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Educating Educative Mentors: Video as Instructional Tool

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College of Education

Doctorate of Education Program

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Concordia University–Portland

College of Education

Dissertation submitted to the Faculty of the College of Education

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James Therrell, Ph.D., Faculty Chair Dissertation Committee

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Abstract

New teachers rarely come to their first years of teaching with the expertise of a veteran teacher. Because teachers need to deliver impactful instruction, the education community has expanded induction initiatives that support new teachers. Understanding how induction mentors develop expertise in feedback and reflection can guide efforts to foster the development of mentor practice. This qualitative case study focused on the use of video and self-reflection to support mentor development practices within a regional induction program in Southern California. The study explored the experience of induction mentors who used both video-aided self-reflection and video-aided peer feedback during the 2017-2018 school year. Data collection methods included key documents, interviews, and observations. In researching the impact of video-aided reflection and feedback on mentor practice, the results of this study demonstrate and link the potential of video to impact new teacher practices. In addition, the study presents details of the observed changes in mentor practice. These findings provide preliminary support for an alternative model for developing educative mentors, including suggested recommendations to the educator preparation community as induction program leaders work toward developing mentor expertise.

Keywords: teacher education programs, induction programs, educative mentors, video-stimulated reflection, peer feedback.

Dedication

This dissertation is dedicated to my family. My parents, Jay, Barbara, and Carol; my daughters, Rebecca and Greer; and especially to my husband, Tom. Thank you for being supportive and understanding, and for taking such good care of me. It would be an understatement to say that I could not have done this without you.

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Finally, I would like to acknowledge a vast network of colleagues and friends who supported me throughout this process, including Barbara Howard, Princess Solomon, Lanae Turley-Trejo, Magee Pitkin, Drs. Ruth Sandlin, Iris Riggs, Andrew Kwok, Doug Mitchell, Karen Lafferty, Terry Walker, and Molly McCabe—you helped with everything from gentle queries on my progress to coaching sessions.

To my study participants, thank you for the valuable insights and graciousness of your time.

Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction

The United States has approximately 3,500,000 full-time elementary and secondary teachers (Institute of Education Sciences, 2014). “The Census Bureau indicates that PreK-12 teachers form the largest occupational group in the nation” (Bureau of Labor Statistics, as cited in Ingersoll, 2014, p. 2). Based on student enrollment and employment statistics, teacher demand is on the rise. Projections show a large increase in new teachers in the 2017-2018 school year followed by a projected plateau bringing annual hires to approximately 300,000 teachers a year (Learning Policy Institute, 2016).

This projection of new teachers means that nearly 10% of the teaching force will be new to the profession. At the same time that the number of new teachers is increasing, the educational system in the United States is undergoing significant change (Darling-Hammond, 2013). The number of new hires, in addition to the increased political and social pressures to dramatically improve student achievement, escalates the importance of supporting these novice teachers. These factors also bring forth a confounding dilemma about the most effective way to support those new to education.

Statement of the Problem

The results of numerous studies suggest that teachers have the largest school system impact on student achievement (Alton-Lee, 2003; Meissel, Parr, & Timperley, 2016; Nye, Konstantopoulos, & Hedges, 2004). At the same time, Ladd (2009, as cited in Rice, 2010) contended that “on average, brand new teachers are less effective than those with some experience” (p. ix). When studying in-service learning for teachers, induction programs, which support candidate development and growth in the profession by building on the knowledge and skills gained during the preliminary preparation (California Commission on Teacher

Credentialing, 2011), continue to be conceptualized as an important element of new teacher support and as a component of teacher professional development.

Whether citing Zey's (1984) mutual benefits model, Vygotsky's (1978) social development, or Rogers's (1995) innovation diffusion theory, research consistently suggests that interaction with a mentor is an overwhelmingly important element within effective induction programs. Following their review of the literature on induction, Kapadia, Coca, and Easton (2007) argued, "Induction is generally characterized as a means to orient, assist, and guide beginning teachers so they remain in the profession and grow into capable practitioners" (p. 4). When studying more than 35 induction programs in Illinois, Wechsler, Caspary, and Humphrey (2010) found that worthwhile induction activities included observations and targeted feedback. In 27 states, this continuum of teacher development relies on educative mentors to provide meaningful induction support (New Teacher Center, 2016). The problem then is how to develop these effective educative mentors.

Markers in Teacher Development

Research has indicated that the greatest changes in teacher practice take shape between three to five years of experience (Darling-Hammond & Bransford, 2005). As a result, teacher educators expect it to "take many years of experience to develop sophisticated expertise" (Darling-Hammond & Bransford, 2005, p. 3). Ingersoll and Strong (2011) claimed, "Teaching is complex work, pre-employment teacher preparation is rarely sufficient to provide all of the knowledge and skill necessary to successful teaching" (p. 204). Stages of learning to teach include content or subject matter competency in undergraduate programs, coupled with credential and licensing courses, student teaching (or intern placement), and professional learning.

The preservice portion of teacher education is generally delivered through universities and course work. On the in-service side of the continuum, new teacher induction has been conceptualized and implemented as a way to provide "opportunities for experts and neophytes to learn together in a supportive environment" (Howe, 2006, p. 288). In some areas this progression of teacher development has been called a continuum of learning to teach. One such example can be found in California's Learning to Teach System (see Figure 1). In this system, a new teacher candidate first experiences preservice (preliminary credential preparation), which is then followed by Professional Credential Preparation induction (in-service preparation). The successful completion of a job-imbedded induction program, supported by a mentor, allows the candidate to progress to a clear credential.

A key conceptual assumption in this study is that teacher induction supports new teachers in their development. However, within the induction model are varied facets of mentor actions and interactions, some of which are more supportive and impactful than others. Given the increased demand for and on teachers, the educational community must focus on those mentoring activities that make a positive difference.

Research Questions

A review of literature indicates that new teachers develop in their professional practice when they are concurrently supported and challenged in growth-focused relationships (Helman, 2006; Lipton & Wellman, 2004; McGatha, 2008; Zwart, Wubbels, Bergen, & Bolhuis, 2009). The literature review on educative mentoring reveals multiple themes and contextual factors impacting the work between mentor and new teacher. At the same time, the literature provides no clear direction on how best to develop the mentor teachers. While contextual factors, including the expanded use of technology, may impact the quality of the induction experience,

