Mosston & Ashworth, 1994). Cothran and Ennis explained that “educational engagement is not an isolated construct” (p. 234) and that students’ emotional and personal connections to peers in the classroom, school, and community are a fundamental component of student engagement in PE. Pedagogical approaches that allow students to connect to each other, their teachers, the real world, and to make

connections between their prior knowledge and new knowledge are central to social constructivism in the creation of a community of learners (Azzarito & Ennis, 2003).

Azzarito and Ennis (2003) examined how two middle school PE teachers enhanced students' construction of knowledge and meaning-making through the use of social constructivist teaching strategies. Findings indicated that the teachers' strategies created a learning environment in which students actively constructed knowledge (took responsibility for their learning) and made connections to peers and to their community through their PE experiences. "Social constructivist pedagogy takes students' varied lived experiences and the schooling context into account and envisions the participation of the student in a social community of learners as the primary vehicle for the creation of knowledge and understanding" (p. 195). Palincsar (1998) explained that in social constructivist classrooms, "Learning is thought to occur through processes of interaction, negotiation, and collaboration" (p. 365). Azzarito and Ennis (2003) summarized that

[Social-constructivist teaching and learning processes occur when] (a) teachers are facilitators in the classroom by providing group work that emphasizes peer interaction and peer collaboration; (b) teachers recall students' prior experiences to facilitate students' construction of knowledge; (c) students have ownership of the curriculum; (d) teachers encourage students to relate activities in the classroom to students' real lives outside of school, and to real world situations, i.e., teachers aim to provide educational experiences that are authentic and meaningful for students (p.181).

Clearly, this student or learner-centered pedagogy would be a dramatic shift for some physical educators whose conceptualization of the curriculum is more sport and skill-based. It can also be argued that a transformation in attitudes and beliefs about student learning would be required to successfully implement this pedagogical approach. Teacher comfort with the affective process of facilitating connections between

themselves and students, from student-to-student, the student and the self, and the student and larger community, would be essential.

In another paper reviewed for this sub-section, Pope (2005) advocated for more attention be paid to the affective dimensions of learning in PE. By using the Teaching Games for Understanding (TGfU) model of instruction as a heuristic, Pope addressed “the notion of affect; what it is and how it operates, particularly with respect to emotion” (p. 273). Several scholars (Holt et al., 2002; Light & Fawns, 2003) have argued that the examination of affect is necessary to advance our understanding of learning in PE classrooms because emotion is what play and sport is all about.

According to Beane (1990) “It is exactly the affective dimension that brings learning out of mere passivity and accumulation toward full active participation and meaningful outcome” (p. 9). If greater exploration of student emotion is in order, then teachers must recognize and value equally, the affective, and not only the cognitive and/or psychomotor dimensions of learning and teaching. Pope (2005) chose TGfU because the learner is central to the model; the game form includes attitudes and beliefs about the sport and those playing the sport; personal purpose for play, and game appreciation. While the TGfU model is also built on cognitive and psychomotor building blocks, “[I]t is the affective cement that creates the bonds between each of those blocks” (p. 280). Pope concluded that since understanding is at the heart of TGfU, there is a need to rethink how educators promote the relationship between affect and learning and urged scholars and practitioners to “consider a holistic notion of understanding; how it is developed, promoted, and manifested through cognitive, movement or behavioral and affective forms” (p. 283).

## **Affect/Emotion and PCK**

From the mid-2000s on, emotion research in education, more specifically in teacher education, began to examine the interrelatedness of emotions with constructs outside of cognition and motivation. Researchers began to examine the interplay between PCK and emotional knowledge in teaching. These scholars explored how teachers, to facilitate deeper learning in their students, use their understanding of the affective domain of learning as part of their knowledge base for expert teaching. Four articles were found that explicitly connected emotions as fundamental to teacher knowledge, calling for the expansion of the PCK construct. These articles were written between 2003 and 2010 and will be reviewed chronologically in this sub-section.

The idea of *emotional scaffolding* in teaching came from a 10-year-period of research focused on critiquing the concept of PCK. Rosiek (2003) explored how teachers help students make emotional connections to subject matter. He outlined how the literature supports the notion that understanding student emotion is part of teachers' practical knowledge: a) the influence of student emotion on teachers' decision-making is apparent to anyone who spends time in classrooms; hence, it is empirically justified; b) scholars from a number of diverse disciplines have affirmed the presence of emotions in learning processes; and c) teaching is a caring profession that requires responsiveness to students' emotional experiences with the curriculum. Rosiek defined emotional scaffolding as, "teachers' pedagogical use of analogies, metaphors, and narratives to influence students' emotional response to specific aspects of the subject matter in a way that promotes students' learning" (p. 402). His research brought to light the overwhelming empirical evidence and numerous examples of how teachers'

consideration of how students would experience the curriculum emotionally played a major role in *how* they taught content and what representations they used to promote students' interest in the subject matter.

The inclusion of these [emotional] considerations in no way detracted from teachers' thinking about their subject matter. On the contrary, it often pushed teachers to think more deeply about how they represented their curriculum to students...The collaborative studies reported on here provide empirical evidence that attention to student emotion is often a prominent part of teachers' efforts to transform the subject matter in the manner Shulman (1987) described. (p. 406)

Rosiek (2003) identified the practice of emotional scaffolding and analyzed its implications for codifying the knowledge base for teaching. He suggested that the research indicates that how teachers use emotional scaffolding "depends both on general understanding of the approach and on insights about students' experiences that are extremely context dependent" (p. 411). Emotional scaffolding—"the [context specific] tailoring of pedagogical representations to influence students' emotional response to some aspect of the subject matter" (p. 399) is the knowledge teachers demonstrate when they consider students social, emotional, cultural, and cognitive qualities when providing instruction for *all* students. The empirical data Rosiek collected makes a compelling case for including affective dimensions into the notion of PCK (transforming subject matter for student understanding).

In their review of literature, Owens and Ennis (2005) give an overview of three theoretical frameworks related to Noddings' (1984) philosophical work on the ethic of care. The purpose for their analysis of the literature was to support the inclusion of the ethic of care as a constitutive part of PCK in PE and to advocate for teacher education programs to explicitly educate preservice teachers to realize the significance of teaching

with care. For the purposes of this review, I focus on one of the theoretical frameworks included in the overview—teacher development of self.

Master [expert] teachers' interactions with students are characterized first and foremost by their call to care (Agne, 1999). Berliner (1988) noted that unlike novices, expert teachers can reach deep emotional levels regarding their work and are genuinely distressed when they perceive themselves as failing to teach up to their own level of expectations (Owens & Ennis, 2005). One of the studies reviewed by Owens and Ennis—Agne et al., 1994—found that expert teachers held more caring beliefs about students as compared to similar classroom teachers. The teachers in the Agne et al. study possessed considerably more affective characteristics (friendly, trusting, accepting, non-moralistic, flexible, democratic, respectful, non-punitive, and student empowering) than comparable teachers (same experience level and teaching situation). The teachers in the study held belief systems (e.g., humanistic pupil control, high self-efficacy, and internal locus of control) that are teacher beliefs known to be highly correlated with student achievement (Ashton & Webb, 1986; Rose & Medway, 1981; Willower et al., 1973). These belief systems were also found to be interrelated and descriptive of caring expert teachers' classrooms (Agne et al., 1994). Agne used her findings to establish caring as the most important belief system related to student achievement. In examining the ethic of care in the classroom, Agne (1999) noted that for caring to occur, the teacher must focus on the student(s), not on oneself. Agne also posited that fear hinders caring:

When teachers perceive fear and control factors, they become consumed with emotions of worry, anger, frustration, jealousy, and greed that lead to increased stress and burnout. The principle concern arising from fear and control states is they inhibit compassion or caring states. For teachers to internalize the belief system of caring, it is necessary to realize that there is nothing to control. (Owens & Ennis, 2005, p. 419)

According to Agne et al. (1994) and Noddings (1992), the key to the classroom is more a function of *who* teachers are and *what they believe* than of what teachers do. Agne (1999), like Noddings (1992), believed that the key to the classroom is caring. Agne (1999) explained that with the development of deep caring states comes an intense level of attention to thoughts and ideas concerning the teaching/learning process that are the precursors to a personal sense of responsibility evident in master [expert] teachers with extensive professional knowledge, expert decision-making skills, and effective teaching behaviors (Owens & Ennis, 2005). To conclude, Agne et al.'s (1994) research on teacher beliefs led to the understanding of caring as a critical component of the master [expert] teacher self; therefore, the development of an ethic of care is essential to preservice teacher training and an indisputable component of PCK.

Teacher's emotional knowledge is an inextricable part of the ecosystem of teacher knowledge. Zembylas (2007) posited that there is a need to expand the construct of PCK by acknowledging the role of emotional knowledge in the teaching/learning process. He situated *emotional ecology* as a term defining how teachers use their emotional knowledge on teaching and learning within a larger ecosystem of teacher knowledge. For example, emotional ecology in the context of education indicates how teachers and students create the environment that shapes how they are emotionally connected and engaged in learning together (p. 357). Zembylas used data from four different ethnographic case studies to document the development of emotional knowledge over a period (2-3 years). The results indicated that emotional knowledge is key to the teacher's PCK and to the creation of emotional ecology (Zembylas, 2007). In all cases, "teachers constructed and/or used emotional knowledge to establish or strengthen connections with

the subject matter or students, make curricular planning, and take actions” (p. 364). PCK is action-based teacher knowledge that expert teachers use to transform their subject matter, about the developmental and contextual aspects of the specific students, school, and classroom in which they perform instruction. Therefore, Zembylas’s case studies make a strong case for the existence of affective/emotional dimensions of teachers PCK.

### **Summary to Literature Review Part 2**

In 2007, Zembylas stated, “the literature on PCK and the literature on emotions in teaching and learning remain unconnected” (p. 356). Seven years later, the results of this review of literature still support his assertion; however, the dichotomy between cognition and emotions in teaching and learning is a false one. Scholars exploring the expansion of the conceptualization of PCK as a purely cognitive knowledge base for teaching are challenging the assumption that issues about content, curriculum, and pedagogy can be separated from emotional issues as well as whether they can be disconnected from a teachers’ PCK. (McCaughtry, 2004; Rosiek, 2003; Zembylas, 2007).

Shulman, the scholar who introduced the notion of PCK into teacher knowledge research, commented that “while literature on teacher knowledge has helped us understand a great deal about how teachers carry out their work it has little to say about teachers’ emotions” (Shulman, 1999 in Hammerness, 1999, p. 2). It should be clear by now that purely cognitive or epistemological models of PCK constrain rather than empower the inquiry about teacher knowledge and its implications in pedagogy and practice (Zembylas, 2007). Shulman reflected on the evolution of the construct he introduced by referring directly to the affective domain of teaching with the following comments made at a conference:

It's treated as a given, and if there is anything you can absolutely count on, and I'll say this dogmatically, a teacher who does not both understand and have a real affection for a subject will never be able to teach it well (Shulman, 2007, in Berry et al., 2008, p. 1275)

Many, if not all, the scholars in this review would most likely add: if a teacher does not both understand the context they teach in and have a real affection for their students, they cannot teach well. However, as scholarship on emotions in teaching continues, it will be wise to remember Rosiek's (2003) caution that any effort to romanticize the emotional dimensions of PCK is as naïve and simplistic as the argument that emotion has no relevance to teacher knowledge.

### **Literature Review Part 3—** **Influences of Psychology and Medicine on Educational Research**

The fields of psychology and medicine have also had a profound influence on 20<sup>th</sup>-century educational research, notably the work of a team of doctors led by James P. Comer, M.D. of the Yale Child Study Center, tasked with an initiative of bridging child psychiatry and education. Comer began developing his School Development Program model in 1968. By the early 1990s, Comer's SDP schools were recognized as an education program that "builds strong and supportive relationships among students, parents, teachers and administrators by recognizing that they all share the same goal: to help children learn" (*Beyond Rhetoric*. Final Report of the National Commission on Children, 1991, p. 203). The major themes emerging from Comer's SDP model showed the importance of long-term collaborative relationships among stakeholders (teachers and school staff, administrators, parents, and university researchers); progressive professional development of teachers; understanding that change is a process that takes time and

effort; and fundamental change requires new approaches and an openness to learn from mistakes.

Comer's (1996) work began with the goal of improving the educational outcomes of the students attending two of the lowest performing public schools in New Haven, Connecticut. To accomplish this goal, Comer developed a process that would fundamentally change the existing relationships in the immediate ecology of the schools. Comer determined that "the interventions that we had to develop had to disrupt harmful interactions in schools and replace them with interactions that enabled all of the adults to help all of the children to grow" (Comer, 1996, p. 8). To do such, Comer built the SDP on three guiding principles: consensus, collaboration, and a no-fault approach to problem solving to sustain and nurture a positive climate in the school. The guiding principles also aimed to aid the optimal development of every student. Comer's theoretical framework for the SDP is deeply rooted in child development and relationship concepts. This sets Comer's model apart from most other school improvement approaches in that "by focusing attention on the interactions that occur in schools, we pave the way for the emergence of self-perpetuating school structures designed to sustain educational change and promote the development of the whole child" (p. 25).

For Comer, part of the process of developing the SDP was immersing himself and his team (school psychologist, special education teacher, social worker, child psychiatrist) in the schools to assess the problems underlying the school's low achievement and behavioral issues (attendance, disruptiveness, hostility/violence, and disinterest in the curriculum).

[Comer and his team observed] a culture of failure was so manifest, we can clearly see that the misalignment between the students and the school was a direct

result of child development being ignored. Looking around and seeing what was so terribly wrong clarified for us how much more there is to a student than a brain on a stick” (Comer, 1996, p. 15).

Comer believed his SDP was addressing the actual causes for schools failing a significant number of public school students. Namely, his initiative created a climate conducive to successful teaching and learning by creating a school environment that improves relationships between all stakeholders so students can learn because their healthy development is the coalescing agent for positive change and outcomes.

### **Conclusion to Chapter 2**

Teachers’ knowledge base must include more than just extensive scholarship of subject matter. Teachers must also understand the manner in which each student learns: with feelings, attitude, values, and appreciation or interest toward subject matter, content, peers, and teacher. A growing body of evidence has documented how students’ academic and life successes as well as their social-emotional well-being are bolstered when attention is given to the social and emotional dimensions of teaching and learning (Durlak et al., 2011). Teaching and learning are emotional, social, and intellectual; therefore, educators must be able to recognize the affective states of their students to make adjustments in their instruction to meet the cognitive needs of students.

In a nationally representative survey—Bridgeland et al., (2013)—95% of teachers believe social and emotional skills can be taught, yet they also report limited confidence in supporting students’ emotional and interpersonal development due to limited preparation in social-emotional learning (Reinke et al., 2011). In an analysis of educational curricula, State et al. (2011) confirmed that preservice teacher education programs are not adequately preparing teachers to deal with student social, emotional,

and behavioral problems (Schonert-Reichl et al., 2015). Therefore, it is critical for teacher education research to address how preservice teachers learn to integrate the cognitive and affective domains, pedagogically, and what interventions or curricula best serve the development of preservice teachers' social and emotional competence.

## **CHAPTER 3**

### **METHODOLOGY**

The purpose of this study is to explore interactions between the affective domain of learning and the classroom practices of preservice teachers. explore how participation in a full public school year-long urban teacher residency program influenced the perceptions of 17 new middle and high school teacher candidates about the use of affective qualities of learning within their classroom practices as teachers—what the researcher is now calling Pedagogical Content and Relationship Knowledge (PCRK). The study examined the relationship between teachers’ enacted beliefs, values, interest, and attitude toward their subject matter and instructional practices in 6-12 settings. The study examined preservice teachers enacting and reflecting on the pedagogical climate of their classrooms, thereby contributing to our understanding of how teacher education contributes to the integration of the cognitive and affective learning domains in teachers’ pedagogy.

Data were collected to provide a more nuanced understanding of how preservice teachers develop a holistic knowledge base that is demonstrated through instruction and embraces both the affective and cognitive dimensions of student learning. A single case study design was used to explore how teacher candidates develop an integrated pedagogy through field-based experiences and coursework in a year-long residency teacher education program. This qualitative research study produced a detailed manuscript providing rich description of the data using preservice teachers’ written reflections, interviews, field notes, course documents, and digitally recorded group discussions.

### **Entry into Setting**

In this section, I discuss my role as the researcher and how this role facilitated entry into the teacher education program and exposure to the participants. As a researcher, I am uniquely positioned because I am a full-time lecturer and coordinator of the program in which the participants are matriculated. In addition to these roles, I serve as the co-advisor to all 17 graduate students enrolled in the program.

Given the circumstances, as researcher, I was transparent with the participants that certain course conversations, written reflections, lesson plans, assignments, and class observations have the potential to become data for a research study with their consent. The adoption of this opportunistic research strategy enabled the researcher to use a familiar situation or convenient events to their advantage (Riemer, 1977); however, it is important for the researcher to note that both the participants and the Institutional Review Board decided whether this data would be collected and used for research.

### **IRB Approval and Informed Consent**

Upon faculty approval of the research proposal, the researcher sought permission to conduct this study from the University Internal Review Board (IRB). Since the research proposed using human participants, informed written consent was obtained from the participants in the study. The consent form indicates who the researcher is, what they propose to do and for what purpose (See Appendix A). The participants must understand that their participation is voluntary; they have the right to withdraw at any time without prejudice and have the right to review material. The researcher must protect the confidentiality of the participants, disclose any risks or benefits associated with

participation, and obtain the signature of each participant. Once the above is achieved, the researcher signed the form and gave a copy to each participant.

### **Participants**

Seventeen preservice teachers served as the participants of the study. These preservice teachers were observed and interviewed during the clinical teaching field experience phase of a graduate level, university-based residency teacher preparation program. The clinical teaching phase of the program comes *after* a 12-week, 300+ hour student-teaching field-based practicum. The interns entered this intensive one-year program with an undergraduate degree in one of four subject-matter areas: English; Science; Math, or History. At the start of the program, most of the participants had just completed an undergraduate degree in their content area and the remainder had the requisite subject matter requirements and undergraduate degree but had worked several years since obtaining the undergraduate degree. During the clinical teaching phase, the participants are the teacher of record in the classroom, taking full responsibility for content, instruction, assessment, and class management. The intent of clinical teaching is for ~~interns~~ teacher candidates to experience full immersion in professional practice. The clinical teaching phase occurred in the spring semester of the program from ~~early~~ mid-January to the close of the school year—mid-June.

### **Setting**

The focus of the teacher education program the participants are a part of is urban education. All the preservice teachers were placed in one of five partner schools in one large urban school district in the Northeast part of the United States. The teacher candidates spent a full academic year in the district, in structured field-based practicums.

The field-based experiences in the schools are conducted in partnership with university coursework, and the teacher candidates are supported by qualified teacher mentors (at least 3 years experience under a professional license and a proficient rating in the educator evaluation system), site coordinators (teacher leader liaisons between the school and university), department and other school-based teacher teams and administrators who actively supported this immersion style/residency teacher education program. The participants in the study are part of a cohort in this university-school partnership. The cohort model allows the group to take classes together and for the courses to be designed specifically for the residency model program.

The urban district is one of the largest in New England, with more than 50 schools and over 25,000 K-12 students enrolled for the 2014-15 academic year. Demographically, most students are Hispanic (63%) and African American (19.8%) with the remainder White (12%), Asian (2.7%), multi-racial, non-Hispanic (2.4%) and 0.1% Native American. Overall, 87.5% of the student population receives free or reduced lunch, and 26.1% of the students do not speak English as their first language. The 4-year adjusted cohort graduation rate is 64%. Dropout rate is 19.2%. Of the total student population, 18.9% are special education students. These statistics were derived from the state board of education district profiles for 2014-15 and the district Superintendent's "Year-in-Review" report to the school committee, in October of 2014.