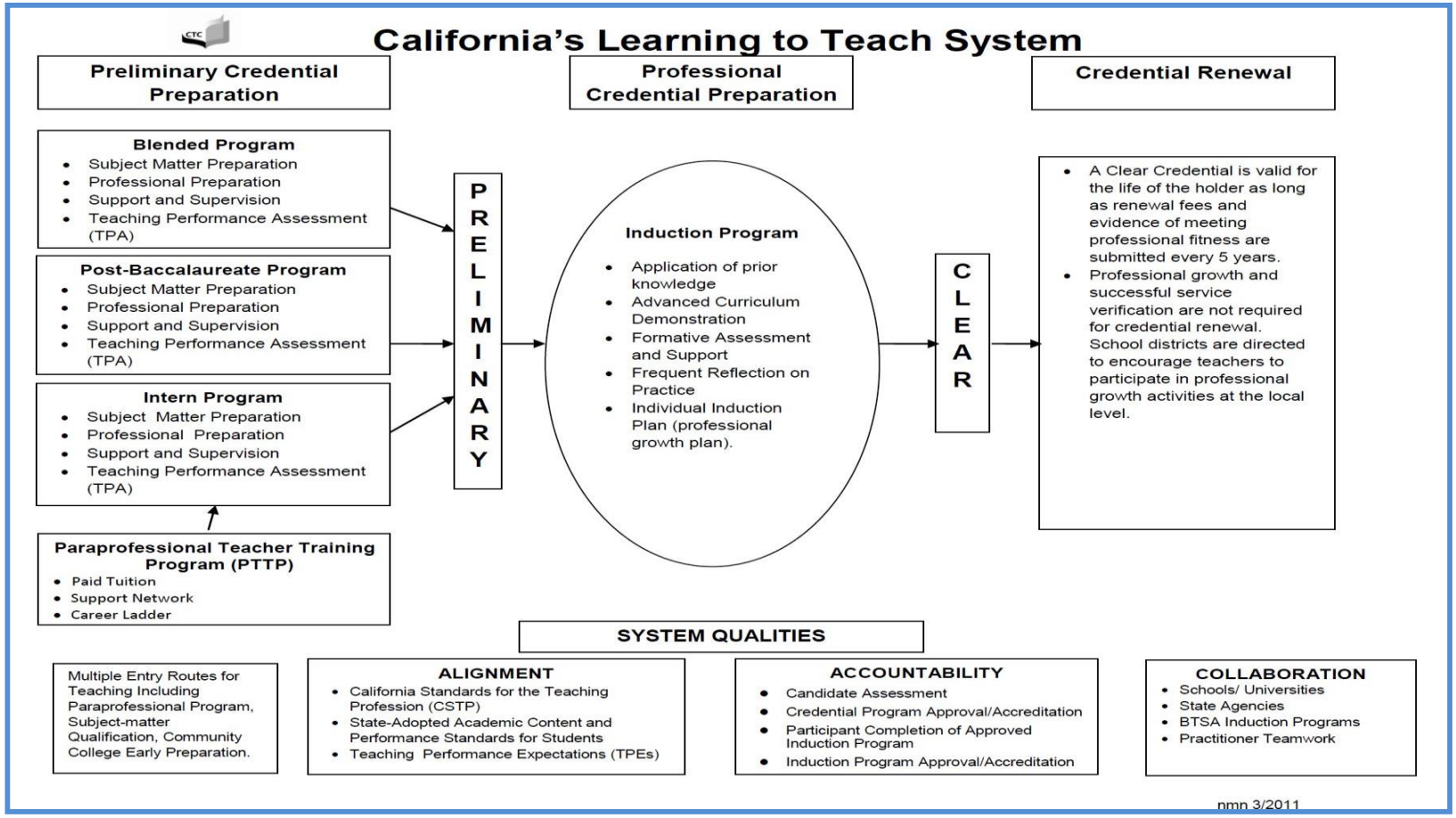

Figure 1. California's learning to teach system. California's Learning to Teach System includes various routes to preliminary credentialing. These routes are represented on the left of the figure. Induction, in the center oval, represents the route from the preliminary credential to the clear. This publication by the California Commission on Teacher Credentialing is not copyrighted. It may be reproduced in the public interest, but proper attribution is requested. Reproduced from California's Learning to Teach System [Graphic], 2011, retrieved from https://www.ctc.ca.gov/seminarsLTT/LTT-Continuum.pdf

the mainstays that make a difference in practice continue to be communication, observation feedback, and repeated practice.

This study focuses on understanding one promising way to develop best practices for induction mentors. Because teacher and mentor development are situated in a complex and evolving environment, understanding the experience of educative mentors requires an iterative examination of "events outside the laboratory" (Campbell, as cited in Yin, 2014, p. xvii). Yin contended that case study is the preferred approach when relevant behaviors cannot be manipulated and when there is a variety of evidence, and explained that "'how' and 'why' questions are more explanatory" (p. 10). Bakkum (2012) further supported the contention for case study and argues that a research question that asks "how" provides the opportunity to understand how something is grasped in human experience. Therefore, the study was guided by the topic of how video-aided reflection impacts mentor practice. The research questions addressed were the following:

1. How does video-aided self-reflection impact mentor practice?
2. How does video-aided peer feedback impact mentor practice?

Background of the Study

Across the United States, educators continue to debate which variable influences student achievement (Darling-Hammond, 2000). Teachers need to know what makes a difference for student learning. Educators' quests for best practices in the field may focus on procedural or material selections as they study student behavior and achievement. Even when student achievement is moving forward satisfactorily, teachers may wonder how to prepare students for a changing world (Darling-Hammond & Bransford, 2005). Concurrently, a majority of new

teachers in their first two years of teaching (Ingersoll & Strong, 2011) are grappling with student achievement while refining their skills and seeking answers with the help of an induction mentor.

In attempting to understand the classroom impact of these mentor-mentee interactions, a conceptual framework becomes a structural tool for organizing and distinguishing between a variety of connections, activities, and relationships (Boote & Beile, 2005) while also providing a common language (Smyth, 2004). To support analysis of the multifaceted induction context, Ravitch and Riggan (2012) argued, "Developing a conceptual framework forces the researcher to be selective, to prioritize variables, and to discern specific relationships within the research" (p. 7). The study began with an exploration of the characteristics of mentoring nested within induction. I relied on my conceptual framework for educative mentor impact on new teachers (see Figure 2) as well as a theoretical framework detailed in Chapter 2. Both of these frameworks provide the means of interpreting the experiences within the given context (Thomas, 2011).

Study Context

The impact of mentor and mentee interactions upon new teachers' classroom practice is situated in both a time and place of complex contextual factors, creating learning conditions for new teachers in which knowledge is reliant on communication and ongoing, interwoven relationships. As Glazerman et al. (2010) stated more precisely,

> Context is important. The structure and functions of an induction program are likely to be influenced by the characteristics of the local area, the school, the beginning teacher's classroom, the teacher, and her students. Teacher and student outcomes may be directly affected, for example, by neighborhood demographics, the degree of administrative and financial support for beginning teachers. (p. 5)

My conceptualization of mentor development includes understanding that professional development takes place through growth-focused interactions. Professional knowledge, for example, is developed when teachers are supported and challenged and held a vision of student success. Mentoring, as a component of induction, is thereby a component of professional development, which impacts student outcomes. An examination of mentoring practice within induction leads to teacher impact on student achievement (see Figure 2).

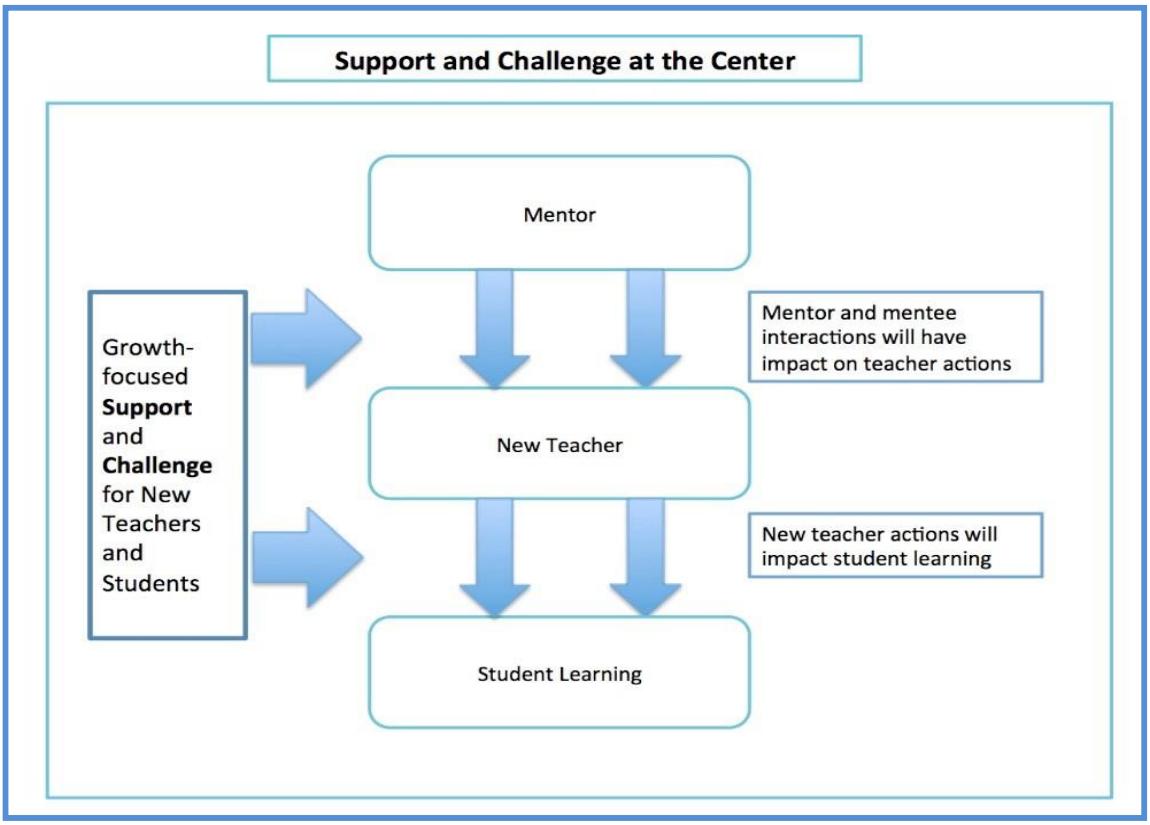

Figure 2. Concept of mentor impact on new teachers and student learning. This figure depicts the influence of the mentor on the new teacher while identifying the growth-focused elements of support and challenge that take place during mentor and mentee interactions. Created by author, based on framework for analyzing the effectiveness of professional learning experiences by Timperley, Wilson, Barr, and Fung (2007).