### **Data Collection**

Data were collected in a "Clinical Teaching Seminar," a 3-credit graduate course taught by the researcher (see Appendix E). With the assumption that all knowledge is situated, the researcher designed the coursework around the general argument that

teachers' learning should be grounded in some aspect of their teaching practice. The seminar was constructed to build teacher candidates' knowledge of the affective domain of learning and provide structured opportunities for executing lessons that integrate the cognitive and affective domains of learning in their subject matter disciplines.

The seminar used two texts to guide the teacher candidates' development of instructional strategies and to build a framework for advancing their understanding of the research on learning that supports an inclusive and learner-centered pedagogy that integrates the cognitive and affective domains. The texts are *Inspired Educator, Inspired Learner* (Stanchfield, 2014), *The Skillful Teacher, 6th edition* (Saphier et al., 2008) and *The Differentiated Classroom, 2<sup>nd</sup> edition* (Tomlinson, 2014). The monthly seminars provided an opportunity to discuss the exploration of this pedagogy with other teacher candidates and to reflect on student response to their instruction. The course is designed intentionally, as an intervention, to expose the participants to the theoretical underpinnings of pedagogical approaches that integrate students' social, emotional, intellectual, and interpersonal learning needs (See Table 1.1).

A major goal of the seminar was to provide the participants with instructional opportunities (clinical teaching assignments) that allowed them to practice new pedagogical approaches discussed in the course texts concurrent with peer and individual reflection in class meetings. Some participants received coaching and feedback from the researcher or a teaching assistant on the use of the approaches via classroom observations, and all participants received feedback on assignments during seminar discussions.

The seminar met formally on a monthly basis and was divided into three sub-groups—two groups of six and one group of eight. The cohorts were determined by school proximity, chosen for convenience, and comprised teachers from different subject areas and levels (middle school and high school). In the last class meeting of the seminar, the entire cohort of preservice teachers had the opportunity to discuss their classroom experiences with Jen Stanchfield, the author of one of the texts.

This last meeting of the seminar was conducted as a workshop session including open dialog with the author. The workshop was experiential (participants actively participating in pedagogical approaches led by the expert author) and reflective (participants sharing their classroom experiences as they relate to the approaches). This workshop was planned for the end of the course so students would be able to test what they learned through exploration of the text in their classrooms and share successes and challenges with the author. The workshop and discussion, led by the author, was designed with three intentions: 1) the expert/author can provide feedback to the participants on their implementation of the approaches described in the text; 2) discuss *if* and *how* the participants plan to use course content in their classrooms of the future, and 3) allow the researcher to observe participant reactions and reflective process with the author about course content.

### **Sources of Data**

#### **Digitally Recorded Seminar Discussions**

Seminar discussions were digitally recorded to investigate how the interns' beliefs, values, interest, and attitudes about affective pedagogy changed over time. These whole group discussions were intended to initiate peer-to-peer learning and to gain a

more nuanced understanding of how PCRK develops in reflective practice in a cohort model of teacher preparation.

### **Field Notes**

A random selection of classroom visits was conducted during the duration of the seminar based on participant teaching schedules and researcher availability. The researcher and a teaching assistant conducted observations of the interns. Both researcher and teaching assistant recorded field notes during observations. The researcher and teaching assistant debriefed the observation with each intern observed to further investigate how the affective domain was considered in planning and execution of the lesson. Written observation notes focused on how the participant made connections to the readings assigned in the seminars by observing teacher instructional practices and their fidelity to approaches and strategies outlined in the assignment and written into the lesson plan. Notes and written feedback from formal observations during student-teaching field experiences were used to compare changes in pedagogy and planning for instruction.

### **Course Documents**

Written responses to readings, reflections, and lesson plans assigned in the seminar served as another set of data, as a means for exploring how the interns operationalized the content of the text and how they planned instruction and made decisions based on their own and their student responses (behaviors, attitudes) to their pedagogy. Email correspondence was used as documentation if the content was relevant to the course assignments, classroom observations, or seminar discussions. These documents, especially the reflections, facilitated the interview process and protocol development.

## **Interviews**

At the conclusion of the semester, seven participants were selected for an in-depth interview based on classroom observations, individual written reflections, seminar discussions, level of participation in textbook authors workshop, and willingness to participate in an interview. The researcher used a convenience sample which is a type of non-probability sampling method that a researcher uses to choose a collection of participants from a population (Etiken et al. 2016). The researcher used this method to achieve a representative sample of teacher candidates out of the 17 participating in the study and chose the sample based on empirical evidence and data collected and analyzed as the study was conducted. A semi-structured approach was used for these interviews (See Appendix D for protocols). The semi-structured approach allowed a flexibility so the interviewer could refer to a specific student's written reflections, classroom instruction, and statements made in seminar discussions; however, there were specific open-ended questions that were asked in each interview. The protocol was developed to answer the research questions of the study and the semi-structured format allowed for unique insights and other information to be shared by participants by allowing the interviewer to respond to their emerging ideas and prior reflections or statements. The interviews took approximately 1 to 1 ½ hours. All interviews were digitally recorded and transcribed verbatim.

## **Data Analysis**

Data analysis began with the researcher keeping a journal during the semester in which the course is taught. The journal included notes on interpretations of how students responded to the text(s) and recording the researcher's ideas on how to facilitate the

bridging of the concepts explored in the readings to structured field experiences. The researcher took notes as the text was read and reviewed in the framework of the research purpose and student responses. Notes from post-seminar debriefing sessions with a teaching assistant as well as from informal, post-conference discussions with participants were recorded in the journal. The notes recorded in the journal served as a critical first step in data analysis—code and category development (Charmaz, 2006).

Each data set was analyzed using the constant comparative method. Qualitative data analysis software (NVivo) was used to help code and organize the data. The constant comparative method is the process of comparing data with data, data with category, category with category, and category with concept. These comparisons constitute each stage of analytic development (Charmaz, 2006). The process of coding facilitated comparing data units over time as well as to compare data from course assignments to that derived from classroom observations. This coding and comparing process was used to analyze how the participants interpreted and integrated affective learning into their lesson construction and pedagogy.

### **Trustworthiness**

Several strategies employed by the researcher ensured the study's trustworthiness. Strategies include the triangulation of data, member checking, audit trails, and critical friends to increase the studies validity. First, the data were collected using multiple methods (interviews, class discussions, field notes, and course documents), thus allowing the researcher to compare what was stated in an interview with what was observed in an instructional activity, that is, triangulation.

A second way to ensure trustworthiness is member checking. The participants were asked for feedback on preliminary analysis of the findings for accuracy of the interpretation of data.

Third, to support the trustworthiness of the study, an audit trail was employed. The researcher took notes as codes and categories were developed, searching purposefully for alternative explanations and data that challenged emerging findings. The journal served to scrutinize decisions and interpretations made by the researcher, especially given her position in relation to the participants. In other words, the researcher was aware of the importance of reflexivity (Rossman & Rallis, 2003) and being systematic about documenting and recording the process of analysis in this study. The journal was used through the duration of the study, creating an audit trail, as data were analyzed.

Finally, my position as a researcher with extensive experience and expertise in the pedagogical approaches under exploration calls for peer examination of my analysis and interpretation of the data. The teaching assistant in the course reviewed data analysis documents and preliminary findings to assess their credibility. This “critical friend” (Rossman & Rallis, 2003) was valuable because they observed and participated in the class discussions, classroom observations, and review of course assignments. In other words, they were a part of the community of practice and had been for several years, serving in various roles in the residency teacher preparation program. As the data were reviewed over a period of time and patterns and themes emerged, this critical friend provided the researcher analytical feedback on emerging ideas and interpretations made by the researcher. The researcher also engaged in “peer debriefing” (Lincoln & Guba,

1985) with an experienced colleague/researcher as well as with an expert in the field of experiential education. These debriefs allowed the researcher to discuss initial and ongoing interpretations of the data and thereby receive confirmation and new considerations for the data.

### **Researcher Bias**

The researcher has been a teacher of students from many developmental levels (PK-12, undergraduate and graduate higher education, and inservice teacher professional development) for more than 25 years. At the time of the study, the researcher was a teacher educator, working as the program coordinator and lecturer in the university teacher preparation program used in this study. For several years, the researcher worked closely with the former coordinator of the program as a university supervisor, mentoring interns in the student-teaching phase of the practicum.

The researcher's pedagogy is consistently grounded in the principles of experiential education. Experiential learning principles embrace a student-centered approach to learning that seeks to develop students' intellectual, social, intrapersonal, and interpersonal growth and are based on the philosophical tenets of John Dewey (1916).

Dewey (1916) stated, "The subject matter of the learner is not...identical with the formulated, the crystallized, and systematized subject matter of the adult" (p. 190). "The teacher should plan and connect the subject matter to the students, keeping in consideration the needs, desires, interests and cognitive development of the students, as he shows in 'How We Think'" (Sikandar, 2015, p. 193).

Dewey has often been referred to as the father of experiential learning. Experiential learning is widely interpreted as a pedagogical approach involving students in hands-on, collaborative experiences. (Eyler & Giles, 1999).

The researcher graduated from a high school that used a school-wide interdisciplinary teaching model based on experiential principles. The researcher's secondary schooling experience, professional training, and close working relationship with the participants in this study provides ample bias relative to the topic of investigation in the study. The researcher is aware that these experiences have an influence on interpretations and analysis of the data. Systematic inquiry, well documented in a journal, helped make the actions and decisions of the research process explicit and transparent.

### **Study Limitations**

One limitation of this study is the position of the researcher. As addressed in the trustworthiness section of this chapter, every effort was made to ensure validity.

A second limitation is the uniqueness of the teacher preparation program. Most teacher preparation programs do not have field experiences that are condensed to a one-year time frame nor do they typically require an extended (5-month) practicum in clinical teaching. In this immersion style teacher preparation program, interns spend the entire school year in a specific classroom while completing a master's degree in two semesters. The intensity of this accelerated schedule can be overwhelming, especially because graduate students are expected to learn pedagogy, theory, advanced methods, how to modify instruction for English-language learners, and educational technology while teaching for the first time. The non-traditional structure of the program may be a

significant factor of the study, therefore, the compressed nature of the program must be acknowledged as a potential limitation because this factor may detract from the participants ability to embrace PCRK or it may enhance their ability to develop the skill and knowledge base necessary to integrate affective and cognitive learning strategies into their teaching.

The participants represented a mix of subject matters, including science, mathematics, history, and English and at two different grade levels (middle school and high school). Just as PCK has been studied specifically by subject matter, research on PCRK may benefit from subject-specific research.

Finally, see Chapter 5, “Suggestions for Improvement and Further Study” for a note on a limitation related to the literature review in this dissertation.

## CHAPTER 4

### DATA PRESENTATION AND ANALYSIS

This chapter presents an analysis of data and results of the study. Using interview data and documents (questionnaires, reflections, and assignments), the findings are described and analyzed for each research question guiding this study. The major research questions were:

RQ 1: In what ways do teacher candidates enact pedagogical content and relationship knowledge in their classrooms?

RQ 2: What role does pedagogical content and relationship knowledge have in student learning, from the perspective of teacher candidates?

RQ 3: In what ways does teacher education coursework influence teacher candidates' development of pedagogical content and relationship knowledge?

Data presentation is divided into four sections. The first section presents results of the pre- and post-questionnaires given at the beginning and end of a clinical teaching seminar course taught during the final semester of candidates' preservice teacher education program. The remaining three sections present analysis of the interview data which are described and analyzed in each of the three remaining sections. These three sections of interview data focus on each of the three research questions guiding this study.

#### **Brief Review of the Context of the Study**

The participants in this study were placed in a middle school or high school in a large urban district that partnered with the University during the 2015-2016 academic year. The school district is one of the largest in the state with a diverse student population; 30% of those students' first language is not English. According to the state's Department of Elementary and Secondary Education, Hispanic and African American

students comprise 86% of the school district's student body (67.1% Hispanic and 18.9% African American).

The teacher preparation program was a residency model, meaning that preservice teachers were in the school on the same schedule as the school district's fully employed contracted teachers. As graduate students attending the University's teacher preparation program, candidates were earning a master's degree and state certification to teach middle and/or high school in the subject fields of English, mathematics, the sciences, or history. When the study commenced, preservice teacher participants were beginning their second and final semester of coursework in the one-year master's degree program at the end of January 2016. At the time the interviews took place, teacher candidates were in the seventh and eighth month of the public school year, April and May 2016. Interviews were conducted after each teacher candidate had completed the student-teaching practicum of their graduate program and assumed a lead instructional role in planning curriculum, instructional methods, and assessment of student learning for the remainder of the public school year.

### **Presentation and Analysis of Pre- and Post-Study Questionnaire Data**

The pre- and post-study questionnaires were completed anonymously. The researcher could not identify the individual responses. On both the pre- and post-questionnaires, all questions were answered. The pre- and post-study questionnaires are found in Appendix D and Appendix E respectively.

Five questions with responses arranged on a Likert Scale were in the pre-study questionnaire. Only 14 of the 17 study participants took the pre-study questionnaire due to three members of the class being absent on the first day of class of the University's

second semester (approximately the half-way point in the year-long teacher preparation program).

On the post-study questionnaire seven questions were asked with four using a Likert Scale and one of the four enabled participants to comment in a comment box. One of the remaining three questions asked participants to rank their responses; another asked the participants to place themselves on a scale from 1 to 10. The final question on the post-study questionnaire was a short answer/open response question. All 17 participants in the study took the post-study questionnaire.

The pre-study survey intended to assess the preservice teachers' baseline attitudes towards affective qualities in student learning. Three of the questions in the pre-study questionnaire most clearly represent this group of preservice teachers' affinities for the affective domain of learning.

1. The first question selected for analysis asked if these preservice teachers believed in the importance of helping students develop interpersonal skills through their classroom instruction.
2. The second question selected was a ranked statement, asking the preservice teachers to take a stand on whether schools should provide students with instruction that tends to the affective domain so students can achieve at the highest academic level.
3. The third and final pre-study question selected for analysis intended to gather data on the preservice teachers' pre-existing knowledge of SEL models and their attitudes towards age appropriateness of their students for teaching such models.

Below, I report the findings from the three questions selected because the data were of significance to the research questions in this study.

### **Pre-Study Questionnaire Analysis**

The first of the three pre-study questions is: "As a classroom teacher, I feel it is important to provide pedagogy that helps students know themselves, relate well to others,

and make responsible decisions.” Ten of the 14 preservice teacher survey respondents ranked their response as the highest level on the Likert scale at “very important.” Three ranked their response at the next highest level of “important” and one respondent responded “moderately important.” The data collected from the responses suggests that this group of preservice teachers are considering the importance of pedagogical strategies that increase students’ intra- and interpersonal skills.

The second item chosen for analysis involved candidates providing a ranked response to the following statement: “Schools need student-centered strategies to help learners reach their highest potential.” Five of the respondents chose “strongly agree”; seven “agree”; one “moderately agree”; and one “somewhat agree.” There was more diversity in these responses compared to the first question but still leaning toward valuing such strategies. One interpretation could be to conclude that to “help learners reach their highest potential” is understood as scoring exemplary on high-stakes testing, meaning that the question is asking if students will achieve at the highest academic level possible when student-centered strategies are used. Therefore, responses on this question may be interpreted as the preservice teachers’ lack of confidence in using student-centered instructional strategies to achieve the highest academic results possible. Another notable difference between these two selected questions is that the first question is asked from the perspective of “classroom teachers” and the second from the perspective of “schools.” The preservice teacher participants may see the role of the school as different from that of classroom teachers when it comes to the affective domain of learning and relationships with students. Another possible interpretation of the difference in responses to these two questions is that the preservice teachers envision the role that a school organization and a

classroom teacher play in student academic achievement as being separate from the affective domain of learning.

The third question chosen for analysis—“Social-Emotional Learning programs, such as The Responsive Classroom are best suited for elementary age students” — revealed another notable trend in the number of respondents who expressed a lack of knowledge about definition and application of the term “social-emotional learning.” A total of 9 of 14 respondents chose the N/A response and several N/A responses included written comments (questionnaires were printed and comments were written spontaneously without inclusion of a comment box taken). Here are a few samples of the comments:

“I don’t know.”

“This sounds like an official title. I don’t know what it is.”

“I wish I knew more about Social-Emotional Learning and how it looks/works in the classroom.”

“What is this? Does everybody need it?”

“I have many students who will be on one day and off the next. If we had programs or the support with students in which this happens, I feel as though they would be more apt to share their concerns with me versus shutting down in class.”

These written responses were deemed significant by the researcher because the question was designed to intentionally determine what level of prior knowledge in the study participants for the term “Social-Emotional Learning.” This group of preservice teachers generally lacked familiarity with the term “Social-Emotional Learning” or its associated models, such as Responsive Classroom. Of the remaining five respondents who did not choose N/A, three chose “disagree.” That choice could be interpreted as an “N/A.” “Disagree” can be an answer if you do not understand the question. The

remaining two respondents selected “somewhat agree” and “moderately agree,” leaving agreement and strong agreement out of the responses.

### **Post-Study Questionnaire Analysis**

The post-study questionnaire was given on the last day of class for the clinical teaching seminar, approximately three weeks before the end of the public school year. All members of the class were present, therefore, all 17 preservice teachers filled out the post-study questionnaire. The post-study questionnaire was intentionally designed to analyze how the content of the clinical teaching seminar influenced the preservice teachers’ pedagogical beliefs and efficacy to enact integrated instruction (cognitive and affective domains) or what the researcher is calling PCRK (Pedagogical Content and Relationship Knowledge).

Two questions from the pre-study questionnaire were repeated in the post-study questionnaire. First, preservice teachers were again asked to choose their agreement with the statement, “Schools need student-centered strategies to help learners reach their highest potential.” Nine post-study questionnaire respondents chose “strongly agree” as compared to five pre-study questionnaire respondents. Eight post-study questionnaire respondents chose “Agree” as compared to seven pre-study questionnaire respondents.

Therefore, there were two notable differences: 1) all 17 preservice teachers agreed with the statement compared to the pre-study questionnaire, whereas two preservice teachers chose “moderately agree” or “somewhat agree”; and 2) there was an increase by four in the number of candidates choosing “strongly agree” and an increase by one in the “agree” category. These results may indicate that the seminar was helpful in building the preservice teachers’ confidence about integrating cognitive and affective pedagogical

approaches and may have also increased their confidence that PCRK is an effective approach to increase academic achievement. Finally, the preservice teachers, having spent almost a full year in the classroom at the point of filling out the questionnaire, may have gained empirical evidence to support the belief that an instructional pedagogy ~~a school culture~~ that holistically places students at the center on both learning and social aspects of schooling is an effective approach.

The next post-study question asked the preservice teachers to rank six pedagogical skills for effective teaching in order of importance. The skill ranked highest by the 17 preservice teachers was “classroom management” with a total of 10 respondents choosing it as the first or second most effective teaching skill. It is not uncommon for new teachers to be overwhelmed and fearful of classroom management, especially when entering the profession, so the high ranking was expected.

Second in the rankings was “understanding student’s intellectual, developmental, and emotional learning needs” with nine respondents choosing it as the first or second most effective teaching skill. The fact that the results from the questionnaire revealed that understanding students intellectually as well as emotionally had such a strong ranking was not necessarily expected by the researcher. When juxtaposed with where “curricular knowledge” and “content knowledge” were ranked, it is even more striking. No respondents ranked curricular knowledge first, and nine ranked it last.

Content knowledge placed slightly higher with one respondent ranking it first and seven respondents ranking it last or second to last. This is noteworthy because admission to the teacher education program was predicated in part on candidates’ knowledge in their subject area as measured by their GPA in the subject as an undergraduate student

and successful passing of a high-stakes exam in their licensure area required by the licensure board in the state where the University's teacher preparation program resided. The post-study questionnaire was administered at the end of the program after completing almost a full academic year of classroom teaching. The preservice teachers overwhelmingly believed they had the necessary subject matter knowledge to successfully teach their subject field in the classroom. This analysis in no way implies that content and curricular knowledge is not essential, but it does demonstrate that according to the preservice teachers in this study, different pedagogical skills are in crucial need of development during a teacher preparation program.

Lastly, when asked if their participation in the clinical teaching seminar influenced their approach to instruction, nine (just over half of the respondents) agreed or strongly agreed, and eight respondents moderately or somewhat agreed. However, answering this question, "When I plan instruction, I consider my students' behaviors, attitudes, emotions and the social climate of the classroom," 10 preservice teachers chose "strongly agree," four chose "agree," and three chose "moderately agree."

These data could be interpreted to mean that tending to students in a holistic realm when planning instruction was part of some preservice teachers' pedagogical beliefs prior to entering the program and not resulting from the seminar's influence. This appeared to be the case by their response to a similar pre-study question noted above in the section headed "pre-study questionnaire analysis." Specifically, they entered the clinical teaching seminar course with a proclivity toward pedagogical approaches that teach intra- and interpersonal skills along with content, thereby advancing student wellness. Or it could

imply that they see behaviors, attitudes, and emotions as natural considerations when planning for instruction, but they do not credit the seminar for this pedagogical tendency.

Their responses could also be interpreted to be the result of the natural and organic response to such a question. Student behavior, attitudes, and emotions are ever present in the classroom. Educators can choose to “manage” those affective qualities with a teacher-centered pedagogy (authority and control of the environment), or they can plan a more student-centered instructional approach that accommodates the organic occurrence of emotions and attitudes toward learning in the social context of a classroom in a way that considers the entire student and uses those affective qualities to advance learning, not shut it down.

### **Presentation and Analysis of Interview Data**

There were seven participants interviewed from the pool of 17 teacher candidates in the cohort of the teacher preparation program participating in this study. The interviewees were chosen purposefully, using a convenience sample. The seven teacher candidates were selected by the thoughtfulness in written reflections, seminar discussions, and willingness to be interviewed. Of the seven, three were female and four were male; four were teaching history, one English/Language Arts, and two biology. Two taught in middle school and four taught in high school.

#### **Interview Data Presentation and Analysis: Research Question 1**

Research Question 1: In what ways do preservice teachers enact pedagogical content and relationship knowledge in their classrooms?

The first interview prompt for Research Question 1, candidates were asked: *What classroom factors support learning? Which are most critical to student success? How and why?* In response, the seven preservice teacher candidates expressed two key beliefs

about the importance of affective factors in students' academic and social success: 1) students know they are in a safe place, and 2) a teacher genuinely cares about student learning.

Candidates defined "safe space" as a classroom environment in which students felt comfortable to ask questions; where routines and procedures were consistent; and where academic and behavioral expectations were clear. The preservice teachers highlighted the reciprocal nature of a safe classroom environment by outlining how expectations must be clear for both the students and teacher.

It's basically what we've been talking about for the past year, everything that we've talked about- student/teacher relationships, having clear expectations with the students that are clear to you and clear to them, because it's gotta be both or forget it. (Lillian line 8)

The statement made by the teacher candidate reveals her belief about the need for teacher consistency in setting expectations to create a safe classroom, in this case, an emotionally safe classroom. There is a reciprocity implied in her statement—the clarity of the expectations must be shared in the relationship between teacher and students.

In the interviews, preservice teachers defined caring as operationalized through their relationships with students and promoted in a participatory classroom environment. To these seven preservice teachers, their relationship with students flowed two ways—the positivity of any relationship was initiated by the teacher's instructional approach and how they created a comfortable atmosphere in their classrooms.

Student comfort in the classroom was described by one preservice teacher as 1) defined boundaries in student-teacher relationships; and 2) lessons that found a way to connect content with student interest and sense of humor along with teaching with an

underlying attitude of “we’re in this together.” In other words, there is reciprocity between teacher and students for the learning happening in the classroom.

Definitely establishing boundaries but through relationships with your students so that they know the limits and so they feel comfortable dealing with me and me dealing with them. (Lucy line 2)

It’s not going to be sunshine and roses everyday but we’re going to get through it together and you can diddle-daddle every once in a while, and that’s fine. (Lucy line 12).

As a whole, this group of seven preservice teachers did not talk about pedagogical expertise in their subject matter (PCK) as a classroom factor critical to student learning. These preservice teachers all focused on affective factors in their responses: positive relationships, knowing students beyond just a name, using humor as a way to connect personally, student self-efficacy, empathy, creating clear boundaries and expectations, and making relevant connections.

Well, I think the climate of the classroom is very important. Students should be comfortable in the classroom. No one should feel like they’re going to get bullied, no one should feel like they’re going to be made to feel stupid. I think that’s a big part because if you don’t feel safe while you’re learning, you’re not gonna learn. (Lillian line 4)

Regardless of which affective factors they deemed most critical, the preservice teachers’ responses positioned the teacher as the individual with greatest control over the affective domain of the classroom. Hence, the way the teacher structures the environment and creates the climate of their classroom was deemed by these teacher candidates as having the most significant impact on the potential for student learning.

When considering student learning, many preservice teachers would initially refer to “best practice” instructional strategies such as differentiation, scaffolding/ZPD, and lesson structure. Formative assessment was another way they reported supporting student

learning in their classrooms. The strategies they named were all highlighted and discussed as part of the curriculum in the overall program of studies as graduate students in the immersion teacher residency and preparation program.

Although the preservice teachers identified instructional methods and strategies associated with improving academic outcomes for student learning, they all framed their answers around *knowing* their students, that is, you need to “know” your students if you want to use the methods and strategies effectively.

I think that’s where it comes down to having to know your students. It comes down to knowing and having small conversations with them where you see what that [learning] looks like to them. Because it looks different to all of them. Some of my students are very artistic, they want to depict what they’ve learned. Some of them want to speak it. Some of them want to shout it from the rooftops. Some of them want to write about it, reflect on it, and talk to you later. So, it’s knowing your students. (Zander line 20)

This preservice teacher’s quote demonstrates how the assessment of learning may take into consideration the variability of learners. However, this cannot be done effectively without understanding and *knowing* this variance among the student body in the classroom and to “know” beyond the cognitive.

I think it’s the bread and butter of formative and summative assessing. Like, it comes down to that. And formative assessing takes tons of roles. And just by engaging my students in a conversation about the topic in a way that sometimes they don’t even know they’re talking about the topic I think is a great way for me to assess what they know already, what they don’t know already, what they’re interested in learning about this topic and it creates a kind of objective data collection tool for me to see where they’re at and what their level of engagement is. And that’s going to inform me, not necessarily on how smart they are or anything like that, but it’s going to inform me what they know, what they’re interested in knowing, and what it’s going to take out of me to engage them in the process of knowing this content. And I think that’s a major piece of how I formatively assess. (Zander line 14-16)

This preservice teacher describes using a general pedagogical strategy (pre-assessment) not only to find out what knowledge his students currently possess on a topic but also to learn about their interests to engage them with the content more effectively. He believes it is important to assess what they currently understand about a topic, but he also understands that to engage students more deeply in the topic, he must understand student interest. This preservice teacher is integrating his pedagogy by combining an important pedagogical strategy that supports student learning (pre-assessment) yet also probing to find a way to hook students into the topic by exploring their personal interests and engagement for the content by having what may appear to be informal discussions. This preservice teacher is not only seeking to discover what knowledge his students possess on the topic but also what attitudes and emotions they possess for the topic, that is, what will help make the student interested in engaging with the topic. And he accomplishes this by building relationships via discussions that are more social than didactic.

Using another example from the interview data, the preservice teacher in the quote below explains how he assesses student knowledge and understanding by evaluating body language.

I look around, like, I've known my students for a few months now and I can tell when their mind is thinking and they're trying to wrap themselves up in the information. If I don't see that their faces show that or I don't see them putting any work down or any effort, I'll keep circling the room and make sure to try and redirect them and get them back on the topic. (Theo line 10)

The data indicate a clear connection between the interpersonal skills of the preservice teacher and the ongoing and effective assessment of student learning in the classroom. The preservice teachers in this study repeatedly stated that you need to

“know” your students if you want them to learn. They are describing another way that pedagogy is an integrative construct.

The data illustrate how teacher candidates were beginning to pay attention to the affective domain of learning in their approaches to formative assessment. They are using formative assessment not only to assess what knowledge their students possess on a topic but also to learn about their interests to engage them with the content more productively. They do not rely on quizzes to assess pre-knowledge; they rely on what they “know” about their students via affective qualities, such as behavior, interest, and attitudes. In other words, for these preservice teachers, it is not just what students produce (quiz scores) that tells teachers what they need to know about students’ learning.

These teacher candidates continually expressed that it is not just important to know what their students currently understand cognitively about a topic but to engage them more deeply in the topic, they must understand student interest. For instance, the preservice teachers would describe how their personal relationships with students aided them in supporting students’ efficacy to learn when using evidence-based, “best practice” methods and strategies they were learning in graduate coursework.

How do you support student learning? Well, again, you have to be able to have a good relationship with them- that’s what I said before- because they should be able to approach you with questions and know that questions are valuable and not going to be shot down. (Lillian line 10)

However, the teacher candidates could not identify a name for their integrated pedagogical approaches for formatively assessing students. Their approaches included scaffolding and informally conversing during students’ seat work. Candidates were unsure how to effectively integrate cognitive and affective teaching and learning strategies, that is, how to make their responses as teachers specific to individual students’

emotional preferences for instructional activities that met students' intrapersonal as well as interpersonal needs in the larger context of a classroom setting that is undeniably social. The teacher candidates were uncertain about how to connect what they were doing to support learning to a principle or method learned in graduate coursework.

How the freak do you differentiate? Like it's the buzzword that is the most confusing thing but I know you need to do it, it's the how that's the hard part. So, we end up doing a basic one where you'll go one on one with a student. Like for some of our students who have trouble reading, you need to be there so you can help him or her along. Which again is knowing your students...and supporting them is a big thing, too. Because knowing how to support each student is different, too. Because some students might like this and then some students might not like the way that you support them. It's very different. Because people are different. (Lillian line 34-38)

Lacking a term to apply to their efforts to understand the multiple dimensions of cognitive and affective learning, preservice teachers labeled their approaches "student-centered" and clearly articulated they were aware of affective differences between students. The data communicated how these preservice teachers did not accept a "one-size fits all" pedagogy as being appropriate in their classrooms. For these preservice teachers, the affective aspects of their pedagogy were critical to and at the forefront of facilitating student learning. The data reveal that the preservice teachers were aware of the importance of the affective domain of learning, yet the "how" of operationalizing it in their classrooms was difficult to label, as academic or educational terminology does not seem to exist to describe the construct of an integrated (cognitive and affective) pedagogy.

The preservice teachers in the interviews were unsure how to describe and explain 1) terminology, more specifically, the term "social-emotional" and 2) a nuanced understanding of an integrated pedagogy, that is, the social milieu of the classroom and

personal interests, attitudes, behaviors, and emotions as part of what students bring to learning content. The interview data reveal the preservice teachers either rejected the notion that the affective domain of learning was *not* something integrated in their daily lessons and pedagogical approaches or else they spoke specifically about content lessons that permitted the opportunity for students to connect to content on an intra- and interpersonal level, simply because the lesson topic focused on, for example, a culturally sensitive issue.

For example, in the following quote, a preservice teacher specifies how affective components are integrated daily and are not “special” activities placed in the curriculum. For this teacher, building a safe classroom for learning is a daily piece of the curriculum, part of the content, and something the teacher facilitates daily in the lesson.

At first, it definitely felt weird. Because it was like if you don't trust me, how can you trust that I know what's best and that the classroom is a safe space? It just takes time and practice and part of it is doing it over and over again, so it becomes routine, it's not like we're only going to be focusing on content and then one day we do this crazy let's get to know each other activity and be done with it, like we're never talking about it again or never learn anything from it. (Juliette line 52-55)

It is important to note how this preservice teacher recognizes that building a trusting relationship with students takes time, consistency, and practice. Her use of the term “practice” implies a recognition that the process of trust-building is a skill-based pedagogical strategy. Further, she uses the word “trust” to describe the reciprocal relationship that takes place when it is enacted in a teacher's classroom instructional approach. Trust-building is, indeed, a part of the development of any healthy teaching and learning relationship.

In the following quote, a preservice teacher is uncertain what “social-emotional” means pedagogically.

I don't know, I think of social/emotional growth as being respectful, like being respectful of other people. And so, it wasn't a lesson on that. But maybe the connection is because they were working together, because they were talking with their peers - and they were - that's emotionally growing and socially growing. The way I see emotional growth is more, like building relationships with the students. So, not when I'm up there teaching is when I'm doing that, that's when I'm getting them, like, the content, and we're doing the work that we need to do. But, I see it kind of off line or in the hallways or when I'm walking around during the “do now”; checking in with students, or when I'm meeting with them and parents, or meeting with them and administration or just talking to them when I see them outside the classroom. That I see as emotional, more social-emotional learning. I've been struggling creating that in the classroom while I do my lessons. (Phineas line 26-28)

This candidate recognizes the dichotomy between teacher-student interactions during direct instruction and teacher-student interactions outside of the classroom in hallways, conferences, and individual check-ins during seat work. He is uncertain, perhaps unbelieving, how students can receive and learn the content with a pedagogy that is less teacher-centered and more focused on students making relevant connections to the content and to each other. And although he defines direct instruction as a pedagogy that does not allow for integration of cognitive and affective domains of learning, he does not acknowledge his own efficacy for creating engaging lessons that facilitate peer-to-peer collaboration, positive relationships, and community-building. What is absent is a recognition that there is space for making his lessons an occasion for integrating students' interests, attitudes toward learning content, and building a safe learning environment by capitalizing on peer-to-peer interaction while facilitating his content lessons.

Other preservice teachers in the interviews focused on cognitive and affective pedagogy by acknowledging that this type of instruction is out of the pedagogical norm (from the perspective of their limited experience in a specific school) and therefore is not necessarily part of every teacher's comfort zone. For example, the following preservice candidate offered that if a teacher believes their students can learn from one another and their classroom is a safe space for peer-to-peer collaboration, then the pedagogical approach of the teacher will be more guide-like and use less direct instruction.

That's a tough one. I think it's because social-emotional is so, like, dense when you think about it. I mean, anytime you implement something new it's not super comfortable. Especially when you- I mean, this isn't necessarily for me- but I feel like people would be worried about losing control. And I think losing control's a good thing, they have the opportunity to work with one another and collaborate and kind of learn from each other, and, in a safe place that's all I want. I mean that's the goal of everyone as a teacher is to sit back and kind of be the guide who is going to help them get to the end without just straight dictation at them. (Lucy line 26-32)

This preservice teacher expresses self-efficacy for providing students with an integrated and student-centered pedagogy. Describing social-emotional as "so dense" could be a way of articulating what is not easy to describe succinctly; social-emotional learning is a multifaceted construct not an integrated pedagogical approach that these preservice teachers learned about throughout the clinical teaching seminar.

Two candidates said they were aware that social and emotional issues could arise from their lessons. They did not express that they planned to change their instructional activities to accommodate potentially different responses by students. The first candidate, asked if he thought of preparing for or approaching a self-described "delicate" lesson in any special or different ways, responded:

I think [with] more caution, just knowing that the topics that would be coming up would be considerably more serious and potentially delicate. I just didn't want anyone to feel uncomfortable about the whole thing so that's where the caution was from. The idea that a student might be reading a piece of literature and feel uncomfortable so I wanted to make sure that ahead of time, they knew that that was okay and that we would be talking about delicate topics and it was okay for them to have questions about things they were unclear about. (Emmett line 54-58)

It is clear that this preservice teacher was caring and aware that his content would bring emotional reactions from his students, but he did not plan for how he would manage students' potentially wide-ranging emotional responses to the topic nor how he would support individuals emotionally and cognitively. This approach is an equivalent to "winging it" in the affective domain; therefore, it is potentially mis-educative and could result in an emotionally unsafe learning environment.

A second preservice teacher also did not seem to perceive the need to assess the social and emotional dynamics of her classroom and plan pedagogically for group learning opportunities in which students are presumed to be learning from one another.

I think that most of the social-emotional growth that we end up focusing on, especially in science, is teamwork. That happens all the time. We do tons of group work in our classes because the kids have said specifically they like doing group work. That was something they said on their feedback sheets that they gave us. They really like doing group work, but then we've also tried to make it individual group work. So, even if they do individual work, like when they do their web Prezis they stay in groups, so if they have a question they can ask a friend. Because honestly, they may not be comfortable asking another student, so we have more structured group work and less structured group work. I think group work is our number one social-emotional learning aspect. (Lillian line 54-56)

The above quote demonstrates a still developing understanding of what an integrated pedagogy looks like in a classroom in which the teacher is intentionally planning for the affective as well as cognitive growth of students. The quote more precisely demonstrates a common yet limited view that students will learn to work

together and develop interpersonal skills by being put together to work on academic content in groups. This simply is not how students develop the social and emotional skills to work effectively together on projects, nor does it foster the invaluable opportunity to invite students to be engaged and willing to talk expressively about their ideas and opinions with peers.

Educational research and neuroscience consistently show how misguided teachers are about the idea that students will learn when placed in groups to produce a project or other outcome through collaborative effort. Students must be taught the skills to do so with the teacher's knowledge of how to scaffold activities in such a way that those skills, and a safe space to develop those skills, is created by a pedagogical climate that allows interpersonal skill development to flourish. This opportunity begins when community has been established through the process of getting to know and appreciate each member of the classroom in new and meaningful ways; when trust is actively being developed between teacher and students with uniformity; when students do not fear their own creativity as something to be made fun of; when teachers plan and facilitate lessons that respect the learner, that is, are relevant, student-centered, and fun; when students are comfortable and confident enough to challenge themselves and others; only then can teachers expect that students can engage in the content of the curriculum in a constructive and productive manner. In other words, building positive, productive, and healthy relationships among peers and between student and teacher is a constant and consistent part of classroom instruction so as to allow instructional methods such as group work to be an effective approach to learning content because the students have developed the interpersonal relationships necessary for creating a beneficial learning environment.

In contrast to the previous two teachers, a third preservice teacher was aware that approaching sensitive or controversial topics that exist in the curriculum required previously established trusting relationships with his students. He expressed the awkwardness he felt in teaching this content without those positive relationships established.

At the beginning of the year, I was pretty uncomfortable with it (integrating social-emotional aspects of learning content). New to teaching, I tried to use the information - learn that approach, and as the year went on, we got to know each other a little bit better... I definitely got more comfortable and started to get a little more in-depth with their social-emotional lives, and I think a lot of trust that's built comes in those few minutes before the bell or after the bell where you're not talking about content knowledge or anything, you're just hanging out with the kids and getting to know each other... I feel like if I came in September doing this I would be making some assumptions that I shouldn't have made. (Theo line 36-44)

This preservice teacher was aware that approaching sensitive or controversial topics that exist in the curriculum can be discussed more meaningfully if there is a certain level of trust and relationship built between the teacher and the students. When asked in the interview if he noticed evidence of emotional growth in the students in the learning activity, he responded,

I could tell that they were understanding that gender roles are still around today but pretty much each new year, each day, there's progress, baby steps toward the end goal which is total equality and- um, a few students struggled to understand that, but at the end of the lesson and the beginning of the following day, I think they were more clear on, like, visualizing it and, like, not acting out on those built in stereotypes that they have in their head. (Theo line 62)

He is describing a change in attitude and rising conscientiousness in his students, and he accepts that these kinds of changes take time and are a process. Again, when asked by the interviewer about student interaction during this lesson, this preservice teacher said:

There is the typical teenage kid joke about “Oh, I wish my wife does that” and then a few guys would come back and defend the women saying “Listen, if you expect this from women, you’re gonna die alone” and I was “Oh, wow. Ok.” That kid 100% gets it, and this kid’s still struggling with it, and then with the meme, we came back and had a mini-discussion about it further and they began to understand more and more about equality in general and sexism and even how wide of a blanket topic sexism is and how it’s not just about women, it’s also about gender roles for men, too. (Theo line 68-70)

Like this preservice teacher, the other interviewees in this study did not appear to wholly recognize that there is a need to build not just teacher-to-student relationships but student-to-student relationships for successful learning. Candidates focused primarily on the social-emotional development relationships they themselves built with students in classes. Secondly was candidates’ understanding that assisting students to learn how to be confident expressing themselves in front of peers was also a way to expand content learning in classes. The data indicate that new teachers’ awareness and understanding of the affective domain of teaching is developed over time with practice and conversations, like most professional teaching skills. Preservice teachers will demonstrate varying levels of understanding its nuances and will need coaching, professional development, self-analysis, and self-study to improve how they teach lessons and build productive relationships with students.