With the use of this conceptual framework for mentor development, I analyzed my study results through the lens of a California teacher preparation provider. California requires that "each Induction program must be designed to provide a two-year, individualized, job embedded system of mentoring, support, and professional learning that begins in the teacher's first year of teaching" (California Commission on Teacher Credentialing, 2015). This program supports growth and development by implementing a robust mentoring system.

Researcher-as-Instrument

My inquiry into educative mentor development is motivated, in part, by my experience in the California induction community. As an employee for several county offices and in my work for the state, I have been in the position to witness the uneven demonstration and practice of mentor practices. As required for my position, I have been fully trained in multiple mentoring models and routinely train others in the use of data, feedback, and observation techniques. As Creswell (2013) stated, "We always bring certain beliefs and philosophical assumptions to our research" (p. 15). My training in mentoring models impacts my belief in mentoring as a practice for professional growth. In my administrative capacity, I organize and facilitate professional learning for teachers and administrators, which includes writing curriculum and providing resource materials. During these training sessions, participants engage in conversation about mentor skills and required components of the program. In the general course of interactions, mentors may relay scenarios and ask for input on how to handle mentoring situations. Mentors may also share their questions of practice. It is through these interactions that I have witnessed a range of practice.

Acknowledging my involvement in the induction community and anticipating the use of interviews for my case study led me to consider my role in the study. During conversations with

colleagues, I was urged to research various methodologies and approaches to best address my research question. To help me more deeply understand the nuance of case study, I read Seidman (2013), Creswell (2013), Yin (2014), and Stake (2005). Stake (2005) did not make reference to the term *researcher as instrument* but does argue, "The brainwork ostensibly is observational, but more critically, it is reflective" (p. 449). Seidman (2013) very clearly addressed the notion in an assertion, "Although inevitably the researcher's consciousness will play a major role in the interpretation of interview data, that consciousness must interact with the words of the participant recorded as fully and as accurately as possible" (Recording Interviews, para. 1). Hatch (2002, as cited in Creswell, 2013) identified that a characteristic of qualitative research, "relies on the researcher as key instrument in data collection" (p. 46). Reading more on the topic of researcher as instrument, I further consider that I may play a role in both the generating and collection of data (Xu & Storr, 2012). Employing several operational methods reduced my researcher impact. I engaged in self-reflexivity by questioning my preconceptions, which made explicit what appeared to be hidden (Cruz, 2015). The use of a field notes journal helped me to reflect on the impact of my involvement as I collected and analyzed data over a seven-month period of time.

Purpose

The purpose of this qualitative case study was to understand the experience and impact of video-aided reflection by induction mentors. Due to the variance of mentor practice and the potential uneven impact on teachers, the educational community should find effective strategies to support the continued growth and development of mentor skills. This study specifically explored the experiences of induction mentors as they worked with their new teacher induction candidate to support candidate and student growth. To examine their experiences, induction

mentors and the teachers they support were invited to participate. The case study involved self-reflection, observation, and interviews as data collection methods.

Significance

As teacher education programs attempt to address the wide range of candidate needs, program personnel are called to provide mentor support. A significant number of studies have examined new teacher development and its impact on student achievement. However, there continues to be a paucity of literature on the training content for induction mentors. Using the ProQuest database and limiting the search to the years 2000-2017 resulted in more than 4,000 studies on teacher development and student achievement. Relatively few studies (fewer than 50) have argued for the essential elements in developing effective educative mentors. A professional learning continuum (Feiman-Nemser, 2001) and the learning to teach system, as presented in this chapter, rely on induction programs and educative mentors to provide scaffolded support for beginners upon entering the in-service stage. Thereby, novice teacher development relies on mentor skill, an area of study that is still underdeveloped.

Results of this study could inform educational organizations that are unsure of best practices in mentor development. In addition, developers of preparation materials may consider the use of video in future training. This study sought to add to the literature on mentor development in order to inform best practices in the field, which can thereby guide future processes, instrumentation, and instruction.

Definitions of Terms

Educative mentoring. A sustained relationship between an experienced teacher and a novice, built upon Dewey's (1933) concept of educative experiences, which are experiences that promote future growth and lead to richer subsequent experiences (Feiman-Nemser, 2001)

Induction. In-service support for beginning teachers; separate from preservice preparation, induction serves as a bridge linking preservice and in-service education. Induction is a program-level support that spans all of the roles and responsibilities teachers fulfill and can be used to improve their effectiveness in serving students (American Institutes for Research, 2015).

Mentoring stance. Skilled growth agents operate across a continuum of interaction to support learning for their colleagues. Within learning-focused conversations, they flex between consulting, collaborating and coaching stances to develop their colleagues' capacities to reflect upon practice, generate ideas, and "increase professional self-awareness" (Lipton & Wellman, 2003, p. 2).

Preservice teachers. A student teacher who has not yet earned a teaching credential; also called a teaching candidate or credential candidate. Preservice teachers are those engaged in initial teacher education programs at undergraduate or postgraduate level (Borg, 2015).

Professional development. Refers to the ongoing, intentional, systemic educational training opportunities available to educators in their schools and districts, based on the definitions and descriptions provided by Guskey (2000).

Reflective practice. Refers to an inquiry-based approach to teaching that involves critical thinking and a personal commitment to continuous learning and improvement (York-Barr, Sommers, Ghere, & Montie, 2006).

Third point. Refers to the three-point interaction between mentor, protégé, and focus. The third point can be an external focus point, such as student work or videotape (Lipton & Wellman, 2003).

Video-stimulated reflection. Technology-supported reflection in which video helps unpack what transpired (Endacott, 2016).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions (and limitations) affect the inferences that researchers are able to draw from studies. While assumptions often cannot be proven (Simon & Goes, 2013), once the assumptions are identified, ameliorating procedures can be implemented. Therefore, it is important to identify the assumptions in order to be able to address their potential impact. This study is based upon the assumption that the mentor participants will be honest and truthful in their responses. I may not be able to validate each mentor response, but multiple data sources and interviews provided evidence that the assumption is correct. The use of pseudonyms and coding in order to preserve confidentiality increased the likelihood of honest responses.

A second assumption of this study was that the mentor participants are educative mentors actively engaged in the work of educative mentoring. The mentoring work would include frequent meetings with their mentees where they work through cycles of inquiry as outlined by the program. The use of multiple data sources and mentee focus-group interviews provided evidence to support this level of active participation.

Limitations

It might seem desirable to try to create a study without limitations, yet all studies face limitations. Limitations are restrictions on the study that cannot be reasonably dismissed; these restrictions affect the design and results. Limitations within this research study may arise from the researcher as the primary research instrument. These researcher-dependent limitations may

include the researcher's decisions about the amount of description, analysis, or summary material to include (Stake, 2005).

In planning this study, I accepted these limitations and also planned to ensure credible collection and interpretation of data by employing a variety of validation processes (Yin, 2014). I included member-checking to ensure that the study would not be weakened by these limitations (Creswell, 2013). As I engaged in data collection and analysis, I continued to monitor for other limitations, which may have still been present.

Delimitations

Delimitations are decisions that a researcher sets so that goals remain manageable. For this study, delimitations include the population I selected and the number of mentors and mentees included in my sample. When determining the population for this study, I first considered all experienced mentors in the region. However, because the second assumption of this study is that the mentor participants are actively engaged in the work with a focus on cycles of inquiry, I set the boundary to omit mentors serving mentees who teach special education. These special education mentors were omitted from the study due to the differentiated and customized content for the education specialist credential program. The weight of legal responsibilities may skew mentor conversations more toward compliance than teacher growth, thus creating a situation in which less time is spent mentoring and more time is allocated to task completion.