### **Research Question 1 Interview Summary**

The data set for Research Question 1 document how these preservice teachers began applying their developing knowledge and understanding of the affective dimension of learning content and teacher/student relationships in the classroom, what the researcher has chosen to call Pedagogical Content and Relationship Knowledge (PCRK).

To be clear, the researcher is *not* likening PCRK as a facet of social-emotional learning nor did the clinical teaching seminar use the term social-emotional learning to describe the pedagogical approaches during the seminar. PCRK was *not* a term used in the clinical teaching seminar. The seminar taught the underlying principles that support student learning, and the assignments were designed to offer a template for integrating their instruction while teaching subject lessons.

Research Question 1 data were consistent in illuminating how these preservice teachers understood student learning to be dependent upon the teacher's attention to affective factors residing in the classroom. The preservice teachers in this study said that "knowing" their students was critical, and they described "knowing" as a social and emotional connection and *not* about knowing the students' content learning mastery. These preservice teachers expressed that knowing students as people preceded knowing students' cognitive capacities. They could also describe how the affective aspects of their pedagogy were important to and at the forefront of student learning. These preservice teachers understood that students vary in their affective differences as much as in their cognitive differences. These preservice teachers consistently indicated that a one-size-fits-all pedagogy would not be helpful to students in the cognitive domain, nor would it be helpful in the affective domain of learning.

At the same time, these preservice teachers struggled in conceiving language or terminology to describe their beliefs about pedagogy. They did not call what they believed to be an effective pedagogical approach "Social-Emotional Learning" or any other term. Three of the preservice teachers specified how they integrated affective factors daily and not as "special" activities placed in the curriculum. They explained how

building a safe classroom for learning is a daily piece of the curriculum, part of the content, and something the teacher facilitates in the classroom constantly and consistently. Although these preservice teachers had a tacit way of describing their pedagogical beliefs about the affective domain of learning, they were all differently executing the approach effectively and consistently.

The data indicated the “how” of their pedagogical attitudes and beliefs were not only difficult to execute due to lack of skill and experience but also because the pedagogical approach was not fully embraced by their school-based mentors. Without more developed knowledge and terminology for the affective domain to guide professional discussions, these preservice teachers were at times uncertain if the integrated pedagogical approach would be validated outside of their program of study.

### **Interview Data Presentation and Analysis: Research Question 2**

Research Question: What role does pedagogical content and relationship knowledge have in student learning, from the perspective of the preservice teachers?

The interview data revealed that preservice teachers understood their role in student learning to be synergistic. This synergy was expressed as a combined effect of “knowing” their students and acting as a guide or facilitator of learning. The preservice teachers interviewed conveyed that there was a considerable amount a teacher needs to know about their students before learning takes place most effectively. The type of “knowing” they described was not exclusive to students’ cognitive capacities. These preservice teachers spoke about needing to know their students on a personal level as well, describing student interests, home life, and real-time emotional condition as examples of what a teacher needs to know about a student before they can attempt to impart content learning in their classrooms.

The data revealed another role the preservice teachers acknowledged they played in student learning—that of facilitator. The preservice teachers in this study described teaching students as sometimes an act of giving content information but always for the purpose of student application and/or discovery. Being a facilitator was described as being a conduit for student learning by allowing the students to receive content information in a way that offers them the opportunity to learn from it and with it. Consequently, the preservice teachers in this study portrayed their role as teachers beyond just the person in the room with all the content information and answers.

As a final point, the preservice teachers in this study deemed the interpersonal relationship between themselves (the teacher) and their students as a critical aspect of a student's agency to learn. Although they acknowledged that a teacher's knowledge of content was crucial, they firmly articulated that how compassionately a teacher developed relationships with students in combination with choosing pedagogical approaches was the springboard to reaching a student's desire to do something to learn content information.

In response to interview question, "What does a teacher need to know about their students to help them learn?" the preservice teachers in this study indicated they contemplate myriad questions before planning a lesson. In other words, knowing something about their students' interests, their learning needs, prior knowledge, and their current social-emotional circumstances was advantageous. The following preservice teacher described how he asks himself questions about how to build a content lesson around both the cognitive and affective qualities his students bring to the classroom before the lesson is taught.

You kind of just need to know your students, all of them, not just the ones with special cases. Who do they work well with? Do they work well in groups or do

they work better independently? What kind of learning styles are they? Do they need to get up and start moving? What are their strengths? What are their weaknesses? Do you have a class that you need to work on reading and writing skills rather than listening and speaking skills? And that all goes into like planning lessons where they can [pause] when you know them you can plan a quality lesson where they can [pause] it can be student-centered, and they can do the work and they can work together and discover the knowledge on their own. (Phineas line 66)

The preservice teacher quoted above not only reflects upon students individually; he considers the social dynamics of the collective group of students to whom he is teaching the lesson. This affective awareness informs his lesson planning. His understanding is clear that this pedagogical approach, including students' preferences and attitudes into plans for their learning, increases the odds that each student will become interested and willing to engage with the topic.

Another preservice teacher stated that a teacher must "know" students if the teacher's goal is student learning. She explained that this "knowing" must become mutual between teacher and students, or it is "useless":

Learn about them. Number one. Interests is the big one right off the bat. Their well-being in a lot of ways [pause] I feel like you just become attuned to them as a person, just like they're attuned to me [pause]. If you're not, if you don't have that mutual thing between each other, then it's useless. It really is. I don't understand how people do it (teach) without that. And so, number one is recognizing that they're human, they have emotions and their feelings and they're kids and recognizing that they have stuff outside of school that is important and affecting them and if you don't, you're doing them an injustice, because you're setting these expectations that are a hundred percent unreasonable, that they can never achieve, so that's like number one. (Lucy line 58)

This preservice teacher not only puts the affective relationship of the student and teacher as the most critical part of her role in facilitating learning; she highlights her belief that a pedagogy that is lacking this element is ineffectual in her efforts to promote student learning and achievement.

Another preservice teacher stated that trust must exist to enable the teacher to develop knowledge of their students' lived experiences outside of the classroom. He offers an example of how language can be used to express a genuine caring for a student's well-being. He offers two negative examples of language exhibiting a teacher attitude that 1) only values a timely product and 2) disregards the inextricably linked affective and cognitive domains of learning.

The big thing I would say is trust, because if a student doesn't trust their teacher to give them this information then they're just not going to do it, they're gonna keep it all bottled up or keep it to themselves. I think you have to allow the students to know that you truly care about what they got going on and it can't just be artificial, it can't just be: "Well, why didn't you do your homework? Give me a reason, right now." It's more like: "I actually care. I really want to know what's going on. I've noticed that you were doing your work for a long time and now suddenly that's dropped off incredibly fast. Is there something going on at home?" Or if a student comes into my class crying: "Do you need to take a step outside for some air? I don't want you to feel like you need to be here. There's obviously something that's gonna hold you back from learning today." (Emmett line 76)

When asked what a teacher needs to know about students, these preservice teachers each stated they need to know what goes on for the student outside the classroom: extra-curricular interests or if they babysit their siblings due to a parent's work schedule. Learner profiles and other cognitive aspects of learning appear secondary in answering this interview question. One preservice teacher took the question of what role she has in student learning to the level of describing herself as a surrogate mother to the students in her classroom.

I feel like you're more of a moderator and a facilitator. And yes, you help with some struggling things. There are some concepts that like, yeah, maybe you might have to lecture on it but then you have them practice it and stuff. It's not like you just say: "Here's the notes and you're done." It's like: "Okay, well we've done this. Now we need to practice" [pause]. I think it's almost like sometimes you feel like a mom, too. Where you're like: "Listen. You're not behaving. We need to

have a chat.” Or like: “Listen, you need to be nicer to your sister.” (Lillian line 68)

A different preservice teacher stated that he has embraced as part of his belief system a pedagogical construct that has been reiterated throughout his teacher preparation program of studies.

The phrase my professors love is “Don’t be a sage on the stage, be the guide on the side”. To me that means that the teacher isn’t an extension of the textbook, they’re another resource for the kids. They’re not telling the kids, “This is what to know, this is what you’re supposed to think, this is what you’re supposed to do.” I think the teacher’s job is supposed to say, “Hey, kids, look. Here’s all these different resources, all these different points of view on this one topic. I want you to dive into it. I want you to form your own opinions about it, because I’m not going to tell you what to think. I want you to form your own opinions. My job as a teacher is to present you with the information, not force it down your throat.” Yeah, the teacher provides opportunities for them to express what they’ve learned and show what they learned and even opportunities to, um, struggle with it. (Theo line 74-76)

In the above quote, the preservice teacher defined his understanding of “guide on the side” as a pedagogical belief that students can make meaning and relevance of content by exploring their own ideas, attitudes, and opinions about a topic. This is how he believes his students learn the content he is responsible to impart. The catchphrase, “sage on the stage,” is noted as a favorite saying of one of this preservice teacher’s professors. This truism reinforces what the data is revealing in the interviews. Teacher candidates essentially do take away what is reinforced. When phrases, such as, “sage on the stage,” are repeated and emphasized through coursework and field-based application, they become more than just empty mottos; they have potential to impact candidates’ choices of instructional pedagogies.

Another preservice teacher offered an additional perspective on the importance of understanding interactions between the content and affective dimensions of teaching and learning in the classroom.

A teacher needs to be able to express not only content but skills. And so much of that is like, you know, “I’m telling you what the information is, now you have to work with someone or work with yourself or work with people around you to figure out why we’re learning about this, like the mortise of this kind of thing. Um, so it’s like giving them the skills and space to grapple with ideas and giving them the ideas to grapple with. It’s really not so much about having them reiterate information [pause] or regurgitate it on a test. (Juliette line 73)

This preservice teacher is expressing the need to teach skills, specifically inter- and intrapersonal skills, so learning is “mortised” (meaning bonded together). In other words, she is stating that content cannot be made meaningful (to students) until students are given the opportunity to engage with the content themselves and in connection with others to bring forth the content’s relevance.

Another Research Question 2 interview prompt asked the candidates: “*Who defines what your students learn? Who should determine what is learned? Why?*” This prompt was intended to examine how preservice teachers viewed their role in determining what is learned (curriculum) in their classrooms and who should determine what is learned. One candidate replied:

The students. Well, the students to an extent. Because they want to learn about something that is relevant to their lives. I picture that applied like students saying they don’t want to learn about the industrial revolution, they want to learn about G-Unit or something [laughter]. There’s an element of both. But that’s me also thinking about kids, like pulling them through the mud of something, like my content. Because for the most part, especially at the beginning of a unit, they don’t want to do it yet. So, once they’re into it, once they understand that it can be engaging [pause] that’s when I want them to take control. (Juliette Line 85)

This preservice teacher understands that students may not be immediately excited to learn some topics in her curriculum but acknowledges her role in that reality to be the

one who induces the students through the “mud” of content until they are engaged enough to want to learn it. At this point, she trusts students to find meaningful and relevant ways to connect with the topic:

It’s up to them, you know, theoretically to guide their own decision of where they want to go with it, what they want to focus on. What they think is their ultimate understanding of it. As long as they like including me in all that [laughter].  
(Juliette Line 93)

This preservice candidate’s approach supports learning as a shared endeavor between teacher and students. Students are valued as contributors in learning, not just receivers of the content to be learned. Students are active participants in and co-creators of the learning environment with the teacher acting as the guide and facilitator.

One preservice teacher delineated his answer to “Who determines what is learned?” question would be in an “ideal” world versus the real world answer as demonstrated in the quote below.

I’m going to start in an ideal world, the students would be, you know, getting together, and the teacher, too. The teacher’s there and decoding what do we want to learn? What do we want to explore? What problems do we want to learn about, and what problems do we want to change? I think the other disciplines who have the state testing and just need to stick to those standards, that’s awful. But social studies kind of has a healthy balance of we’re going to have some standards but, balancing that with what the school wants, what does the teacher want and what kind of learning are the students into. So, I think social studies right now has kind of a healthy balance, but I think ideally, there’d be more student voice and student choice. (Phineas Line 80)

The above quote articulates the reality of top-down mandates in modern public schooling. Teachers are constantly making pedagogical decisions around a combination of factors, most that are not within their realm of control. The influence that these factors, especially high-stakes testing, have on teacher decision-making is real.

Another preservice teacher offered her perspective on federal- and state-mandated curriculum standards and how a high-stakes summative assessment impacts the topics students learn and how they must be taught:

Oh my gosh. I'm not going to lie. The state's high-stakes test does! As unfortunate as it is, it does and I know that it does not say specifically how you teach it [pause] but I feel like it determines how they learn it and how they practice it. (Lillian line 76)

As a group, the preservice teachers in this study are cognizant that the curriculum and the standards are entirely out of their control. The certainty of this directive is clear for this preservice teacher.

The school determines what students learn and that's through what the district wants them to learn and that's through what the Common Core and State Frameworks want the students to learn. And, based on my limited teaching knowledge, that's okay for me. (Emmett line 82)

At the same time, this same preservice teacher noted the importance of giving educators and students input in determining what students learn:

I think it's tough when they tell you that you need to learn certain topics or need to learn certain books or different materials in the classroom. And when that becomes difficult, I think that poses an issue because I don't think that they understand the way your class dynamic works, they don't know how much stuff you'll be able to get through and I think sometimes you have to either rush through things or just get through a unit. So, I think at that point, it should be up to the teacher to determine based on what skills the students have, what skills they need to learn by the end of year, and how best I am going to make that happen. (Emmett line 82)

This preservice teacher recognized his students' agency to learn before choosing the materials, resources, and pedagogical approaches to use in teaching mandated standards. This preservice teacher announced the dilemma he faces trying to teach pre-determined topics without the benefit of considering the instructional time available, interests, and previous knowledge which often do not line up to produce the expected

learning outcomes. What the educational system expresses it wants and what the students and teachers can accomplish are not always the same thing. If students and teachers had greater input, more learning could happen.

Like the preservice teacher above, all the candidates in this study articulated that they had little autonomy over state standards and school district curriculum. They all recognized that content standards, and thereby the curriculum, were not in their control. However, each participant wished for teachers, students, parents, and the local district to have more choice in the required curriculum.

I think the students should have some say in what they learn because it's their education. They should have some sort of say if we live in a democratic nation. Shouldn't our schools who are essential to living in a democracy also practice democratic teaching practices? (Theo line 114)

The preservice teachers in this study adopted an unrestricted belief about what might be included in the curriculum, encouraging input from several constituencies, not from just one entity, especially one that is disconnected from the daily lives of teachers and students.

Knowing what students would be interested in would be a great way to define curriculum and to set up a curriculum because it's all of the topics that students want to hear about. Engagement would go up, and student connections to the teacher would go up because they're on the same page. So, I think in a perfect world more student understanding of what they're going to learn would be wonderful [pause] because just like our students are different people and interested in different things, so are the teachers. And I'm going to tell you I'm a much better teacher about things that I'm interested in than I am about things I'm not. It's just human nature. (Zander line 93)

To further explore the multiple dimensions of Research Question 2, the researcher used an interview prompt featuring a metaphor for learning in classrooms and asked the candidates: *"If there were a recipe for student learning, what would be the most important ingredient?"* Candidates responded that teachers need to create a learning

environment that has all the necessary “ingredients.” For one candidate, the key ingredient was the idea of “Love.”

**Interviewer:** In terms of a recipe for student learning, are you saying that it’s important for your students to feel loved? Or is it more for students to love?

**Candidate:** Both.

**Interviewer:** Why so?

**Candidate:** Well, it just makes for a nice happy classroom, knowing that their teacher loves them, cares about them. It’s hard not to love someone who loves you. And thinks that you’re like amazing and capable of so many things. It’s hard not to feel good towards that person. And to believe in yourself, as well, it’s contagious, almost. And if they love each other, and that again, brings in so much positivity and potential. Like, they can access potential in each other, instead of not collaborating with each other, not caring about each other, it’s just like why are you going through high school by yourself [laughter]? It’s so sad. (Juliette Line 149)

For this preservice teacher, love is at the core of student learning. It is not just love as an ephemeral notion but as a lasting action in the classroom. This gesture of love is reciprocal among all parties and results in a learning process that brings not only joy to the classroom experience but also the self-efficacy for learning.

A second preservice teacher’s response to the key ingredients question focused on the significance of cognitive safety to student learning when he alluded to making sure the content is “just right” in the level of challenge presented through instruction.

What comes to mind is interest, but it is actually engagement. Does the student have work that is at a level that challenges them and pushes their thinking but is also easy enough so they can get engaged? A student’s going to learn if they’re engaged, if they want to learn, if they want to be there. A student is not going to learn if they hate going to math class, or they don’t speak the language the subject’s taught in and the work’s way above their level. They’re just going to shut down and not learn anything. Other recipes for learning are the kind of bigger, whole child; you need to be healthy and ready to learn; you need to have a quality instructor in front of you that plans good lessons. (Phineas line 88)

The candidate further commented that in the absence of physical health and safety, student learning is difficult to accomplish.

For a third preservice teacher, the concept of a student-centered classroom that placed responsibility squarely on the teacher's pedagogical approach was the crucial ingredient for successful learning.

So, the first ingredient would be student engagement. So, teaching things that they're interested in in a way that's interesting. Stand and deliver doesn't work. So, finding something that does work, and not for you, something that works for them. Next ingredient, student-teacher relationships. If I'm not having fun then they're not having fun. The teachers that I loved the best were the ones who came in on the worst days and were still enthusiastic. Because the teachers that come in and are miserable, you're just like: "Why are you here? Why am I here? Like, this is stupid." It's student-centered; it's student learning, it's not teacher learning. I know this stuff. Like, I'm not here to show you how much I know. Like, that's not my goal at the end of this. Like, the goal is for you to show me how much you know at the end. (Lucy line 126-130)

For this preservice teacher, learning is to be designed for student engagement (based on interest), and she posited that learning cannot occur unless the teacher's relationship with students is emotionally positive.

Not all preservice teachers were self- or teacher-focused when it came to defining the most important ingredient in student learning.

I'm thinking accountability; responsibility for sort of flipping the script. I would put a lot of that on the students just based on what I've seen with students who come to school ready to learn, or ready to even attempt to do school. I know that we always learn that if a student's not learning, it's truly the teacher's fault but there are students that come to class without a pencil, without something to write on, without a mindset that 'this class is even worth my time', and they'll just come in and put their head down. And that could be based on a whole number of things. But I'm thinking that students need to be ready to learn when they come into the classroom and it's a real struggle for the teacher when students completely shut down, and it's not the lesson or the quality of the teacher. (Emmett line 96-98)

Although this preservice teacher expressed the main ingredient for student learning is personal accountability and responsibility of students, his attitude may be

derived from disappointment about perceived student apathy rather than from blaming students for not learning in his classroom.

I have one class that's particularly difficult because it's a second English for these kids and you sometimes hear the "I don't care" expression. That's like heartbreaking because you know they do but that's just like the easy way of shrugging off the idea of school by saying, "This isn't something that I care about, this isn't something that matters to me." But at the same time, you know it does because they made the decision to come to school and walk into that classroom, so something told them that it is worth it for them. (Emmett line 106)

In summary, when discussing the most important ingredients in student learning, engagement, accessibility, and student interest were common components of the ingredient list. However, when pressed to choose the most essential ingredient, like yeast in bread-making, this preservice teacher stated the following:

I think for some students the most important part would be that they have to feel safe - they have to feel loved in that classroom. But I think for other students, it depends, because there are some students that are more goal driven, purely about getting a good grade. But then again, it goes back to feeling that safety and that student/teacher relationship part because if I didn't get it and it wasn't accessible, if I trusted in that teacher I could've asked- but some of those teachers- I remember having professors that scared the crap outta me. So, I guess it does come down to being-feeling safe in your environment and being able to talk to your teacher. (Lillian line 148-152)

This preservice teacher listed several ingredients but as she thought out loud, each one came back to the same indispensable ingredients: feeling safe in the classroom environment and having a trustworthy relationship with the teacher. As this preservice teacher internally debated her ingredient list, personal recollections circled back to the same fundamental element in the recipe for student learning—safe relationships.

When sharing his recipe for student learning, this preservice teacher noted the symbiotic relationship between students and teacher creating the possibility of learning in a classroom.

Teacher and student drive. And what I mean by that is I think the most important ingredient for student learning is both the teacher and the student having a passion

for wanting to be involved in the learning. And that's not necessarily content specific, that's anything. (Zander line 99)

The candidate continued and elaborated, recognizing that the mutually beneficial drive generating the opportunity for learning is human connection.

Right next in line would be understanding a human connection... It's a two-way street. Have your students remember that you're a person too? And it's not about my feelings or anything like that. But knowing that I'm a human being that learns and engages and has feelings and has opinions and has ideas and frustrations. I'm not a computer, I don't spit back that you got five answers wrong. I spit back that: "We can work on this. Let's do this. Let's try that". It's a different kind of connection. I think it's easy for students to forget the interaction is a two-way street. So, understanding that communication and understanding the human aspect of learning, I think is critical to having a good classroom. (Zander line 105)

To this preservice teacher, linking teacher and student is equal in the sense that both parties share not just information or knowledge but as he described, "passion" for joining in the process of learning with shared enthusiasm and effort and that this process cannot be accomplished without, as he described, "a different kind of connection."

### **Research Question 2 Interview Summary**

The interview protocol for Research Question 2 explored the roles the preservice teachers perceived that they play in student learning. To summarize the data as analyzed in this section, these preservice teachers viewed learning as a shared endeavor, with student interest, engagement, and relationships at the center and with the teacher acting as a guide or collaborator in the learning of content. They believed students should be offered choices of what is learned and how it is learned. They believed the student is valued as a meaning-maker, not a receiver. Finally, they believed that learning is more likely to happen when there is an aspect of emotional safety in learning and a passionate, shared love for the experience of learning with peers and with the teacher in the classroom.

### **Interview Data Presentation and Analysis: Research Question 3**

Research Question: In what ways does teacher education coursework influence preservice teacher's development of pedagogical content and relationship knowledge?

Research Question 3 data elucidates how the preservice teachers regarded their coursework in the clinical practicum seminar as an influence on their instructional practice, both at the time the interviews were conducted during the last two months of their teaching residency and in their future as professional educators. The data were analyzed for how preservice teachers reported their plans for future use of these pedagogical methods and strategies learned in the seminar course.

The first interview prompt for Research Question 3 asked candidates: *How did the content of the clinical teaching seminar influence your instruction of your subject matter? What will you do differently, in your instruction, in the future?*

For some preservice teachers, the notion of student social interaction and engagement as a process for learning (espoused in the clinical teaching seminar course) was embraced but still not fully integrated from the foundational structures and routines of the classroom. As the quote below exhibits, this dual reality may be assimilated from the mentor teacher.

I think it was cool because that seminar class is kind of like- what I got out of it was my class needs to be fun and engaging, students need to work with their peers, be interested, like that's the key. And then in my field work (classroom-based teaching), my mentor teacher likes the classroom to be structured and have routines so that we can - they can, like- and they still, you know, here's the thing, you still have pair-shares, you still have group work so you're still interacting in my mentor teacher's classroom, but the kind of way I learned in the seminar is more student choice, freedom kind of engagement, interest, fun, like, fun. So, it was great for me to see that way as kind of like two, I don't know, birds in my ear. (Phineas line 96)

The quote above highlights the divergent pedagogical philosophies that preservice teachers confront between live classrooms and university coursework. One difficulty this issue presents for teacher education begs the question: How do preservice teachers get the opportunity to explore different instructional approaches in their preservice training? And another is how do preservice teachers gain the pedagogical freedom to learn to trust affective factors of learning to be indispensable to producing academic results without ignoring the importance of classroom structures and routines?

This same preservice teacher continued:

What my hope is for the future is to bring in more of this, like have more fun, make it engaging, really student-centered but also have structure and have those routines so that students feel comfortable coming into the class, so they know the expectations of the class. But, during the activity, there's gonna be a little volume, we're gonna get our hands dirty and kids are gonna enjoy it. So, like trying to balance those two is the goal. (Phineas, line 100)

This preservice teacher is embracing the integrated nature of instructional praxis by choosing to listen to “both birds in the ear” (that is, mentor teacher and university coursework) simultaneously. Teacher educators must anticipate that the common instructional methods practiced regularly in many classrooms reject social and student-centered pedagogy as likely to produce a loss of order and control. For the preservice teacher who also accepts this standpoint, testing new ways of approaching instruction can be daunting and scary to attempt. As stated in the quote above, the mentor teacher appears to create the dichotomy.

This preservice teacher concluded that structure and routine are things that he will include in student-centered, socially engaging approaches to learning. What is missing for this preservice teacher is the idea that structures and routines can be top-down and authoritarian, or they can be co-created and upheld by both students and the teacher.

Finally, he gives the impression that his take away is he can balance both “birds in his ear” by enacting an instructional approach where affective and cognitive considerations are interdependent pedagogical constructs, even if he believes that structure and routines cannot be part of a student-centered pedagogy.

Preservice candidates cited additional ways the pedagogical approaches presented in their graduate coursework diverged from the reality of their day-to-day field-based experiences. They experienced tension between what they were exploring in coursework and what the cultural ethos of their schools disclosed as protocol, for example, how to handle a student's emotional state; “team building” as a start of the year routine not an ongoing, dynamic part of classroom culture; and/or punishing academic lag vs. collaborating to support effective effort. The tensions expressed in the interviews were mostly centered in the affective domain. For example, this preservice teacher was asked what she might do differently in the future, based on what she deemed as a takeaway from the clinical teaching seminar course:

The first one is community-building. I took over the class and within a month of taking over, a kid showed up to the class and a student walked in and said, “Oh, we have a new student,” and the student had been there the whole time, like for three months! It hit me like a brick—that cannot happen. So then after that I was assigning groups so they’re actually trying to get to know each other but it’s hard mid-year to be like, okay, let’s do a team building exercise. And it’s interesting. In the beginning of the year, they say to build community, don’t worry about content. And then in the middle, they say, don’t build community anymore, focus only on content. But you can do both simultaneously. You can focus on content while building community. (Lucy line 164)

In this instance, it is clear that the school policy or teacher mentor is directing this preservice teacher to decouple content learning from community-building in the classroom. The social aspect of the classroom is either relinquished as something to get through before learning begins or something that is not integral to learning itself. For this

preservice teacher, integrating social interaction of students with content-specific instructional approaches or methods and doing so throughout the year, was a key takeaway from her graduate coursework.

Regrettably, these tensions between the practices of schools and teacher/mentors and the emphasis of graduate coursework often left preservice teachers confused and unsteady in their convictions about their choices used for problem solving student issues, whether academic or personal. However, their choices were especially unclear when the messages received by field-based mentors were conflicting, especially about addressing students' emotional states.

I don't know what's appropriate and what's not appropriate still. The teaching I know, but the language- like the interactions I don't know. I don't know what I'm allowed to do and what I'm not allowed to do. Because you're not necessarily taught what's appropriate and what's not appropriate and it's different in every context with every student. And some teachers are like, just let it go. And there are some teachers that will be like, no, say something if you want to, do what you feel is right. (Lucy line 224)

When graduate coursework assignments have a particularly powerful impact on preservice teachers, this tension can be untenable because there is no space for ignoring a student's emotional trauma once preservice teachers understand the negative impact of not reaching out to a student in a way that prioritizes mental health and wellness over content specific learning tasks in the classroom.

The last article we read, I wish we had read it in the beginning of the year. It was about poverty in the classroom and if you're a human, you have to be compassionate, you have to understand where these kids are coming from. If you don't, then you shouldn't be doing this. Because, like, I can tell right off the bat if somebody's not feelin' it. I'll immediately go over and be like: "If you're not feeling well today or you're like in a bad mood or whatever's going on, that's fine. I'm not gonna expect you to be happy in here. Like, just try to do the work if you can. Talk to me. You can go on a walk, you can do what you need to do." Because if there's no connection then it doesn't make sense to be doing this job. At all. And reading that article I was like God, I wish I knew this stuff in the

beginning because when I read it I was like, oh I could've done something. I would've done this. (Lucy line 152)

The article (Jensen, 2009) referenced in the quote contained research about how students bring emotional trauma into the classroom and its effect on academic performance and the brain's ability to perform cognitive functions. The data revealed several candidates citing the significant impact the article made on their pedagogical approach to their management of students displaying emotions and behaviors not conducive to learning. There was a strong connection between the impact of the article and praxis. The article matched the context within which these preservice teachers were working and was obviously highly relevant to their daily experiences with students. For these preservice teachers, being told to ignore student emotions was not feasible after reading the article.

As a way to continue exploring the impact of the clinical teaching seminar, the researcher asked candidates to respond to the following interview prompts: *Much of the focus of the Spring Seminar course was on pedagogical practice that embraces a belief that posits learning is not just a cognitive experience but involves emotions and the social context. What has your experience been with this exploration (what have you learned, what have you embraced, what do you reject and what role do you see it playing in your teaching future)?*

For several of the preservice teachers, a significant takeaway from the clinical teaching seminar was adding student movement into their lesson activities.

I try and get the kids up and moving and walk around and get partnered with someone they usually wouldn't be with. (Theo line 160)

While describing the benefits to having students move more in their classroom, he noted the effects of facilitating students to partner with people who are not necessarily a friend.

They were productive. The chatter got out of hand a couple times because their friends were right next to them so they started to talk to each other across the class but I'd just walk through, redirect them, get them back on task. But it's in the hands of the teacher and the students of how we partner up. It's not all on one person or the other and it's not me dictating who they can work with. I see it as more of a fair way to do it. Because it leaves it up to chance. So, it's fair. And working with a new student; with a new classmate, I think can only bring new ideas. Because if you work with the same person over and over they're gonna bring up the same ideas over and over. (Theo line 200-202)

Equanimity is seen as the leverage for developing more varied and productive peer-to-peer engagement. And his willingness to step out of a pedagogical comfort zone is not contingent on student compliance. Student engagement is equally shared by the creative facilitation (novel ways to randomize selection of partners and physical movement during learning activities) of progressing students into new partnerships but is likewise dependent on students trusting that they are not being forced into something socially awkward. This preservice teacher had success in trying this new approach (student movement and random partnering) by focusing on emotions and the social context along with cognitive content.

The data reveal physical movement of students in the classroom is perceived as something outside of pedagogical norms to these preservice teachers. One preservice teacher described how teaching a lesson for which students were up and out of their seats, interacting on both a physical (social) and cognitive level, was out of his instructional comfort zone.

The readings on the *Inspired Teacher, Inspired Learner* book by Jenn Stanchfield. Those readings were wonderful for me because they broke me out of my comfort

zone into doing some things that I wouldn't have necessarily tried before. I taught a lesson where the students were interacting and shaking hands and having a discussion and then moving again—the movement of it—the physical movement of it, that was intimidating to me, and that wasn't intimidating to me because of the process. It was new and time, you know? I don't have a lot of time. So to plan, to orchestrate that- it's so vast. So by the time I plan and orchestrate and get something like that going, the amount of time I actually have to execute it and then reflect on it has to be precise. But that was a big part- that was something that I think was great. (Zander line 131-137)

The data suggest that time is a decision factor in a teacher's pedagogical choices.

Clearly, this preservice teacher's experience with planning, executing, and reflecting about the usefulness of this approach revealed how the approach was not as time efficient as other types of instructional approaches he typically adopts for daily learning. This preservice teacher stated that the “newness” of this way of teaching was professionally intimidating. However, the reading from Stanchfield's (2014) book and the associated graduate course assignment requiring students to try something they had not implemented previously demonstrated how coursework can impact a preservice teacher's instructional choices.

In the interviews, one candidate discussed how sharing lesson plans and observing each other's classrooms—another area of content from the clinical teaching seminar course—impacted his thinking about teaching and learning.

I think what we've been doing is sharing more lesson plans with each other across subject matters and it's not necessarily about what is being learned, it's just about the different teaching activities that can be done to help differentiate the lesson or try to engage student learning. I'd say that's really affected my teaching the most as of late. (Theo line 160)

I'd try and observe more cohort members, earlier on. I think it would be really helpful and really beneficial if I could go see the English teacher, the Biology teacher, and see what kind of activities they have their students do and see if I can translate some of that over to my history class. (Theo line 166)

A consideration for teacher education: This type of peer observation in teacher education could be a lever for reluctant preservice teachers, especially when exploring new pedagogical approaches. The reading and assignment were purposefully designed to support all preservice teachers hesitant to try uncommon instructional approaches as a scaffolded learning experience so as to build confidence for planning and executing uncommon instructional approaches. It is important to point out that these preservice teachers did observe multiple classrooms of varying subject matter during the pre-practicum phase of the teacher preparation program, yet they were not “seeing” learning activities as transferable to their content.

As part of Research Question 3, the researcher used two additional interview prompts to explore how the clinical teacher seminar impacted the thinking of the candidates about their future roles in schools: a) *What will student success look like in your future classroom?* b) *What have you learned from your students that you will take with you into your classroom next year?*

The clinical teaching seminar focused on offering preservice teachers an opportunity to develop a pedagogical toolbox that posits learning as a cognitive experience involving human emotions, academic content, and the social context of the classroom. The interview data unearthed these preservice teachers’ experience with exploring and implementing such an integrated pedagogy, including embracing or rejecting from the seminar content. The preservice teachers were asked how what they learned in the seminar would play a role in their future instructional practice.

What I accept is that kids need to be in a good emotional state to learn...And I need to plan accordingly to make sure that they catch up in whatever way. These are things that I’m gonna take with me. It’s not like next year I’m gonna be like, I don’t care about my kids’ emotions anymore-doesn't apply. I’m definitely gonna

think about that every new year, every new kid, you know, where are they at emotionally and mentally. Are they good in my class right now? How can I make sure that they're good in my class right now? (Juliette line 216-220)

This one preservice teacher clearly stated that she has no doubts about the level of consideration that student emotions will have when she plans instruction in her classes.

The other preservice teachers were more cautionary in their reports on how their learning from the seminar would be used in future teaching practices. The two following quotes are examples of the real world obstacles these preservice teachers imagined bumping up against when starting their careers.

I wish this class had more practical ways that things can be done about real academic content. What I got from it was, okay, yes, here's the science that supports it, when students are having fun they learn, when they're engaged, they learn better, yeah, I accept that. But the practicality of it...I don't wanna say it's revolutionary, but it's not the typical pedagogy of what you see in your schools, you know? It's not the way things are done and it's also a lot more work for teachers. I mean those high energy classes, it takes a lot of energy as opposed to, "Okay, let me model this, now you do it, okay, do it together, okay, debrief, done". I see the importance of it, I just think it's difficult to put into practice and I think it takes more energy to put into practice. But the energy thing wouldn't really stop me, if I created this bomb lesson, like I would do the bomb lesson all the time instead of doing, like, the textbook stuff. (Phineas line 120-124)

I'm not saying that social-emotional learning and the whole pedagogy behind it is not going to fit in, but sometimes I feel like it's hard to fit it in. And in this aspect, in clinical (independent teaching practicum), I know we're given a lot more leniency, but only to an extent. I mean, there's still people that are checking in to see that- where you're at and what you're doing and there's only so many times you can say: "Well, I'm doing this because I learned it in my class and I'm trying it out." Before they say: "Yeah, that's not gonna work. I've tried it before, it doesn't work." But, I think that it's just hard because I don't fully understand how to implement it in a lot of ways. (Lucy line 240)

Their statements reveal that they believe an affective learning pedagogy has merit, but they anticipate the following challenges: the instruction will be in conflict with school-based pedagogical norms and the pedagogy demands extra time, energy, and teacher planning and preparation.

Despite these concerns, one preservice teacher expressed that he would teach with student emotions in mind “all the time.” His statement demonstrates the very real fact that to execute an integrated pedagogical approach takes knowledge and deep understanding of the research supporting the effectiveness of the pedagogy and an extensive instructional toolbox to integrate strategies to teach academic content. This is an obvious challenge to anyone new to the classroom. Expertise in effective pedagogy takes deliberate practice, knowledge, skill, and trustworthy relationships that allow the teacher to deeply know students holistically.

The exposure to content in the seminar inspired another preservice teacher to spend more energy in the affective domain with students.

You’ll never know as much as you’d like to know about the students and that’s because you don’t live their lives and also because you come from a different background as them. So, the idea that you need to continue to learn about them as much as they’re learning from you, like you need to figure out more about what’s going on with them. And I feel like sometimes I don’t give them the opportunity to reflect on their own lives or talk about themselves and I think that needs to happen more. That needs to be more built into what I am trying to get across. (Emmett line 160)

In the quote above, the preservice teacher’s statement is about an article he read in the seminar. His reading influenced his understanding of how lives outside of the classroom impact student motivation to learn and why some academic content becomes relevant or not to students. He spoke about how his pedagogy must be mindful of the realities students face on a daily basis, positive or negative. He appears to understand that to gain students' personal investment in classroom lessons, teachers must recognize and integrate student lives outside the school.

Other preservice teachers stated that the affective factors existing in the classroom were an obvious part of the learning environment, and it was important to acknowledge how students' emotional states influence learning.

I mean, Maslow's hierarchy. I already knew it but having it applied in this context is different. I feel like you shouldn't have to argue for social-emotional because based on Maslow's hierarchy, if you want them to have cognitive, you need to have all these other needs met first. So, I think that's huge, just as a support for social-emotional learning. We learned a lot about techniques and how to make sure you're incorporating it. I didn't really think of group work as social-emotional learning until, maybe this practicum or the last practicum- honestly, they kind of merge for me. I feel like a lot of the stuff we end up learning is stuff that you kinda know but you need to be told. You already know it, it's in the back of your brain, and then you're like, that's right, that makes sense. (Lillian line 178)

Unlike the preservice teacher above, the idea that learning is an integrated experience in both the cognitive and affective domains was something unconsidered for this preservice teacher. Until he was exposed to theories and pedagogical strategies that supported this approach to instruction, it was not part of his instructional repertoire. Through coursework, he became more aware of factors affecting learning and began to reflect on his own experiences as a student, realizing the difference it might have made in his K-12 and undergraduate education.

I mean, the emotional context being part of the cognitive experience of learning. I think it's more critical than I thought it was. I never experienced or thought I experienced learning as a social/emotional experience. But having learned a little bit more about it, and reflecting on my own experiences having been a student- and I'm not speaking actually about my graduate experience, I'm speaking about my undergraduate and my high school experience- I think if I had had teachers that were able to connect with me as a human being, as a person, and my interests...what if I had had some of those teachers? I think that my experience in school would've been different. (Zander line 149)

Finally, Theo, the pedagogical message of the seminar landed squarely on his instructional bullseye:

What I've learned is that social-emotional learning goes hand in hand with the cognitive learning and the content knowledge. I don't think you can separate them and that's one thing that I've embraced. (Theo line 206).

Possibly, the most significant ideas culled from the data were statements the preservice teachers made about what they learned from their students and what their perception of student success became.