Yin (2014) suggested no more than four cases to allow for in-depth analysis and the development of deeper understandings. Denzin and Lincoln (2013) contended, "Qualitative research is a set of complex interpretive practices" (p. ix), which necessitates the establishment of a manageable set of participants. Two studies that further support case study approach with

this number of participants include Bower-Phipps, Klecka, and Sature (2016), which used four matched sets of mentors, and Stanulis, Brondyk, Little, and Wibbens (2014), which included one mentor and three beginning teachers. Limiting the number of mentors and mentees in this study follows these design recommendations.

Summary

As teachers have the largest school system impact on student achievement (Alton-Lee, 2003; Nye et al., 2004) and as the number of new teachers has increased, greater interest has been focused on the development of new in-service teachers. A majority of states (New Teacher Center, 2016) now includes induction as a way to support those new to the profession. In this chapter, I have introduced the problem of educative mentor skill development and the connection between mentor practice and new teacher development. This study proposed that uneven mentor skill could affect the application of scaffolded support for novice teachers. The purpose of this qualitative case study was to understand the experience and impact of video-aided reflection by induction mentors.

Chapter 2 includes my theoretical framework of learning and presents a detailed review of the literature. The review of literature includes the historical context of new teacher development, mentor development, the impact of technology, and the role of video in professional development. The chapter concludes with a review of methodological issues, a synthesis of research findings, and the argument that more needs to be known about mentor practice.

Chapter 2: Literature Review

Over the last five years, induction mentors and their mentees (novice teachers) have experienced increased pressure from government and communities to demonstrate positive outcomes for teachers and students. While some research findings may suggest that, "well-designed mentoring programs improve retention rates for new teachers, as well as their attitudes, feelings of efficacy, and instructional skills" (Sutcher, Darling-Hammond, & Carver-Thomas, 2016, p. 64), there are also contradictory findings on induction outcomes for teachers and their students (Glazerman et al., 2010; Ingersoll & Kralik, 2004). When using student test scores to measure impact on student achievement, Fletcher, Strong, and Villar (2008) found little relationship between teacher experience and student achievement. Other study results indicate that new teachers have lower student achievement. According to Adams (2010), "The relationship between experience and effectiveness is most pronounced in the first three years and then tends to fall off once teachers have about four years of experience" (p. 3). The relationship between experience and effectiveness and the widespread reliance on induction to support new teacher development make it clear that "more needs to be done to distinguish the effective elements of the induction process" (Mitchell, Howard, Meetze-Hall, Scott-Hendrick, & Sandlin, 2017, p. 82).

The perspective of this researcher is that teacher induction supports new teacher development. However, within induction there are varied facets of mentor actions and interactions, some of which are more supportive and impactful than others. Given the increased demand on teachers and the projected need for more new teachers (Bureau of Labor Statistics, as cited in Ingersoll, 2014), the educational community must put its efforts toward mentors and mentoring activities that make a positive difference.

Organization of the Review

This review explores induction and mentoring studies from the United States and abroad, including some "that expect teachers to practice reflective and collaborative action" (Howe, 2006, p. 290) and others that highlight levels of reflective practice (Larrivee, 2008). This review first presents my theoretical framework, followed by a historical summary of new teacher development using seminal work by Joyce and Showers (1980) and Feiman-Nemser (1998). The historical summary is then followed by the nested components of mentoring and induction; dimensions of technology then complement these facets. Examples of unsuccessful induction experiences (Fry, 2010) are included with examples of success, satisfaction, and student achievement. Finally, mentor development and video technology provide the concluding boundary for the literature review.

Theoretical Framework

Although theories about teaching and learning abound, most preservice teachers graduate with exposure to experiential learning, as posited by Dewey (1933) or concepts of discovery learning by Bruner (1960) and social learning Bandura (1977). Administrators in training are also likely to encounter the theories of Wenger (1998), Schön (1983), or Mezirow (1991). In the current era of Common Core State Standards, constructivism and experiential learning are evident in teacher preparation and increasingly practiced in classrooms. What follows is an explanation of the theoretical framework for this study. I start first with theories connected to student learning, followed by learning in adults.

Constructivism and Social Learning in Students

Dewey (1933) is often associated with both pragmatism and constructivism. Regardless of label, Dewey was concerned with the social importance of school and the necessity of

facilitated learning activities, where the learner is the focus. In *My Pedagogic Creed* in 1897, Dewey wrote,

> I believe that much of the time and attention now given to the preparation and presentation of lessons might be more wisely and profitably expended in training the child's power of imagery and in seeing to it that he was continually forming definite, vivid, and growing images of the various subjects with which he comes in contact in his experience. (p. 78)

Bruner (1960) built upon the theory of active learning with the development of discovery learning and suggestions for scaffolding. One of the guiding principles was that learning takes place "*in situ"* (p. 28). To support a learner, Bruner suggested the concept of a scaffold, where supports are in place until they can be removed for greater autonomy. The author argued that educators should consider the difference between learning and thinking and defined thinking as the "operation of utilizing information to go beyond the information" (p. 29). Bruner added to the field with the inclusion of dialogue and the importance of dialogue in the learner's discovery and use of reflection.

Bandura's (1977) social learning theory sought to explain the phenomena of how individuals process via observational learning. Bandura contended that behavior modeling could include students observing students for social clues and norms as well as how to function in the school environment. The theory has also has been applied to mentor and mentee roles, where the mentor provides the model and the mentee is the observer. In either of these relationships, reality is reinforced and the observer can be acculturated to the context. The combined impact of Dewey's constructivism, Bruner's discovery learning, and Bandura's social learning supports the

important role that observation, feedback, and reflection contribute to successful induction experiences.

Reflection and Social Learning in Adults

Wenger (1998) began the description of community of practice (COP) theory by stating the underlying assumptions, the first of which is that humans are social beings. Wenger (1998) contended, "The primary focus of this theory [COP] is on learning as social participation" (p. 4). Wenger further argued,

> Communities of practice are groups of people who share a concern or a passion. They develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems—in short a shared practice. This takes time and sustained interaction. (p. 4)

The theories of Schön (1983) and Mezirow (1991) were built upon research with adult learners. The work of Mezirow (1991) was based on a more general population of adult learners, while Schön (1983) was interested in reflective learning by professional practitioners, particularly in the medical field. The field of education quickly adopted the importance of reflection in developing the skills and knowledge of teacher practice. What has perhaps been lost is the distinction that Schön (1983) made between the structure for reflection in action versus reflection on action. Schön (1983) argued that professionals learn while doing when they may need to improvise in the moment. For Schön (1983), learning from reflecting on the action of their own professional experiences after an event is especially important in the iterative nature of learning cycles and the resultant application of experience-based learning.

Mezirow's (1991) theoretical distinction centered on knowledge learning versus perspective learning. According to Mezirow, transformational learning (TL) is a change in

perspective or beliefs (a paradigm shift). The first step in TL requires a disorienting dilemma and a resulting exploration and action plan. In supporting new teacher development, both knowledge learning and perspective learning are necessary. Without a change in paradigm, educators might not consider the necessity of reflecting on knowledge learning, which represents the how and what of their professional practice.

Built upon the work of these seminal theorists, the field of educator preparation has been dramatically altered by the debate about learning as a socially constructed activity and the importance of reflection. The elements of teacher preparation and the attributes of teacher induction have been studied extensively (Cherubini, 2009; Darling-Hammond, 2000; Delaney, 2012; Feiman-Nemser, 2001; Ingersoll 2014). One area of research that appears to be underaddressed in the literature is the role of reflection and video use when mentors learn to mentor. With constructivism, discovery learning, and social learning as its foundation, this study used the theories of reflective practice, transformative learning, and communities of practice to understand mentor video reflection from the perspectives of experienced induction mentors as they engage with teachers new to the profession. Collectively, these learning theories inform mentor development and provide a framework to understanding educative mentoring in the induction context (see Figure 3).