I come back to it, they're human beings. They're people. I knew that they were people but you don't really, until you interact with them, you don't know what it's gonna be like. Like I'd never interacted with a class of students before. They are dramatic teenagers, but they're also serious human beings and I think tapping into that humanity was something that was easy to say but not easy to do and not easy to recognize right off the bat because when you're first coming in, you're terrified... That was the major takeaway, that they're cool to be around. They're not scary, they're just wonderful people that are working themselves through their world... I'll start teaching with less fear and more excitement for meeting a whole new group of wonderful, annoying, fantastic, challenging, irritating, fantastic people. They're all of those things and I think that's just being around people. (Zander line 213-217)

According to the above preservice teacher, classroom instruction requires that the teacher deal with humans who are growing and changing not just cognitively but socially and emotionally. Clearly, the structural environment of any classroom is based on the co-existing humanity and the relationships occurring within.

Finally, for this preservice teacher, her idea of successful teaching before entering the preparation program was unlike how her present definition of impactful instruction:

I'm like automatically thinking that they're happy. That's so weird- it's just- I know that like a year ago or going into this program I would've said: "They all have As!" And now I'm just like: "I don't even care." I mean, I care- because I want them to learn, but- I said this to my classes the other day, I was like: "In five years from now, if I see you at a store, I don't care whether you know the equation for coy respiration. I care that you learned skills from being in school that helped you be successful in your future." I don't know if that answers it. I feel like it does. (Lucy line 266)

### **Research Question 3 Interview Data Summary**

The interview prompts for Research Question 3 explored the preservice teachers' efficacy for practicing an integrated pedagogy as professional classroom teachers. To

summarize the data as analyzed in this section, the interview data revealed how preservice teachers are not only discouraged to use an integrated pedagogy (equally focused on affective, social-emotional, attitudinal, and behavioral considerations) because it is outside the norm but are told that it will not succeed in their classrooms. The challenge for teacher education programs that promote new pedagogies is the conflicting pedagogical practices that are the standard in the educational climate of the school, and perhaps more importantly, the attitudes of the mentors. The challenge for preservice teachers who would like to engage students differently is they are novices, typically in short supply of the skills, experiences, and confidence to continue to explore alternative instructional practices.

This chapter presented the data and analysis of the results from this study. The next and final chapter will draw conclusions and make recommendations based on the findings in this chapter.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

This study explored the impacts that teacher preparation coursework had on preservice teachers' capacity for integrating the cognitive and affective domains of learning in their instructional practices, a new teacher education concept proposed by the researcher called Pedagogical Content and Relationship Knowledge (PCRK). The study specifically focused on which aspects of the teacher preparation program's clinical teaching seminar were most influential in helping teacher candidates develop symbiotic learning relationships with middle and high school students. Chapter 4 reported on the data from the individual interviews and the pre- and post-study questionnaires. Chapter 5 presents the conclusions based on those results followed by recommendations for teacher educators who are interested in integrating the affective dimensions of teacher/student relationships in their teacher preparation coursework. Those recommendations will focus on preservice teachers' development of instructional practices that embrace both the cognitive and affective domains of learning and teacher preparation program practices that adopt PCRK as an essential knowledge base for educators.

#### **Overview of the Study**

Seventeen preservice teachers participated in this study, all members of a school system-based and university-sponsored one-year urban teacher residency preparation program. The program included 36 credits of graduate level courses and a full academic year of teaching in a public school secondary setting (grades 6-12). The school-based portion of the teacher residency preparation program included three phases.

1. Pre-practicum (the initial phase) occurred during the first six weeks of school comprising structured and targeted observations in a variety of classrooms as well

as micro-teaching (instructional experiences with experienced educators and independent teaching observed by university faculty and peers with formal feedback provided).

2. Student-Teaching (the second phase) was a 14-week student-teaching practicum.
3. Clinical teaching (the third phase) began after the preservice teachers had completed student teaching and continued until the final day of the public school year. During this phase of the school-based portion of the program, the preservice teachers assumed the classroom's lead instructional role in planning the curriculum, instructional methods, and assessing student learning. The preservice teachers were responsible for teaching two-thirds of the mentor teacher's regular load (or three of five classes) during this final clinical teaching stage of the university-based teacher preparation program.

Data were collected in a 3-credit graduate seminar during the third and final practicum experience (clinical teaching). Study participants filled out a pre-study questionnaire that provided prompts about student-centered pedagogy and social and emotional growth in schooling. Throughout the duration of the clinical teaching seminar, the candidates wrote reflections about course readings, each one with a different focus, centered on related topics of inclusive and learner-centered pedagogy, for example, experiential learning, whole child education, personal relationship-building, and student engagement. Discussion of the topics was part of the clinical teaching seminar course meeting times and was facilitated by the course instructor who is also the researcher conducting this study. The participants were asked to design and implement lesson plans integrating these topics with the academic content lessons being taught to students.

Individual interviews (approximately 90 minutes long) were conducted with seven purposefully selected preservice teachers involved as participants in the study. Each of the seven selected for individual interviews also participated in one group interview conducted after all the individual interviews were completed. Finally, all 17 of the preservice teachers participating in the study answered a post-study questionnaire that

included two prompts from the pre-study questionnaire and additional questions about the impact of the clinical teaching seminar's coursework on their instructional practices.

### **The Study's Research Questions**

Three research questions guided this study and will be the focus of the general conclusions outlined in this chapter:

RQ 1: In what ways do preservice teachers enact Pedagogical Content and Relationship Knowledge in their classrooms?

RQ 2: What role does Pedagogical Content and Relationship Knowledge have in student learning, from the perspective of preservice teachers?

RQ 3: In what ways does teacher education coursework influence preservice teachers' development of Pedagogical Content and Relationship Knowledge?

The pre- and post-study questionnaires can be found in Appendix B and C respectively.

The interview protocol and questions can be found in Appendix D.

### **Conclusions of the Study: Pre- and Post-questionnaires**

When comparing the pre- and post-study questionnaires, the results showed at the start of the study preservice teachers strongly or moderately agreed that social, relational, and emotional factors were important aspects of student learning. The post-study questionnaire results revealed an increase in participants' attitude or belief with preservice teachers embracing the idea that providing pedagogy to help students develop social-emotional skills, for example, intra- and interpersonal relationship skills, is a way to increase academic performance in mathematics, science, English/language arts, and history/social studies content.

The post-study questionnaire also asked how the preservice teachers were applying what they had learned and practiced in the clinical teaching seminar in their teaching and how they planned to use an integrated pedagogy (one that tends to both the

cognitive and affective domains) to teach academic content lessons in the future. All respondents said they considered student behaviors, attitudes, emotions, and the social climate of the classroom when planning instruction. Asked what pedagogical knowledge or skill they thought was most important for teaching academic content, 9 of 17 respondents ranked “understanding student’s intellectual, developmental and emotional learning needs” as first or second in the agree category. No participant expressed any level of disagreement with this statement.

The data from the post-study questionnaire revealed a noteworthy difference from the pre-study questionnaire. The preservice teachers’ attitudes and beliefs changed about the importance of using “social-emotional instruction/curricula to serve students from low socio-economic status or students presenting behavioral or mental health issues.” In the pre-study questionnaire five respondents had chosen “disagree” or “NA” about the question. In the post-study questionnaire, four respondents “strongly agreed” (compared with zero respondents in the pre-study questionnaire), and nine respondents “agreed” with the importance of social-emotional instruction/curricula. Also in the post-study questionnaire, four respondents either “moderately” agreed or “somewhat” agreed, with no respondents disagreeing or unsure of the importance (five respondents had chosen “disagree” or “unsure” in the pre-study questionnaire). The results show that a social-emotional component of instructional delivery was seen as more important to these preservice teachers after they completed the clinical teaching seminar course and the clinical teaching experience.

Post-study questionnaire results may have been influenced by the amount of time preservice teachers spent as the lead teacher in their own classroom, that is, fully

responsible for student learning and assessment. The results may also be the consequence of course assignments requiring the preservice teachers to enact lessons with students that explicitly demonstrated their understanding and application of methods and strategies supporting PCRK. The clinical teaching seminar provided an opportunity to introduce the concept of an integrated pedagogy (approaches that link the cognitive and affective domains of learning/PCRK) via course readings, assignments, and class discussions while preservice candidates, now in the role of lead classroom teacher, had the opportunity to begin implementing the methods of an integrated pedagogy as part of their teaching practice.

To understand the results of the pre- and post-survey questionnaires, it is important to acknowledge why the researcher intentionally changed the phrasing of one of the prompts in the post-study questionnaire, replacing the term, “Social-Emotional Learning curricula,” in the pre-study questionnaire to “social-emotional instruction/curricula” in the post-study questionnaire. The intention of the change was to focus the candidates' attention more directly on teachers' choices of instructional practices: what learning experiences a teacher *chooses* to provide students. The researcher believed using the term “Social-Emotional Learning” might make preservice teachers less likely to take ownership of their choices for providing content specific instruction that meet student needs in both affective and cognitive domains.

Using the term, “social-emotional instruction/curricula,” was important to the results of this study for two reasons. First, the type of instruction and pedagogical approach a teacher uses can make a difference in what and how much a student learns. Getting preservice candidates to “own” their instruction and “walk the talk” of their

pedagogical beliefs was a key principle introduced and supported in the clinical teaching seminar. The researcher believed that changing the language in the questionnaire from “Social-Emotional Learning curricula” to “social-emotional instruction/curricula” would help candidates understand the prompt as about the concept of an integrated pedagogy and would help the researcher to interpret the results of the post-study questionnaire more accurately. Since building the preservice teachers' knowledge and skill in PCRK was an objective of the clinical teaching seminar, the researcher believed the change of language in the post-study questionnaire prompt was key to interpreting the results.

The second reason using the term, “social-emotional instruction/curricula,” was important to the results of this study is the researcher determined the term, “Social-Emotional Learning,” to be problematic for both teacher candidates and teacher educators. In one regard it is problematic in this study because the pre-study questionnaire demonstrated that the preservice teachers were unfamiliar with the term “Social Emotional Learning”; therefore, they could not compare and contrast SEL with the pedagogical approach they would be exploring in the clinical teaching seminar (PCRK). In another regard, the SEL construct encompasses several models of curriculum that teach specific, non-academic skills and is separate from teaching subject matter content. Therefore, using the term “Social Emotional Learning curricula” in the post-study questionnaire could have been confusing to the preservice teachers because the term and construct were not a part of the clinical teaching seminar and the newly proposed construct/term PCRK and was unknown to the preservice teachers at the time the post-study questionnaire was taken. PCRK advocates that social and emotional factors are inextricably linked in any classroom; thus, instruction (pedagogy resulting in

learning) needs to keep affective and cognitive domains integrated when teaching subject matter content. After reviewing the data, the word change in the post-study questionnaire (using social emotional instruction/curricula in the question prompt) enabled the researcher to conclude that the preservice teachers in this study had a shift in their attitude or belief in the importance of an integrated approach to instruction.

The researcher recognizes that SEL, although used extensively in the teaching profession, is a confusing term for many educators. For this reason, a prompt about SEL was included in the pre-study questionnaire to explore what prior knowledge about SEL existed in the 17 preservice teachers participating in the study. Based on the data, the researcher now concludes that the distinction between SEL and PCRK needs to be explicit if preservice teachers come into a clinical teaching seminar without a strong understanding of SEL.

Preservice teachers like the participants in this study, come to middle and high school teacher residency programs having majored in an academic subject area (English, mathematics, the sciences, or history/social studies) as undergraduates. In the program, they take two graduate level methods courses that focus on teaching content in their chosen licensure/content area (PCK). During their residency program graduate coursework as well as in their school-based practicums, preservice teachers hear educators talk about SEL; however, SEL is an incomplete term when used alone to describe the challenges facing new teachers. Preservice teachers need a term that unifies these two demands: teaching content and teaching students. PCRK is that term.

What was discovered in this study was that preservice candidates did not enter the clinical teaching seminar with a knowledge base that included a clear or well-defined

understanding of SEL. The differences in the way all 17 preservice teachers answered this specific question and others on the post-study questionnaire indicates, at a minimum, that teacher educators must help candidates develop an appreciation for PCRK (via readings, instructional assignments, peer observation, and self-reflection) and clearly define the principles of the PCRK construct so preservice teachers 1) understand how PCRK is different from SEL and 2) help them maintain a strong desire to keep this pedagogical approach at the forefront of their instruction as they enter their own classrooms in the future.

### **Conclusions of the Study: Research Questions**

#### **Research Question 1**

In what ways do preservice teachers enact Pedagogical Content and Relationship Knowledge in their classrooms?

Results indicate that the preservice teachers in this study believe in the importance of building positive relationships with their students. Forming positive interpersonal relationships with students was the mechanism by which they came to “know” their students. “Knowing” was the term these preservice candidates used to describe the type of connection to be made with students that opened up the possibility for engaging meaningful and effective instruction for *all* students. For these preservice teachers, tending to students in both the cognitive and affective domains of learning made sense because it was a way to honor the uniqueness of their students. Creating a safe learning environment was paramount for this pedagogical approach. They took responsibility for students’ emotional and physical safety and declared it as a baseline for learning. The findings show preservice teachers tentatively moving toward building learning experiences that integrate cognitive (content) and affective (relationships) as a feature of

their classroom instructional activities because they saw this as a way of supporting students in learning content and succeeding in school.

### **Research Question 2**

What role does Pedagogical Climate and Relationship Knowledge have in student learning, from the perspective of preservice teachers?

The preservice teachers varied in response to what factors most contribute to student learning. However, when they described their role in student learning, these preservice teachers defined their role as a guide in the classroom. They expressed the desire to provide enough information and materials so students could then make meaning of the content with each other and find their own personal relevance in the learning. However, the preservice teachers acknowledged the obstacles that might and, in fact, did get in the way of approaching learning as a synergistic undertaking with their students. The preservice teachers advocated for student input and choice in what they learned, especially because they believed it would increase engagement in the lessons. However, this “ideal” came with the caveat of having to work within the confines of local and state mandates for curriculum standards and assessment.

A theme of “knowing” was also present in this data set. The “knowing” was directly related to learning in the following way: preservice teachers voiced that a way they believed to achieve student buy-in to their lessons was to know students well enough to assess their interests and emotional states. These preservice teachers felt that “knowing” students was an essential precursor to student learning. They had an affinity toward making the subject matter relevant to their students, whether the means was connecting the content to their personal interests, lived experiences, or by “knowing”

their students well enough to create an emotionally and socially safe atmosphere for learning.

The preservice teachers expressed the following impacts of PCRK on student learning in their classrooms: positive relationships with all students; safe learning environment for all students; use of an integrated pedagogy to teach subject lessons that include appropriate levels of cognitive and affective [challenge] scaffolding; teacher-student collaboration in learning; learning as a shared social and emotional endeavor between peers, and facilitated by the teacher; and creating a classroom climate which may involve feelings of love, passion and joy in the action of learning.

### **Research Question 3**

In what ways does teacher education coursework influence preservice teachers' development of Pedagogical Content and Relationship Knowledge?

Preservice candidates said that a clinical teaching seminar, held weekly in conjunction with daily teaching in a public middle or high school classroom during the second half of their teacher preparation residency influenced their pedagogical thinking in specific ways. Preservice teachers expressed their willingness to engage in planning and delivering lessons using PCRK and creating student-centered learning experiences even though the seminar's school-based assignments involving the implementation of integrated instruction caused several preservice teachers to say they felt, outside their "comfort zone." However, none of these preservice teachers reported those experiences to be negative for themselves or their students; instead, they said their experiences were successful enough to feel encouraged to explore affective and cognitive integrated pedagogy further.

The data set also shows preservice teachers articulated their apprehension to implement integrated (cognitive and affective domains) lessons on a daily basis because these did not fit into the instructional norms of their respective schools and mentors. The data exposed how the experienced classroom mentors' beliefs concerning PCRK were divergent from the pedagogical principles learned in the seminar. While this tension caused preservice teachers to express dissonance between the desire to try new approaches and the responses of the mentors, it should be noted that the preservice teachers never mentioned students' resistance or responses as being obstacles to integrated instruction.

Another way the seminar's coursework influenced these preservice teachers was reported as a heightened awareness of the importance of students' lives outside the classroom and the emotions that surface inside the school learning environment. The data revealed how the preservice teachers used the students' affective responses as a means to support connections to the content and to understand how these impacted individual learning.

The preservice teachers also expressed how clinical teaching coursework reminded them not only of their students' humanness but of their own humanness as well. They reported if "being human" was afforded equal standing with teaching academic content to students, positive outcomes in affective and cognitive domains resulted. The preservice teachers expressed that this simple, yet powerful understanding could make a huge difference in the social climate of the classroom and in student motivation for learning.

Research Question 3 interview data reveal how the concept of PCRK (an integrated pedagogy—one that integrates both cognitive and affective conditions for learning subject matter) is regarded as important, challenging, and a cause for discord to preservice teachers.

### **Summary of Interview Data for Research Questions 1, 2, and 3**

The interview data show that the preservice teachers in this study valued PCRK and appreciated the effectiveness of this pedagogy on student learning. Yet the preservice teachers also expressed that PCRK learning activities required more time and energy to plan and were more time-consuming to implement in classrooms with students. Finally, all preservice teachers conveyed school-based roadblocks for engaging in the pedagogical approach, for example, mentor's discrediting the efficacy of the approach as well as state and local mandates that forced what was taught and how curriculum was delivered in their classrooms.

In summary, the interview data conclusions resulting from this study are as follows:

1. Preservice teachers valued developing personal relationships with students.
2. Preservice teachers said they found the attitudes of mentor teachers and the larger context of school norms and high stakes testing to be obstacles to implementing pedagogical approaches perceived as different.
3. Preservice teachers were often surprised at their success in integrating affective learning while teaching content/subject matter.

### **Recommendations for Teacher Educators**

A major recommendation of this study is that teacher education preparation programs and teacher educators in those programs need to ensure that preservice teachers have the opportunity to plan and deliver academic content lessons in a way that integrates

the affective and cognitive domains of learning. The researcher is calling this integration of the affective and cognitive domains of learning Pedagogical Content and Relationship Knowledge (PCRK). PCRK advances the proposition that new teacher candidates must have a knowledge base of the academic content they will be teaching students but must also know ways to build interpersonal relationships that will motivate and engage students to learn.

The goal for teacher education programs and teacher educators is to simultaneously expand the pedagogical content knowledge and the relationship-building knowledge of teacher candidates. The structure of a year-long immersion program enables daily practice of multiple tools and strategies and conversations among the cohort of preservice teachers to solve issues and questions that arise as part of their instructional practice. This can be accomplished in year-long teacher residency programs in which teacher candidates are in a classroom every day with lead instructional responsibilities. Immersion-style teacher preparation programs can provide a comprehensive context for examination and implementation of PCRK. Through graduate coursework and in-school teaching experiences, teacher candidates can be introduced to the concept of PCRK, then given opportunities to process and understand that concept in a teacher preparation course and have classroom settings in which they are trying to implement the concept as part of daily instruction.

PCRK is a new construct, not only in preservice teacher training but also in the lexicon of readings and texts used in teacher education. Introducing preservice teachers to the affective qualities of learning may be the best way to accelerate their future pedagogical development because, given the findings of the study, they will likely

experience positive results in their classrooms because students are drawn to genuinely caring adults whom they perceive to understand them on the social, emotional, and cognitive levels they bring with them to the classroom.

### **The Clinical Teaching Seminar as Change Agent**

All the candidates in this study participated in a 3-credit clinical teaching seminar whose goal was to make them aware of the importance of integrating the affective domain of learning into their academic content instruction in middle and high school settings (PCRK). Questionnaire and interview data indicated that teacher candidates believed that teacher education coursework provided in a clinical teaching seminar and done while they were teaching in school settings did impact their classroom pedagogical approaches.