Review of Research Literature

Historical Context of Mentoring

Part of the formative research base on the topic of educative mentoring borrows from business and other fields. There are plentiful examples in business of assigning a wise elder to support the development and growth of someone less experienced. Bozeman and Feeney (2007) have contributed to mentor theory within the sphere of business administration and have crafted

a working definition of mentoring while concurrently identifying variances in mentoring models. Other business mentor studies focused on mentor implementation with college students and graduate business students (Parker, Hall, & Kram, 2008).

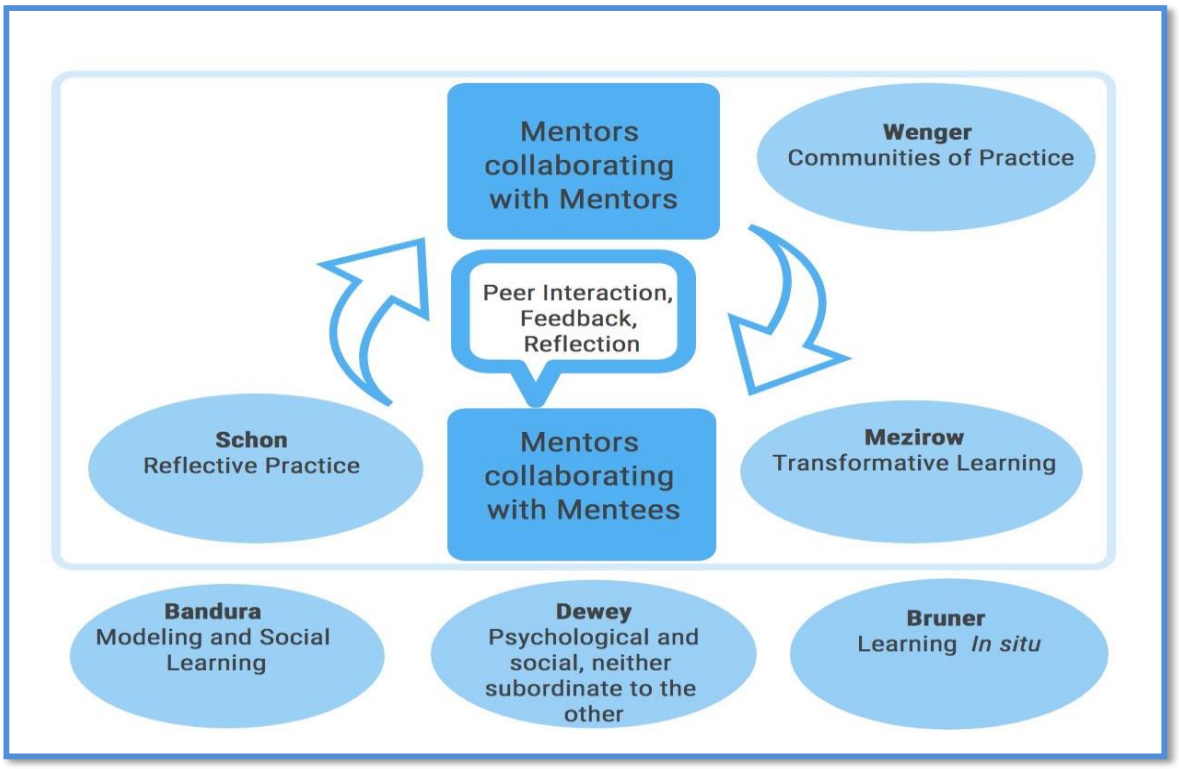

Figure 3. Theoretical framework. Schematic representation of the theoretical framework for this study. The seminal theorists listed along the lowest horizontal line represent foundational constructs of how people learn. The squares and arrows indicate the iterative interaction pattern of feedback and reflection between mentor and mentee; the interactive pattern is surrounded by adult learning theorists who support the structure and design of mentor and teacher development. Created by author using Vengage.

The variance in mentoring models is important to explore and not unique to the world of business. Seminal researchers in education mentoring include such names as Costa, Garmston, Lipton, Wellman, Feiman-Nemser, Joyce, and Showers. These researchers, with many of their

early works published in the 1980s, explored peer coaching in education and led the field in understanding the practices of reflective practitioner, which promoted the expansion of education vocabulary to include the term *educative mentoring*.

As addressed in the theoretical framework, the notion of learning resulting from reflection is connected to theorists such as Mezirow, Dewey, and Schön. The concept of reflective practitioner also connects beyond education to Schön's work in the area of professional knowledge development. Indeed, the broad study of induction might be similar to the medical example labeled "situations of practice" (Schön, 1983, p. 16) in which the professional must not only be knowledgeable and analytical of technical components but also be skillful in synthesis and creative in solutions. Markie (1994), too, made the connection to teacher analysis: "The first criterion is intellectual competence . . . but he should have some capacity for analysis. Without this capacity, he cannot develop it in his students" (p. 90). It is this focus on analysis of classroom practice that will move a teaching practice forward.

Whereas early versions of new teacher mentoring had included the partnering of those who taught next to or down the hall from one another, induction mentoring has grown to include assistive technologies and the expanded use of mentors from outside the walls of the mentee's teaching space. Many recent induction studies have included case studies situated in specific geographic areas such as the rural areas of Wyoming (Rush &Young, 2011), programs focused on special education (G. Jones, Dana, LaFramenta, Adams, & Arnold, 2016), and large national metastudies such as those by Ingersoll and Strong (2011). More recently still, induction teachers are using video, computer mediated communication, and Web 2.0 tools in what is often labeled as E-mentoring.

As provocative as new models and delivery options of reciprocal coaching might be, there is much to be learned from seminal work by Joyce and Showers (1980), Feiman-Nemser and Parker (1990), and Lipton and Wellman (2003). Joyce and Showers (1982) described reciprocal coaching in detail: "Each teacher practiced the teaching strategy several times with the other teachers. . . . Then they switched places. . . . Each practiced several times with the 'coaching partner' present to reflect on progress" (p. 4). The synectic model developed by Joyce and Showers (1980) presented parallels between athletic and teacher coaching: "we are beginning to discover parallels between the problem of transfer in teaching and the problem of transfer in athletic skill" (p. 7). Two short yet memorable quotes by Joyce and Showers (1980) provide a way to remember the focus of this early research. The first quote draws attention to the similarities: "like athletes, teachers will put newly learned skills to use—if they are coached" (Joyce & Showers, 1980, p. 5). The second quote illuminates an incongruity between athletes and teachers "perhaps the most striking difference in training athletes and teachers is their initial assumptions. Athletes do not believe mastery will be achieved quickly or easily. They understand that enormous effort results in small increments of change" (Joyce & Showers, 1980, p. 8).

Building upon this deeper understanding of teacher coaching, Feiman-Nemser and Parker's (1990) initial studies of new teacher development explored two teacher education programs. The comparison study (1992) examined programs in California and New Mexico. As with much of education, the programs were heavily context-dependent. Through interviews and observations, Feiman-Nemser and Parker delved into descriptions of mentoring and necessary training dimensions for coaches. The authors captured a coach's perspective on the training experience in California: "The district is very large, and when we are made mentors, we are

turned loose" (p. 4). Conversely, the New Mexico mentor training is described as occurring frequently: "On Friday mornings, support teachers meet with the director in a three-hour staff seminar. . . . In addition, the support teachers are divided into two teams. . . . The teams meet informally as a support group" (p. 5). Feiman-Nemser (2001) later went on to state, "Serious mentoring oriented around new teacher learning is a professional practice that can be learned. Strong induction programs offer mentors more than a few days of initial training. They provide ongoing opportunities" (p. 29).

As they created their instructional guide for mentors, Lipton and Wellman (2003) acknowledged the challenges for new teachers: "new teachers often have a mistaken belief in the existence of a readily available package that can transform their classes. . . . It is the mentor's role to debunk this myth" (p. ix). Lipton and Wellman further claimed that mentoring relationships are central to the success of ongoing learning within induction programs. The necessity of ongoing learning is increasingly true as the landscape of education continues to expand beyond the building-bound constraints of brick and mortar into cyber communities. In the next section this review examines mentor and mentee relationships within initiative and non-induction situations, then explores the mentee-mentor experience within induction programs for beginning (novice) teachers and concludes with a more specific focus on mentor development.

Induction Programs and Initiative-Based Studies

The studies discussed are grouped together either because of their focus on specific projects (such as literacy or science) or specific induction programs. Many of the initiative-based studies add to the field by focusing on science, math, special education, primary grade literacy, English, or drama. Other studies focus on classroom protocols such as Sheltered

Instruction Observation Protocol (SIOP). The induction studies examined provide a starting point to understand how mentoring is included with the other elements of induction.

Onchwari and Keengwe (2008) studied 44 Head Start coaches across two states. Using interviews and classroom observations, the authors examined the coaching component that was directly connected to the specialized teacher training, which was intended to support implementation of specific classroom literacy practices. The Head Start programs experienced a positive impact from the mentor coach initiative, and more teachers joined the program. The researchers contended that the important element in mentoring is the relationship.

Batt's (2010) ethnographic study, while based on differing methodology than Onchwari and Keengwe (2008) used a sample size of 15 teachers and mentors who were part of a specific teacher training. In Batt's (2010) study, the participating teachers and coaches had been trained in SIOP. The study sought to monitor the effectiveness of the SIOP training and to "assess the value of cognitive coaching" (Batt, 2010, p. 997). The methodology and inclusion of several dimensions across two phases of the study lends credibility to the findings that work with a mentor makes a difference during the implementation phase. None of the coaches in Onchwari and Keengwe (2008) or Batt's (2010) studies were induction mentors. The coaches may be more appropriately called instructional coaches. In both studies, the role of the coach was to support implementation of specified classroom practice following professional development. Principals' perspectives of teacher growth were collected via stakeholders. The principals' perspective was that there had been growth in participating teachers.

The study by Griff Jones et al. (2016) is among the most recent in contributions to the body of reviewed mentor studies and included a pilot of mentor and resource assistance for STEM (science, technology, engineering, mathematics) teachers. The use of a teacher needs

survey and the explanation of data analysis make the study a strong example to build upon because of the congruence to induction mentoring activities. In the study, nearly 30% of teacher participants indicated that neither they nor their mentor used the online resources. Of this 30 %, many participants referenced time issues as the deterrent to accessing resources. Overall, the results of the study indicated that the pilot program was effective in providing resources for STEM teachers and that the pilot program was expanding across Florida districts.

In a variance of the initiative-driven study, Rush and Young (2011) conducted an "ex-post facto study designed to examine the impact of an instructional facilitator program on teacher practice" (p. 13). In this study conducted in the state of Wyoming, the mentor program was supported by the state government allocation of monies for Instructional Facilitators. While the curricular focus was varied, the mentor program had been in existence for two years at the time of the study. Nearly 7,000 Wyoming teachers were surveyed, and over 1,600 responded to the survey. Of the respondents, 83% had worked with an instructional facilitator. By collecting data from a wide range of respondents, Rush and Young were able to identify different types of activities that were valued, including formative assessment for elementary teachers and technology use for secondary teachers.

Other studies, such as those by Adams and Woods (2015), focused on program qualities that attract and retain teachers in rural areas. In this study, the authors explored a state and university partnership across isolated districts in Alaska. Alaska has one of the lowest teacher retention rates; close to 85% of the teachers leave the profession after struggling with isolation and challenges associated with many mixed-grade classrooms. These findings support the importance of continuing to provide services to early-career teachers through multistaged

induction models. The authors argued that the multistaged induction should include a focus on community and adaptability.

Research by Collis, Falkenberg, and Morin (2013), Kelley (2004), and Zwart et al. (2009) moved the coaching conversation from being largely curricular dependent to being focused on intensive coaching training with an emphasis on induction participants and their students. Situated in Canada, the study by Collis et al. (2013) also heavily referenced the work of Costa and Garmston (2002); the findings presented by Collis et al. (2013) also drew reference from Laura Lipton and Bruce Wellman, both colleagues of Costa and Garmston. In describing the design of the program, Collis et al. affirmed, "Paramount to the design was the knowledge that in-depth mentor training should be a critical feature of any professional development model" (p. 16). The study focused on induction model design; in doing so, the researchers began to add to the knowledge base of what makes a difference in coaching conversations. An additional area of emphasis within the study was targeted focus on formal training as part of professional development. Collis et al. stated, "There was overwhelming evidence that advanced skills teachers were applying the skills that they had learned at the Lipton PD [professional development] workshop. . . . Most skills were visible in each of the observed mentoring sessions" (p. 22).

Kelley's (2004) study conducted in Colorado collected data on district-trained cognitive coaches and included references to specific training protocols by Arthur Costa and Robert Garmston. Kelley (2004), contrastive to the study by Collis et al. (2013), drew upon the interplay of "quality of mentoring and perceived teacher growth level" (p. 444). While Kelley's study did not specify the coach training and support in detail, the outline of an initial training for

coaches and the coaches' ongoing training was presented as were the growth perspectives of participants' principals.

With an anomalous shift from previously discussed coaching models, the research presented by Zwart et al. (2009) focused on reciprocal coaching in which teachers take turns being the coach. While the reciprocal coach term is new in this literature synthesis, the outlining of behaviors and skill sets is congruent with other coaching models. Of significant consideration in this study are the instances where program design outlined the goals for all participants. Most studies specifically stated, "The program was very generally designed to stimulate pairs of teachers to work together to support each other's professional growth" (Zwart et al., 2009, p. 246). The analysis indicated that there were characteristics of the mentoring relationship that had greater impact and caused teachers to try out new teaching strategies while being observed. The characteristics included the peer observation, which reduced the potential embarrassment of "trying something new in front of another" (p. 254).

Finally, studies by Achinstein and Barrett (2004), Cherubini (2009), and Israel, Kamman, McCray, and Sindelar (2014) relied on qualitative methods to explore mentoring within induction programs. Data from these studies relied on semistructured interviews and were conducted across many schools and school systems. With a focus on data conversations and "the third point," Israel et al. (2014) measured mentor and mentee interactions across four domains of planning, creating, teaching, and professionalism. The data revealed that mentors provided extensive professional support including postobservation feedback.

Mentoring Best Practices

In understanding mentoring practices, Dawson (2014) set out to outline a comprehensive model for mentoring and did so by identifying problematic terms and definitions found

throughout mentor literature. According to Crisp and Cruz (2009, as cited in Dawson, 2014), "Most notably, it appears that mentoring research has made little progress in identifying and implementing a consistent definition and conceptualization of mentoring" (p. 137). This assertion is especially unfortunate given that the field has devoted decades of study to the field. According to Bozeman and Feeney (2007), "Mentoring research adds up to less than the sum of its parts; although there is incremental progress in a variety of new and relevant subject domain" (p. 719). Subsequent studies continue to add to the incremental progress.

Nearly eight years after the Bozeman and Feeney (2007) criticism of mentoring research, some progress has been made in understanding mentor practices. Bower-Phipps et al. (2016) added to the field as they focused on "how mentors articulate and share their practices" (p. 291). In their study, the mentor learning program was structured to include online discussion boards, monthly meetings, and observations by mentors. Four mentors and their interns participated in the study. This study was focused on interns, and a significant part of the mentors' functions was on supporting the interns in learning to teach; however, much of the time was spent modeling for the interns.

Mentor language and communication. The research studies by Kohler, Crilley, Shearer, and Good (1997), Fry (2010), and McGatha (2008) shifted the focus of coaching conversation away from the post-training emphasis to that of observed language and interaction style. Studies in this group have included coding of observation data and the shadowing of coaches as they met with their mentees.

The study by Kohler et al. (1997) represented an experimental model with a multiple-baseline design. In the study by Kohler et al. (1997), the researchers captured evidence of student behavior in which the phases of data collection allowed for teacher refinements of

practice in the classroom. In this study, observation notes were collected. Teacher and student actions were measured in addition to interactions with the educative coach; the reactions were captured and measured by classroom observations and then coded. While not program based, the Kohler et al. (1997) study identified specific coach behaviors and drew connections to the sustained behavior of the mentee. The study also expanded on the dimensions of coaching skills and the training that the coaches received. Quoting from Kohler et al. (1997), "Few coaching studies have encompassed formal examinations of both teacher change and student performance. Yet, the simultaneous assessment of both of these outcomes is needed to conduct a thorough evaluation of peer coaching" (p. 242).