The clinical teaching seminar course served to introduce the tenets and to nurture the pedagogical skills necessary for integrating affective and cognitive approaches to teaching content. By creating graduate coursework assignments requiring the preservice teachers to apply and practice what the researcher is now calling PCRK, preservice teachers had 1) a means to try using methods they had not previously thought would impact student learning positively, 2) opportunities to design lessons they believed would take too much time to plan and execute within the timeframe of a standard lesson, and 3) permission to explore instructional methods that expanded beyond the mentor teacher's repertoire of pedagogical knowledge and belief. The clinical teaching seminar course associated with the study served as a way for preservice teachers to try using methods with students that mentor teachers had not previously thought would impact student learning or were not a part of the mentor teachers' skill set.

As part of the clinical teaching seminar, preservice teachers were asked to take into consideration students' experiences in the learning environment and how the attributes of each learning activity affected emotions as well as knowledge gains. In essence, preservice teachers were asked to differentiate their instruction in ways that met individual academic profiles (general view of the student from an academic standpoint: learning preferences; what they know and still need to learn) and social and emotional profiles (likes, dislikes, interests, preferences, attitudes, inter- and intra personal skills, emotional skills and development). The skill and knowledge required to plan and execute such instruction must be learned and understood and then deliberately practiced. Therefore, after much experimentation, coaching, and reflection, preservice teachers can begin to develop the skills and understandings needed for integrating PCRK into the planning and instruction for content lessons.

The clinical teaching seminar emphasized that teachers find ways to make instruction more interesting, active, and varied for students. This pedagogical approach can take more planning time, energy, and materials, and teachers are mainly responsible for those factors. Ultimately, educators are the facilitators of student experiences in the context of the classroom and are accountable for *all* students learning the content taught. Teachers can decide to ignore the affective aspects of learning, but these will always be part of the learning environment.

Everything that happens to students influences their lives, and therefore, the curriculum must be considered extremely broadly, not only in terms of what can be planned for students in schools and even outside them, but also in terms of all the unanticipated consequences of each new situation that individuals encounter. The consequences of any situation include not only how it is learned in a formal sense, but also all the thoughts, feelings, and tendencies to action that the situation engenders in those individuals experiencing it. But since each individual differs in at least some small ways from all others, no two individuals can experience the

same situation in precisely the same way. (Posner, 1992, as cited in Frey et al., 2019, p. 7)

The PCRK instruction promoted in the seminar sought to show new teachers how to build a classroom environment in which middle and high school students begin to see the relevance of academic subjects to their lives and begin to take pride in their academic accomplishments. Building such a classroom learning environment is led by teacher behaviors and attitudes that demonstrate to students a belief in their ability to achieve while genuinely valuing each unique learner. Attaining such an environment, the research has shown, is the most difficult part to create for preservice teachers, especially when practicing with a mentor teacher or in a school culture that does not believe in nor validate the principles that comprise PCRK.

### **Post-study Changes to a One-Year Teacher Residency Program**

The dissertation study provided information important for making course and programmatic changes in the one-year teacher residency program with which the research was conducted. In the years since the research was completed, the clinical teaching seminar and the overall teacher education program has been continuously revised to more fully develop the understanding of PCRK by teacher candidates. The researcher used insights from this dissertation research to address the following features of the one-year teacher residency program: 1) Relationships were strengthened by being more clear about the goals between the university and school-based partners; 2) programmatic expectations were explicitly outlined to preservice teachers and mentors; 3) the need for the preservice teachers to have time and autonomy to explore pedagogically what is being taught in the university graduate courses was reviewed and explained to school-based partners; and 4)

course readings and assignments were evaluated and assessed and new resources were found in an effort to enhance the preservice teachers' development of PCRK.

### **Relationships with Teacher Mentors and a Co-teaching Model**

Findings from the questionnaires and interviews led the researcher to devote more time to building personal and organizational relationships with school-based partners. In the interviews, participants expressed that tensions and confusions can develop between candidates and mentor teachers about the candidate's role and responsibilities as a teaching intern in the school. To address these, the researcher concentrated on building relationships and began this process by meeting informally with potential mentors at the end of the school year. The researcher, in her role as program coordinator, traveled to schools where preservice students were placed to hold information sessions with educators considering working with a preservice teacher for the entire academic year beginning in the fall and continuing through the spring. It became clear in the conversations how essential it was to describe the ways a teacher residency preparation program is uniquely different from traditional 13-week student-teaching practicums.

One significant change made after the study was completed was the implementation of a co-teaching model (Bacharach et al., 2010) in the student-teaching practicum phase. Interactions with mentors focused on the co-teaching model used in the practicums, a major new feature of the one-year urban teacher residency program. At the heart of the co-teaching model is that from Day One of the school year, middle and high school students will see two teachers in the classroom—one a fully certified veteran educator and the other a preservice intern, both responsible for planning, instruction, and assessment of learning. The core message conveyed to mentors was the expectation that

mentors be open-minded and flexible, that is, preservice teachers will learn from the mentors and mentors will learn from the preservice teachers. In this way, the philosophy behind how the program is structured was made explicit to the mentors well before they agreed to work with a preservice teacher in the following academic year.

By building relationships with the school-based mentors, the researcher/program coordinator made the effort to demonstrate to the mentors that they were appreciated by the university and considered to be an invaluable resource contributing to the success of preservice teacher development in the program. Importantly, the informality of the meetings allowed the researcher to share her background as a public school educator and discuss teacher development in a collegial atmosphere.

Implementing the co-teaching model produced an environment for the preservice teachers' PCRK development because the framework of the co-teaching model is based on shared decision-making in the classroom. Inherent in the co-teaching model is a shared understanding that both teachers in the classroom are equally responsible partners for teaching content and crafting conditions for student learning. With the co-teaching model in place, the preservice teachers in the residency program share decision-making for planning, instruction, and assessment for student learning from the beginning to end of the student-teaching practicum.

The researcher chose to conduct a one-day training on the model, facilitated by its founder, Dr. Teresa Heck, to increase the perceived legitimacy of the co-teaching model. The training took place a few days before the start of the student-teaching practicum. All stakeholders took part in the training, which included the preservice teachers, mentors, site coordinators, university program supervisors, and school administrators. Inviting all

constituents to the training was an intentional act on the part of the researcher, with the goal of obtaining buy-in and creating a shared responsibility for successful implementation of the model.

The one-day training and the implementation of the co-teaching model allowed the researcher to have discussions about the expectations for the mentor-mentee relationship via the topic of co-teaching. The overall process of implementing the co-teaching model, for example, funding the training (shared by the university and school district); clearly communicating the goals and value-added of the co-teaching model to school administrators and other stakeholders; and setting the clear expectation of employing the co-teaching model with fidelity as a criterion for working with a residency preservice teacher, opened doors for the researcher to build influential relationships with school partners, especially mentors, in a way not possible prior to using the model.

### **Relationships with School-based Site Coordinators**

Another critical dimension of school/university partnerships that emerged from the study's research findings involves the roles played by each partner school's "site coordinator." Site coordinators are lead teachers in the school who act as liaisons between the university and the school building administration and serve as "de facto parents" for the preservice teachers. Site coordinators guide the teacher candidates through the entire year, assisting them with everything from building access to applying for a future classroom teaching position. Site coordinators are crucial to the smooth operation of the residency as well as the growth and development of the preservice teachers. The site coordinators advise the preservice teachers on classroom and school-based issues,

negotiate classroom placements with mentors, meet regularly with the preservice teachers in their building, help resolve conflicts when they arise, facilitate observations of teachers throughout the building and work closely with the university program coordinator on all these matters. Successful coordination of the program and related issues rely on the support and efforts of the site coordinators.

One change that contributed to the development of a more productive relationship with the site coordinators was conducting monthly meetings. Meeting regularly with programmatically focused agendas with topics and questions contributed by site coordinators and the researcher created a team committed to similar goals that enabled candid discussions about matters important to the success of the residency, such as finding suitable mentors to work with preservice teachers in the residency.

The consistency of site coordinators serving more than one academic year in a school and as a group meeting monthly has built a collegiality through which the researcher/university program coordinator can unambiguously share how the goal of developing the preservice teachers' PCRK must be supported by mentors who are open to assignments that are enacted instructionally in classrooms; willing to share instructional responsibility with candidates who are interested in expanding their own pedagogical repertoire, and; do not expect to mold the preservice teacher into a mini-version of themselves.

This long-term relationship-building has enabled the researcher to clearly and honestly articulate what attributes are needed and expected in a mentor and has resulted in the site coordinators actively recruiting those educators in a team effort to support the residency program's preservice teachers. After years of collaborative discussions about

the goals of training preservice teachers and eliciting site coordinators' insights and expertise to improve the training of school-based interns, there now exists a reciprocity of investment in the larger teacher residency model. Because site coordinators fully understand what the teacher residency program is trying to accomplish in preparing preservice teachers, the recruitment of potential mentors is done with clear knowledge of program expectations for working with a preservice teacher in the residency model. These changes have enhanced mentor-mentee relations by defining co-teaching in the classroom and putting into practice shared responsibility for decision-making from the start of the practicum, resulting in reducing conflict and need for intervention in or dissolution of a preservice teacher/mentor partnership as well as more opportunity for the preservice teachers to practice and develop PCRK with supportive mentors.

### **Candidates' Roles as Graduate Students and Classroom Teachers**

In a college/university teacher residency preparation program, everyone, including school-based partners, must understand the dual roles the preservice candidates take on in the classroom as well as with graduate level coursework. In this study, preservice teacher candidates expressed frustrations about how to balance these dual roles during the immersion year. Unlike traditional teacher preparation programs in which 1) coursework is mostly not done concurrently with school-based practicums, and 2) the length of time to finish a degree and practicums is anywhere from one to several years longer, the teacher candidates in this university-sponsored residency program were simultaneously responsible for graduate coursework that was integrated with full-time classroom teaching throughout the public school's academic year. In this study,

preservice teachers were tasked with assignments that asked them to implement a variety of classroom-based instructional learning experiences grounded in PCRK pedagogy.

Following what was learned from the dissertation research, the researcher adopted strategies to clarify preservice candidate's roles that started with 1) explicitly outlining to the preservice teachers the expectations of their role as teaching interns in the school district as well as their graduate student responsibilities, 2) meeting mentors in person prior to the start of the school year to review roles and responsibilities, and 3) providing comprehensive professional development in the co-teaching model by which preservice candidates and their mentors were paired throughout the training for engaging in partnered activities to build the skills inherent in a co-teaching relationship.

Another strategy to support preservice teachers as graduate student interns was sending mentor teachers the assignments from the clinical teaching seminar specific to PCRK development, explaining the rationale for the assignment and the research concepts behind the instructional approach. Sharing the assignments with mentors reiterated the earlier message that preservice teachers are not "student teachers," but interns/co-teachers during the school day and graduate students during the after-school time. All assignments in the program of studies of the residency program were integral to how the teacher preparation model is implemented. The tacit message the researcher sought to convey about PCRK assignments and overall graduate coursework was: "These are important; please don't dismiss the assignments and please allow preservice teachers to do the assignments with fidelity and support."

Starting the process of relationship development with mentors in the previous academic years and delineating roles and responsibilities with both the mentor and

mentee was a successful strategy the researcher employed as it resulted in 1) preservice teachers having a period free from teaching during the school day to tend to graduate assignments and other responsibilities, 2) mentors seeing the coursework as important to the preservice teachers success in the overall program, and 3) both preservice teachers and mentors coming to understand that the coordinator of the residency program is an educator who respects the role of the mentor and views the preservice teachers' pedagogical development as a reciprocal effort amongst all stakeholders. The process resulted in increased mentor buy-in to PCRK assignments and preservice teachers receiving the time and mentor support for implementing PCRK pedagogy.

### **Relationships with University Program Supervisors**

The research showed that university program supervisors could be leveraged to encourage PCRK approaches by the preservice candidates. The university program supervisors observe the preservice teachers during the student-teaching portion of the residency year. Therefore, the researcher included the university program supervisors in the co-teaching training. When the research study was conducted, the program supervisors were only required to attend a 2-hour training about their responsibilities for observations and documentation required by the state department of education.

A common characteristic of the university program supervisors was that they were retired teachers strategically recruited for the credibility they possess as educators from the district where the residency program resided. The researcher recognized that if the university program supervisors agreed with the goals of the co-teaching model, as professionals who had taught in the same district for years, they could assist current teachers in becoming more open to the outcomes/objectives of the co-teaching model.

Leveraging the university program supervisors' authority as former teachers in the district during the student-teaching/co-teaching practicum laid the groundwork for the mentor attitude necessary to accomplish PCRK initiatives in the clinical teaching seminar.

After the study was concluded, the researcher instituted three additional regular meetings with the team of university program supervisors: one prior to the student-teaching practicum, one in the middle of the student-teaching practicum and one before the end of the student teaching practicum. The researcher approached meetings collaboratively with the university program supervisors. In the meetings, the researcher shared the rationale for instituting co-teaching during the student teaching practicum and how the mentor-mentee relationship developed in the co-teaching model would support the goals of the clinical teaching seminar. The researcher also shared course assignments with the university program supervisors to solicit sponsorship of the assignments to reinforce PCRK pedagogy in the preservice teachers' classrooms. The researcher invited the university program supervisors' input and feedback on the viability of the assignments, given the teaching styles of individual mentors and academic expectations of the district. The university program supervisors became attuned to and supportive of the assignments and the PCRK instructional approach.

### **Developing an Additional Supervision Model**

The findings of this research study led to the creation of a new role in the residency program—the addition of “coaches” during the clinical teaching phase of the residency program. University program supervisors shifted the way they worked with preservice teachers once the student teaching practicum and state requirements for

licensure were met. The university program supervisors, the researcher in her role as program coordinator, and the Teaching Assistant in the residency program all served as coaches during the clinical teaching phase of the program (the last 5-months of the school's academic year). All coaches served as additional mentors and confidants for the preservice teachers as they embarked on leading planning, instruction, and assessment in their classrooms.

Coaches were specifically tasked to encourage and sustain the continued development of PCRK and instructional skills of the preservice teachers. The researcher understood that all pedagogical development, not just PCRK, at this formative stage in the process of learning to teach (gaining the knowledge and skills needed to be an effective educator), needs nurturing and constant reflection by the preservice teacher alongside guidance by experienced and skilled advisors. Without the additional mentorship of the coaches, the researcher believes it would be challenging to solidify the learning gained in the student teaching practicum and continue the process of PCRK development.

### **Suggestions for Improvement and Further Study**

This study was conducted to provide a description of the influence teacher education coursework can exert upon preservice teachers' pedagogical approaches in a field-based teaching practicum. This section of the chapter outlines areas for how the study could be improved along with areas of research that would add to the body of knowledge concerning preservice teacher training. The following suggestions are presented to improve the quality of the data and thereby the results.

1. The questionnaire would have benefited from clearer language in the statements and questions by eliminating unfamiliar terms. The questions

could have been designed to more clearly define the baseline pedagogical attitudes and beliefs of the preservice teachers. Keeping the pre- and post-study questionnaire consistent may have provided more information on shifts in attitudes and beliefs.

2. Because the researcher did not conduct the interviews, videotaping the interviews could have given the researcher a more nuanced understanding of participants' responses.
3. The seminar may have been more effective if the curriculum was presented within an explicit framework of PCK (Pedagogical Content Knowledge) and the researcher's newly proposed concept of PCRK. In the future, naming the PCRK construct and basing the assignments on the exploration of PCRK could help the preservice teachers in their understanding and deliberate practice of the pedagogical approach.
4. Adding middle and high school student interviews could have enhanced the data from this study by providing the learners' perspective on the effectiveness of PCRK instruction and the students' general response to the learning environment.
5. The addition of classroom observations of the preservice teachers' teaching integrated lessons would have provided more information of how they operationalized the pedagogical approach and could provide data for seminar content and instruction. These observations could be recorded in a manner that would eliminate the need for the researcher to be in the classroom, as this can alter teacher and student behavior.
6. The interview protocol could have been improved by editing a few of the questions for clarity and thereby eliminating redundancy in respondent answers.
7. Between the time the literature review was conducted and the final oral exam associated with this dissertation was presented, the researcher recognizes that an important piece of scholarship is missing from the review of literature. Specifically, there are important connections between the study associated with this dissertation and the scholarship associated with Culturally Relevant Pedagogy. Culturally Relevant Pedagogy recognizes the importance of centering student's cultural references in all aspects of learning (Ladson-Billings, 1994 & 1995). The research on Culturally Relevant Pedagogy should be integrated into this study because the study was conducted in an urban school district with a majority non-white student population. Another reason the inclusion of Culturally Relevant Pedagogy (CRP) is significant to this study is the characteristics of CRP are closely associated with the characteristics of Pedagogical Content and Relationship Knowledge (PCRK) e.g., high expectations for all learners; meaningful learning activities that nurture both academic growth and social consciousness; a curriculum that

connects to student interests and prior experiences in meaningful ways (this includes culture); a positive and respectful relationship between student, teacher and peers; student-centered teaching where students are actively engaged and the teacher facilitates the learning. CRP is clearly a direction for further research on PCRK, especially in terms of research conducted on teaching in urban and multi-racial schools.

In conducting the study, opportunities for other areas of research became recognizable to the researcher. These suggestions are presented below.

1. While the preservice teachers in this study were able to implement integrated lessons in their classrooms when conducted as an assignment, some felt they did not have the freedom to pursue these pedagogical approaches on a regular basis. Based on these data, the following questions could guide further study: How do preservice teachers get the opportunity to explore different instructional approaches in their preservice training? How do teacher preparation programs negotiate the terms for preservice teachers' praxis with school-based partners? How do preservice teachers gain efficacy for their own pedagogical beliefs while teaching alongside a mentor and within a school culture?
2. What role does school culture play in preservice teachers' capacity for embracing pedagogical approaches that integrate the affective and cognitive domains of learning?
3. What role does teacher preparation coursework play in the development of teacher beliefs in integrating the cognitive and affective domains learning? Where else do preservice teachers learn about the social and emotional effects on learning? Why is it important for preservice teachers to learn about student emotions?
4. The study indicated the preservice teachers were not entirely comfortable with the tension they perceived from disapproving school-based mentors. Based on these data, the following questions could guide further study: What role do the beliefs and attitudes of mentor teachers play in preservice teachers' development?

Adding a follow up interview with the preservice teachers after their first year of teaching would be a way to explore their instructional praxis as independent educators.

5. How have the high-stakes testing and similar mandates affected preservice teachers' willingness to experiment with alternative pedagogical approaches?
6. What makes a classroom space "safe"? How is a "safe" classroom defined by preservice teachers? How is a "safe" classroom defined by students?

7. For those teacher education programs that include PCRK and other social-emotional based pedagogy in coursework, an awareness of how field-based experiences can heavily influence a teacher candidate's willingness to develop an integrated instructional praxis is critical. How is Pedagogical Content and Relationship Knowledge (PCRK) defined by school-based educators and administrators? How is PCRK defined in the literature? How is PCRK defined in teacher preparation programs and how do programs prepare preservice teachers in PCRK? Does focusing on PCRK take away from academics? Does PCRK co-opt the role of parents and families?
8. How do the pedagogical methods, strategies, and approaches learned in teacher education coursework become part of a preservice teachers' everyday instructional praxis?

The questionnaire responses and interview comments of the preservice teacher candidates in this study raise important questions for teacher educators. If preservice teachers are not encouraged to get to know students on deep and meaningful levels, how will they make the explicit connection to the symbiotic relationship existing between student and teacher? In other words, will teacher candidates seek or become aware of how much the students have to teach them about learning?

The data from the clinical teaching seminar at the center of this research study provides significant insights to these questions and those insights hold implications for teacher educators who want to adopt and adapt PCRK pedagogy when developing their own teacher preparation models.