Fry (2010) identified that a lag in communication time mattered to the new teacher in this study; the mentee was "frustrated" by the system and her mentor. In one instance, her mentor contacted her four weeks after a classroom observation. Although the mentee quotes could be considered anecdotal data, it is also true that the new teacher's response provides clear evidence of just one challenge to effective communication, the importance of timely feedback.
The strength of the new teacher's dissatisfaction is informative not only to the study analysis but could be informative to new mentors.

McGatha (2008) studied the language use of coaches and conducted the study across phases of relationships and learning. For this study, McGatha used the frames of consulting, collaborating, and coaching to analyze the new teacher activities. An added component in this study was the use of coaching journals, which introduced a vehicle for analyzing coach language and coach reflection. McGatha collected and analyzed the use of concrete observational data during coaching discussions. According to McGatha, "The support functions of consulting, collaboration and coaching were used to frame the analysis of the coaches' levels of

engagement" (p. 146), which may support the structure of future studies. An interesting perspective was added by one of the coaches in the study. The coach did not believe that model teaching was helpful to her mentee's development of a reflective practitioner.

The captured dialogue between coach and mentee was especially relevant as was the importance of meeting discussions as highlighted in a study by Stanulis et al. (2014). In this longitudinal descriptive case study, the researchers examined one mentor's work in developing elementary classroom practice and classroom community. Aside from being a National Board-certified teacher, the mentor in this study approached mentoring practice with beliefs about effective and engaging teaching. Stanulis et al. concluded that programs must support a specific vision of mentoring that includes mentor preparation and targeted teacher practice.

The importance of vision is also true of Helman's (2006) case studies within a teacher induction program. Helman conceptualized mentor stances, the language used, and sentence stems associated with producing a desired outcome for induction teachers. Helman argued that structured conversations between mentor and mentee support reflective thinking. Helman is an experienced mentor and included multiple mentoring experiences in the study. The four experienced mentors met and worked together to transcribe their conversations with mentees. Helman's findings suggested that structured conversation provided an opportunity to support the reflective thinking of new teacher candidates (Chapter 4 Summary).

In their study, Zwart et al. (2009) contended that there is an implementation dilemma of various educational reforms. The study of reciprocal peer coaching was structured to address "whether the more haphazard learning of teachers can be systematically influenced by such a program as the reciprocal peer coaching program" (p. 243). The sample size included 28 high school teachers across a range of subject areas including language arts, science, and social

science. The range of teaching contexts adds strength to claims of this study. The answer to the research question, according to the study authors, "appears to be affirmative" (p. 254). Considering all of the literature and variety of research methodology, it still seems true that "larger sample sizes should thus be used to study the relations between peer coaching characteristics and teacher learning. . . . Additional qualitative analyses, for example a few case studies, may also be called for" (p. 255). This study is informative but is dissimilar to induction mentoring because of the reciprocal structure. Induction programs do not rely on a reciprocal peer-coaching model.

Hudson's (2013, 2015, 2016) research has explored mentor skills in observation and feedback and the relationship between mentor and mentee. Hudson analyzed mentors' written observation and looked for feedback patterns, including "positive feedback and constructive criticism" (Hudson, 2015, p. 221). While the methodology and data collection methods are informative for this study, the relationship between mentor and mentee is based in the preservice phase of learning to teach. The preservice context of this study, in which the novice has not yet received licensure, creates a different power dynamic than the relationship between mentor and mentee in induction.

Mentor development. Aspfors and Fransson (2015), Bradbury (2010), Charteris and Smardon (2014), and Clark and Byrnes (2012) studied educative mentoring with novice teachers. While the study by Aspfors and Fransson (2015) does not represent first-line research, it does bring the issue of mentor education to the conversation. Aspfors and Fransson asserted, "The problem is that there is no universal definition of mentoring" (p. 76). Based on their metareview of studies, Aspfors and Fransson found that in many cases mentors were practicing mentoring while learning to mentor. At the same time, relationships between mentors and mentees where

dependent on trust, comfort, support, and stimulation. The researchers concluded that "mentor education is complex" (p. 84).

Bradbury's (2010) work focused on science teachers and the emphasis placed on the mentoring relationship. Mentoring behaviors were categorized as "respecting development levels, using teaching practice as an inquiry site, and striking a balance" (p. 1053). The balance between a response to immediate needs versus long-term development has also been coined *just in time* mentoring in other literature. One of the mentor dispositions that Bradbury highlighted was the "cothinking relationship" (p. 1051) between mentor and mentee. The co-thinking included how to help a novice use the classroom as the site for situated inquiry. In this setting, the new teachers were learning as they worked. Learning while teaching in the classroom is congruent with Schön's (1983) notion of reflection in action.

Charteris and Smardon (2014) presented a qualitative case study of nine pairs of mentors and mentees within professional learning groups formed on a social-cultural view of teacher learning. The relationships were not part of an induction program but rather a school culture of communities of practice. The methodological strength of this study includes the use of reflective transcripts and question frames for the mentors. The evidence suggested that questioning promotes mentee thinking. What was evident from this New Zealand study was the depth of thought behind creating a "peer coaching learning culture" (p. 114) and the potential for self-transformation.

The setting for Clark and Byrnes's (2012) study of 136 beginning teachers most exemplifies the context of my study. The researchers sought to understand the forms of mentoring support that new teachers receive and which they find most helpful. The study was structured on sociocultural theory and the belief that socialization of new teachers is

important and valuable. Using a mentoring support survey taken from Total Quality Partnerships Teacher Survey, this study brought forth the concept that common instructional planning time was a benefit. In the study, teachers rated 15 items in the survey. The study analysis included standard deviation, and the content validity was reported. From the analysis, the two most helpful activities were identified as "the mentor being a good listener and the mentor encouraging the novice during times of self-doubt" (Clark & Byrnes, 2012, p. 49). The studies by Charteris and Smardon (2014) and Clark and Byrnes (2012) suggested significantly important characteristics of mentoring relationships.

Gardiner (2012), herself a former mentor, presented two studies that explored the "juxtaposition between what is possible with mentoring and what is prevalent" (p. 196). In both studies, she collected observation and interview data and then applied axial coding of these interactions to disaggregate key themes of interactions and experiences of coaches and mentees. The study also examined the yearlong ongoing professional development for mentors, including instruction on the processes and tools used in observation and postobservation conferences. The study included 34 researcher observations of new teacher classroom practice and observations of coaching conversations. It is possible that as a former mentor, Gardiner could present a biased review, but the work also represents a keen understanding of the nature of coaching and how it changes over the course of the year. Gardiner concluded that "mentoring research needs to respond to mentor teachers' evolving roles" (p. 206), and that is precisely what the studies presented and why they are worthy of inclusion.

Gordon and Brobeck (2010) explored mentor development while the mentors worked with established teachers. The authors defined several problems that affect the quality of mentoring, one of which is that "new mentors often have only a vague understanding of their

role" (Gardiner, as cited in Gordon & Brobeck, 2010, p. 428). The observation data from monthly mentor workshops and experiences of three mentees were included as part of the study. A potential shortcoming of the study was that one of the researchers was an instructor of the workshops, and bias may have impacted the study results. However, extensive dialogue quotations and recordings strengthened the citable data, and the authors believe that coaching the mentor reaped positive changes in mentor behavior. This study provides insights on the development and characteristics of mentors. A unique element introduced by Gordon and Brobeck (2010) is that mentors need to "differentiate their mentoring" (p. 428) and that mentors might learn to do this through reflection. The study by Gordon and Brobeck, as did Gardiner's, included monthly mentor workshops. A thorough description of the open coding for the study was followed by a description of the axial coding processes. The description of the coding process was informative for understanding best practices and mentor development. However, the highly structured observation and feedback process required extensive skills on the part of the professional development provider and one-on-one time, both of which could be drawbacks for most programs. The results of the study by Gordon and Brobeck suggested that mentors, like teachers, needs support during their development.