## APPENDIX A

### INFORMED CONSENT FORM

Title of Study: **Developing New Teachers' Pedagogical Content and Relationship Knowledge (PCRK) During A One-Year Urban Residency Teacher Preparation Program**

By signing this letter of informed consent, I volunteer to participate in this qualitative study and understand the following information:

- I. This letter serves as an invitation to participate in a research study. The study will be conducted using qualitative research methodology (interviews, observations and document collection) during one semester in a master's level teacher preparation program. Some, but not all participants will be interviewed. An interviewer who is not the researcher will conduct all interviews. The researcher is a doctoral candidate at REDACTED. The data collected will be used to complete a dissertation. The purpose for conducting the research is to explore the interaction between the affective domain of learning and the classroom practices of preservice teachers. The study is not sponsored by anyone or any organization.
- II. It will not be necessary, nor feasible to conduct formal interviews with every participant; however, informal interview data will be collected in class on occasion. The interviewer will use a semi-structured interview protocol with participants who volunteer to be formally interviewed.
- III. All interviews will be audiotaped and then transcribed to facilitate analysis of the data. Transcripts will be done verbatim and participants' words may be used in this study. However, participant names, the school they teach in or place where they are a student, and any other detail that might disclose identity will not be used in any written material or oral presentation in which the researcher uses material from interviews. Instead, pseudonyms will be used for all names and places in order to protect participants' identity.
- IV. Your participation is entirely voluntary, and you are free to refuse participation or discontinue at any time without penalty or prejudice. Upon request, participants may review their interview audiotapes and transcripts.
- V. The researcher will use material from interviews, field observations, and documentation (course assignments) for purposes of writing a

dissertation. By agreeing to this consent form, you are giving the researcher permission to include transcribed interviews, field observations, and documents in a dissertation. The data may also be included in manuscripts submitted to professional journals for publication and presentations at professional conferences.

- VI. Research participation typically involves both benefit and risk. Participation in this research study may help inform the body of scholarly work on teacher knowledge that directly benefits teacher training and student learning. Because the size of the study is relatively small, approximately 17, there is some risk that a participant's identity could be exposed.

You have been furnished with a copy of this informed consent, which should be signed if you are willing to participate. Once your signed consent form has been returned to the researcher, a copy will be made, returned to you and should be retained for your records. Your signature below indicates that you have read and understood the information provided above, that you willingly agree to participate, and that you may withdraw your consent at any time.

If you have any questions about the study, or your participation in it, you can reach the researcher at:

REDACTED

You can also contact the chair of the researcher's dissertation committee at:

REDACTED

All research conducted by doctoral students at the REDACTED is approved by the Institutional Review Board at the university.

I, (please print name) \_\_\_\_\_  
have read the information in this consent form and agree to participate under the conditions stated above and below. Please circle one response below.

I agree to be interviewed and my assignments and course related documents could be used in the study.

I do not want to be interviewed but my assignments and course related documents could be used in the study.

I do not want to participate in the study.

Participant Signature

Date

Researcher Signature

Date

## APPENDIX B

### PRE-STUDY QUESTIONNAIRE

#### Pre-Test 180

1. As a classroom teacher, I feel it is important to provide pedagogy that helps students know themselves, relate well to others, and make responsible decisions.

Very Important      Important      Moderately Important      Somewhat Important      Not Important



2. Students who have behavior problems; mental health issues; or that are from low socio-economic families or communities, are best served by Social Emotional Learning curricula.

Strongly Agree      Agree      Moderately Agree      Somewhat Agree      Disagree      N/A



3. Social Emotional Learning programs such as The Responsive Classroom are best suited for elementary age students.

Strongly Agree      Agree      Moderately Agree      Somewhat Agree      Disagree      N/A



4. Schools need student-centered strategies to help learners reach their highest potential.

Strongly Agree      Agree      Moderately Agree      Somewhat Agree      Disagree



5. Social Emotional Learning programs are NOT effective in school districts that are below proficient in academic achievement.

Strongly Agree      Agree      Moderately Agree      Somewhat Agree      Disagree      N/A



## APPENDIX C

### POST-STUDY QUESTIONNAIRE

**Post-Test 180**

Post-Test 180

1. When I plan instruction, I consider my student's behaviors, attitudes, emotions and the social climate of the classroom.

Strongly Agree      Agree      Moderately Agree      Somewhat Agree      Disagree      N/A

                            

Comments:

2. What knowledge/skills are most important for effective teaching? Rank from 1 to 6, where 1 is most important.

content knowledge

knowledge of the principles of learning

classroom management

knowledge of individual student learning preferences/needs

curricular knowledge

understanding student's intellectual, developmental and emotional learning needs

3. On a scale from 1 (very uncomfortable) to 10 (extremely comfortable), how comfortable were you when your lessons included pedagogical approaches that created opportunities for social-emotional growth of your students?

4. Schools need student-centered strategies to help learners reach their highest potential.

Strongly Agree

Agree

Moderately Agree

Somewhat Agree

Disagree

5. Students who have behavior problems; mental health issues, or are from low socio-economic families and communities are best served by social-emotional instruction/curricula.

Strongly Agree

Agree

Moderately Agree

Somewhat Agree

Disagree

N/A

6. I feel that my participation in the Clinical Teaching Seminar Course influenced my approach to instruction.

Strongly Agree

Agree

Moderately Agree

Somewhat Agree

Disagree

Comments:

7. In your own words, describe social-emotional learning

## APPENDIX D

### INTERVIEW QUESTIONS

RQ1: To what extent do teacher candidates enact pedagogical content and relationship knowledge in their classrooms?

1st Interview Question: What classroom factors support learning? Which are most critical to student success? How and why?

2nd Interview Question: How do you make sure students are learning in your classroom? What are the principles that support how you structure class time so that students can and will learn?

3rd Interview Question: How comfortable were you when your lessons included pedagogical approaches that created opportunities for social-emotional growth of your students? How did you and your students respond?

RQ2: What role does pedagogical content and relationship knowledge have in student learning, from the perspective of teacher candidates?

1st Interview Question: What is a teacher's role in learning? What does a teacher need to know about their students to help them learn?

2nd Interview Question: Who defines what your students learn? Who should determine what is learned? Why?

3rd Interview Question: If there were a recipe for student learning, what would be the most important ingredient?

RQ 3: To what extent does teacher education coursework influence teacher candidates' development of pedagogical content and relationship knowledge?

1st Interview Question: How did the content of the clinical teaching seminar influence your instruction of your subject matter? What will you do differently, in your instruction, in the future?

2nd Interview Question: Much of the focus of the Spring Seminar course was on pedagogical practice that embraces a belief that posits learning is not just a cognitive experience but involves emotions and the social context. What has your experience been with this exploration (what have you learned, what have you embraced, what do you reject and what role do you see it playing in your teaching future?)

3rd Interview Question: What will student success look like in your future classroom?

4th Interview Question: What have you learned from your students that you will take with you into your classroom next year?

## APPENDIX E

### CLINICAL TEACHING PRACTICUM SEMINAR

Spring 2016

Instructor: **REDACTED**

Class meets: Tuesday 4:30 – 7pm

Class location: **REDACTED**

Office: **REDACTED**

Office Hours: By Appointment

Email: [REDACTED](#)

#### Course Description

This three-credit course is designed specifically for **REDACTED** interns. Each class involves a substantial amount of time discussing issues important to the pedagogical development of **REDACTED** interns, their current classroom environments, and the school and community contexts in which they work. There is some flexibility in the design of the course, allowing for student input regarding specific and general concerns and issues related to the clinical teaching experience.

The main focus of the course is to support pedagogical development via field-based challenges; willingness to experiment with innovative instructional strategies and the exploration of student-centered pedagogy. The **REDACTED** interns will be assessed on how rigorously they work to develop their own “pedagogic creed” (John Dewey’s term for philosophy) and skill. Students will demonstrate evidence of pedagogic development through observed change (growth), written reflections and full participation in collegial sharing and coursework within the seminar.

#### Course Objectives

1. Increase knowledge of major theories, research and issues related to student-centered pedagogy.
2. Demonstrate a variety of pedagogical strategies that are known to increase student engagement and academic achievement in field-based experiences.
3. Examine a variety of pedagogical approaches with attention to their constraints and possibilities.
4. Explore the tensions between school context; state, federal and district policy; and teaching and learning.
5. Become familiar with, and use related research on instruction as a means for developing a personal pedagogy that meets the cognitive, social and emotional needs of *all* students.
6. Clarify personal ideology and beliefs about teaching and learning.

7. In the process of examining one's own pedagogy through structured field-based assignments and instructional coaching, students will develop a framework for continuous improvement.
8. Invite interns to raise questions and concerns about a number of issues affecting their work in schools today.

### Required Texts

Stanchfield, J. (2014). *Inspired educator, inspired learner: Experiential, brain-based activities and strategies to engage, motivate, build community, and create lasting lessons*. Wood N Barnes Publishing.

Readings will be assigned weekly. All reading material will be posted on the LMS or presented as hard copy in class.

### Grading Policy

Students are graded on a pass/fail basis in this course. Assessment includes, but is not limited to, attendance in class and the field placement; preparedness for full participation in class activities; quality of and fidelity with reflections, projects and course assignments; professionalism; timely completion of the **REDACTED** portfolio; successful completion of the clinical teaching practicum; timely completion of assignments; timely completion of paperwork for licensure and the graduate school; observed growth in instructional skills based on classroom observations and the integration of research, peer feedback, and the instructional coaching received within the clinical teaching practicum.

### Attendance Policy

The expectation for graduate level work is that you participate fully inside and outside of class *and* you arrive on time. This is one key element of professionalism. Consistent tardiness will be handled on an individual basis. If you must miss a class, you are expected to make up the work missed within one week. It is the students' responsibility to communicate prior to missing the class, as well as after, for any make up work and assignments. Failure to complete missed coursework and class time will result in an incomplete in the course.

### Communication Policy

**REDACTED** interns will practice of the habits of professionalism in a variety of ways throughout the course. One way to demonstrate strong communication skills is through timely emails detailing your status on attendance in the field and in class, as well as with coursework assignments. **REDACTED** interns are expected to check the LMS page for the clinical teaching seminar at least twice daily.

### Accommodation Policy

**REDACTED** is committed to providing an equal educational opportunity for all students. If you have a documented physical, psychological, or learning disability on file with Disability Services (DS), Learning Disabilities Support Services (LDSS), or

Psychological Disabilities Services, you may be eligible for reasonable academic accommodations to help you succeed in this course. If you have a documented disability that requires an accommodation, please notify the instructor within the first two weeks of the semester so that appropriate arrangements can be made.

### Academic Honesty

Since the integrity of the academic enterprise of any institution of higher education requires honesty in scholarship and research, academic honesty is required of all students at the **REDACTED**.

Academic dishonesty is prohibited in all programs of the University. Academic dishonesty includes but is not limited to: cheating, fabrication, plagiarism, and facilitating dishonesty. Appropriate sanctions may be imposed on any student who has committed an act of academic dishonesty. Instructors should take reasonable steps to address academic misconduct. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible. Instances of academic dishonesty not related to a specific course should be brought to the attention of the appropriate Department Head or Chair.

Since students are expected to be familiar with this policy and the commonly accepted standards of academic integrity, ignorance of such standards is not normally sufficient evidence of lack of intent.

### Code of Student Conduct Policy

Each student enrolled in a course at the **REDACTED** is accountable to their primary institution's Code of Student Conduct (CSC). The CSC for each respective institution is available on the institution's website. These Codes outline the standards and expectations for students' conduct and behavior, on and off campus. The CSC assists students in understanding their role in the academic community and establishes procedures to ensure due process in the adjudication of complaints and concerns. The **REDACTED** reserves the right to initiate student conduct proceedings for violations of the respective codes. For more information, contact **REDACTED**.

### Conceptual Framework

This course is designed to demonstrate commitment to the following elements stated in the **REDACTED** Conceptual Framework. These are:

- Collaboration – Educators recognize the imperative of collaboration - that we cannot achieve our vision for student learning as independent actors working in isolation. Educators exhibit attitudes, dispositions, and behaviors consistent with a collaborative approach to professional practice, as opposed to an individualistic or competitive approach to professional practice.
- Reflective Practice – Educators recognize the imperative of reflective practice – that to transform the status quo we must be willing to consistently examine and transform assumptions about professional practice. Educators exhibit attitudes, dispositions, and behaviors consistent with a reflective approach to

professional practice that allows them to adapt practices based on considered reflection.

- **Multiple Ways of Knowing** – Educators recognize the imperative of multiple ways of knowing – that to create communities of practice, we must respect the perspectives of different stakeholders. In a spirit of inquiry, educators reflect on and challenge their own perspectives and beliefs and maintain a professional awareness of the influences that their perspectives may have in educational settings.
- **Social Justice** – Educators recognize the imperative of social justice – that we cannot achieve our vision of excellence and equity in education for all students without knowledge of and attention to the student’s social, cultural, developmental, and personal context. Educators exhibit attitudes, dispositions, and behaviors consistent with promoting social justice that allow them to adopt practices that create and advance equitable conditions in which all students can learn.
- **Evidence-Based Practice** – Educators recognize the imperative of evidence-based practices that promote student engagement, achievement and performance. In so doing the candidate will be able to: 1) gather and/or examine multiple sources of evidence, 2) determine the credibility, reliability and validity of the evidence, 3) synthesize and draw conclusions from evidence, and 4) use the evidence to modify professional practices that result in increased PK12 student learning outcomes.

Class Schedule/Content

This is a draft and subject to change. It is also an outline. It is not possible to fully represent all content that will be covered in class or assigned outside of class. LMS will provide the most comprehensive overview of class/course content and assignments.

<b>Seminar</b>	<b>Date</b>	<b>Topic</b>	<b>Readings &amp; Assignments</b>
1	1.5.16	Student Centered Pedagogy	Posted in LMS
2	1.19.16	Personal Relationship Building	“
3	2.2.16	UDL	“
4	3.1.16	Innovative Approaches to Teaching	“
5	3.29.16	Inspired Educator, Inspired Learner Guest Speaker – Jen Stanchfield, author	“
6	4.5.16	Hattie – Visible Learning-trust scale	“
7	4.26.16	Differentiated Instruction	“
8	5.10.16	Experiential Pedagogical Approaches	“

## APPENDIX F

### COURSE CONTENT AND TIMELINE

Table 1

*Course Content and Timeline*

<b>Clinical Teaching Seminar Class Meetings and Dates</b>	<b>Content</b>	<b>Assignment</b>
<b>Seminar 1 – February</b>	<b>Seminar 1 – February</b>	<b>Seminar 1 – February</b>
<p>Read Chapters 1 &amp; 2 in the Stanchfield Text. Come prepared. Demonstrate professionalism and respect for your colleagues by reading the text thoughtfully and carefully. Highly qualified educators have a broad understanding of student learning beyond their specific disciplines; apply theory to their teaching practice <i>and</i> they understand what is said about teaching and learning within their subject matter as well as in the field in general.</p>	<p>Questions are designed for short answers; round robin format—everyone shares</p> <p>Opening Question – What is the text about?</p> <p>Core Questions – Why do you think what you think? Examples: asking students to support ideas with evidence from the text, respond to another student’s point of view, identify assumptions behind their own or the authors thinking, re-evaluate their ideas, consider other perspectives or ideas.</p> <p>Closing Questions: What does it mean to you? Goal of closing question is for students to consider the values and ideas from the text, in real-world applications.</p>	<p>Bring one of each of the following:</p> <p>a) What is a main idea in chapters 1 &amp; 2? Share one major theme or point the author presents in the text.</p> <p>b) Bring a question for the group to discuss.</p> <p>c) Be prepared to speak to something in the text you want to challenge or something that challenged you in the reading.</p> <p>d) Share a strategy/technique/philosophy/theory from the reading that you will explore in your classroom.</p>
<b>Seminar 2 – March</b>	<b>Seminar 2 – March</b>	<b>Seminar 2 – March</b>
<p>Readings:  Chapters 3 &amp; 5 in <i>Inspired Educator</i>, Inspired Learner, (Stanchfield, 2014).  Chapters 1, 2 and 7 in <i>The Differentiated Classroom: Responding to the Needs of All Learners</i> (2nd ed),</p>	<p>Participants will share their reflections with the group. Discussion will be facilitated and questions will be generated organically.</p>	<p>Prepare for March Seminar by reading the following chapters and preparing a lesson that you will teach to your students using the concepts gleaned from the reading. The lesson should be one that is taught within the days following the Seminar. You will receive feedback on this lesson and will be asked to discuss how it uses and embraces any or all of the following: <i>differentiation,</i></p>

(Tomlinson, 2014).

*collaborative learning, play and engagement.*

<b>Seminar 3 – April</b>	<b>Seminar 3 – April</b>	<b>Seminar 3 – April</b>
<p>Read Chapters 4 &amp; 6 in the required text (Stanchfield, 2014).</p> <p>Come to Seminar prepared to reflect upon your experience with planning and teaching this lesson. Please write a reflection that is valuable to you and your colleagues. Some prompts to help with that process: What were some student reactions or reflections in the lesson? What did you learn from your students? What did you learn about yourself as a teacher? Was there something significant that happened or an outcome that you want to share with colleagues, within and outside of the cohort? What will you do to follow up the next time the class meets? These are just suggestions. It is your experience, reflect in whatever way makes the most sense to you!</p>	<p>Triads–10 minute each to share lesson taught, reflections, peer to peer Q&amp;A.</p> <p>Whole Group: Did anyone have a significant student reaction they would like to share? What did you learn from your students?</p>	<p>Design and teach a lesson that demonstrates on paper and in action, many of the principles of effective teaching discussed in chapters 4 &amp; 6, e.g., learner-centered instruction; student reflection; sequencing and scaffolding; involving reluctant learners; designing classroom space to enhance instruction; cultivate creativity; formative assessment through a student-centered activity. These examples are not exhaustive. Read the chapters and then PLAN your instruction so you can execute an effective lesson, i.e., one in which students LEARN.</p>
<b>Seminar 4 - May</b>	<b>Seminar 4 - May</b>	<b>Seminar 4 - May</b>
<p>READ Chapter 3 – “Rethinking How we do School – and for Whom” in Tomlinson’s Differentiated Classroom text.</p>	<p>Class discussion centered on the reflection assignment below: <i>“The brain learns best when it can make its own sense out of information rather than when information is imposed on it. The brain doesn’t respond much to things that carry only a surface meaning. It responds far more effectively and efficiently to something that carries deep and personal meaning– something that is life shaping, relevant, or important or taps into <u>emotions</u>.”</i> How well do you know your students on an emotional level? How do you plan your lessons with student affect (beliefs,</p>	<p>Choose one of the following significant sentences from the chapter and reflect on how this tenet has influenced your instruction during clinical teaching by answering the reflection prompt(s) following the passage. Bring a copy of your reflection or device to seminar so you can share this reflection with colleagues. I would suggest you choose the passage that allows you the best opportunity to use a rich example(s) from your clinical teaching experience to support your reflection.</p>

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values, interests, and attitudes) in mind?

*“A meaningful curriculum is characterized by high interest and high relevance, and it taps into learners’ feelings and experiences.”*

How have students responded emotionally to your lessons? Has your awareness of student emotions in learning had an influence on how you plan for instruction? In what ways?

*“Classroom environments that are rooted in strong teacher-student relationships and that build communities of learners have a highly positive impact on student outcomes.”*

How has your instruction had an influence on your relationships with individual students and your classes as a whole? What impact has your relationships with students had on their learning? What impact has student-to-student relationships had on individual student learning?

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<b>Seminar 5 - June</b>	<b>Seminar 5 - June</b>	<b>Seminar 5 - June</b>
We are going to have a professional conversation and an experiential workshop with Jen Stanchfield, author of the text you read in clinical seminar-"Inspired educator, inspired learner."	*Waiting to receive flow/plan from the facilitator, Jen Stanchfield	Please email me your challenges, quandaries, questions, thoughts, and expectations for the workshop so Jen can plan a session that meets the groups’ needs.

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