Similar claims about the need for mentor support can be found in the study by Ulvik and Sunde (2013). The study participants were part of a university mentor program in Norway. Study participants included 31 secondary teachers. The study relied on demographic data, questionnaires, and focus group interviews. There was a higher than average attrition rate of new teachers during the study year. More than half the mentors were not trained for their role, and mentor education was "regarded as necessary but not sufficient to act as a professional mentor" (p. 763). The findings confirmed the experience of many mentors. Mentors are

challenged to support not only the instructional skills but also the emotional needs of new teachers.

In an urban Midwest study by Israel et al. (2014), the coach development model included services to special education teachers and mentors in which the mentors received 10 days of professional development. The design of the mentoring program included the use of Danielson's (2016) professional practice framework and four domains of teaching responsibility. These frameworks bear some similarities to the structure of California's six standards within the standards for the teaching profession (California Commission on Teacher Credentialing, 2015). Sixteen new special education teachers and five mentors were purposefully selected for the study. Data sets included mentor and mentee interviews, formal evaluations, and "time allocation charts" (p. 51). From the data, Israel et al. (2014) found that "emotional and professional supports provided by the mentors were interrelated; emotional supports were embedded within the mentor's professional assistance" (p. 60). The authors claimed that the inclusion of emotional support diverges from Kram's (1988) business mentor model.

Kram's (1988) model included the phases of initiation, cultivation, separation, and redefinition, and all produce varying affective experiences. Kram's labels may be different than those used by Israel et al. (2014), but there is often an affective dimension to mentor teacher relationships. Coaches may need differentiated support not only as they develop but also as they encounter different needs of their novice teachers.

Moving from the Midwest to a study situated in Australia, Gallant and Gilham (2014) sought to answer the following: "If some coaching goals are more achievable than others, how can this knowledge advance a coaching culture that has the potential for sustainable improvements to teaching and student learning" (p. 240). The authors identified the need to pay

careful attention to the differences between the coaching and mentoring, albeit conflated. Gallant and Gilham (2014) perceived coaching as separate from mentoring. Contrastively, I believe that coaching is a component or function of mentoring. I would suggest that there are times when a mentor will shift his or her stance between coaching, collaborating, and consulting (Lipton & Wellman, 2003). Coaching literature increasingly has used the term stance to indicate a mental and conversational shift depending on mentee needs. As with Gardiner's (2012) studies, one of the researchers had also been a coach in the program being studied, and issues of bias may be raised. However, the extensive data set helps to ameliorate these concerns. While perhaps subtle, Gallant and Gilham (2014) identified professionally symbolic changes in the needs of a coach at the 3-year mark.

Thompson's (2016) study focused on subject-specific mentoring and found limited impact on teacher effectiveness. The author proffered the suggestion that mentoring is not only a technical issue, but that the context the mentors and mentees work within has an impact on teacher and student results. Thompson's proposed response to this dilemma was to suggest that mentors and mentees should engage in peer learning that includes modeling and challenge. This proposal supports the conceptual framework of this study (see Figure 2 in Chapter 1) in which challenge is a key element in promoting growth.

Training to Support Mentor Development

Recently, growing numbers of studies have focused on mentor learning and the training that supports mentors. Researchers in the area of mentor training have referenced Bullough's (2005) assertion that it is not immediately obvious that a good teacher will automatically become a good mentor. Ingleby and Hunt (2008), M. Jones and Straker (2006), and Langdon (2014)

focused on the profession of mentoring and explored both the knowledge base of mentoring and the practice of mentoring (Iucu & Stingu, 2013).

Iucu and Stingu (2013) explored the recently regulated induction training in Romania with a dual focus on both the duration of training models (two years) and delivery models. An interesting element of their study is the assumption that mentor training should be conducted by a university and should follow after the completion of the Master in Education, Professional Doctorate. The second model explored partnerships and establishing communities of practice across both the formal (institutional level) and informal level.

Ingleby (2014) collected semistructured interview data from 80 mentors in the United Kingdom. The author defined the mentoring model in the study as one that is judgmental and flawed because of the competing mentor forces. For Ingleby, who has authored several other mentor studies, the negative experience of assessing another educator reduced the mentoring experience. The author concluded that "research participants in this study view mentoring as having been reduced to what Lawy and Tedder (2011) referred to as a 'performative skill-set'" (p. 394).

Marion Jones and Katherine Straker (2006) studied 102 mentors in the United Kingdom. Although mentor training was provided to the mentors, 74% of the mentors indicated that they developed their mentoring skills through practice and experience. While the mentors felt confident in the realities of teaching, they were less sure of how to handle unwilling teacher participants. The study mentors were interested in more information about adult learning theory and improving their own counseling skills.

Although not situated in the field of education, Pfund et al. (2014) presented the results of a randomized clinical trial in the health field. They found that self-reported pre- and posttest scores were higher for mentors in the intervention group. The study was conducted over

the span of 11 months, and the intervention consisted of case-based curriculum focused on mentor competencies. In their conclusion, the authors recommend that mentor training include competency-based skill development. The study did not significantly contribute to the issue of teacher induction mentors because it was not conducted in an education setting.

Langdon's (2014, 2017) studies focused on unraveling mentor practices. The focus of Langdon's 2014 study was on mentor-mentee conversations. Thirteen experienced school-based mentors were interviewed to examine whether there was "evidence of mentor learning" (p. 37). In this study, "Mentors engaged in professional development that promoted a co-constructive model of mentoring and were provided with the model with which to self-analyze their conversations" (p. 41). Langdon (2014) additionally affirmed that both the mentor context and predisposition had an impact on mentor outcomes. The focus group interviews were informative to this study in creating questions for the participants.

In a two-year study by Langdon and Ward (2015), the authors worked from a constructivist theory, acknowledging that as Cochran-Smith and Lytle (2009, as cited in Langdon & Ward, 2015) stated, "Best practice in professional development involves moving beyond the acquisition of knowledge and skills to a transformational focus, where teachers are supported to rethink their own practice, to construct new roles for themselves as teachers and to teach differently" (p. 241). Twenty-two mentors participated in a pilot of a professional development intervention that required the mentors to engage in action research of their mentor practice. Langdon and Ward reported, "Mentors noted that they were setting more specific and focused goals, putting more emphasis on goal setting and negotiating goals with their mentee" (p. 248). The resultant shift in mentoring practice provided details for mentoring curriculum. Although the study authors can

most likely support the situated context of New Zealand, the study does not significantly contribute to the field at large.

Langdon's (2017) most recent work focuses more specifically on mentor preconceptions and the resultant language that mentors use with their mentees and to describe their practice. This case study of two mentors, each with more than five years of mentor experience, addressed the shifting interactions between mentors and mentees. Both mentors examined their practice; one identified that her practice had changed in that "she was talking with rather than talking to the mentee" (p. 13). This focus on change of practice is further developed in the studies in the following section.

Teacher Quality and Student Achievement

Much of the recent literature on U.S. teacher quality and student achievement has relied on measuring students' standardized test scores (Ingersoll, 2014). Some of the most often cited studies include those by Glazerman et al. (2010) and Ingersoll and Strong (2011). Still others have included large-scale studies, such as those by Kapadia et al. (2007), which were conducted in Chicago Public Schools through research consortiums. In addition to student achievement, many researchers have been interested in teacher retention and have surveyed new teachers on the likelihood that they would stay in the profession. Because of the focus on teacher retention, Kapadia et al. (2007) also examined dimensions of mentoring experiences. What the researchers found was that mentors served as support for new teachers: "These supports made them [the new teachers] more likely to report a good teaching experience and intend to remain in the same school" (Kapadia et al., 2007, p. 30).

Still looking for a connection between effective induction and student achievement, Wang and Fulton (2012) found "a possible link between an intensive mentoring relationship and

student performance in beginning teachers' classrooms is still assumed rather than sustained empirically" (p. 87). They also confirmed that few studies captured what happened in the mentoring relationship and the linkage to observable classroom practice. This study was limited to traditionally defined mentor work with new teachers and intentionally omitted on-line mentoring. While this article is helpful in identifying the possible achievement link, it does not provide specifics on mentor development.

In contrast to Wang and Fulton (2012), Desimone's (2009) conceptualization brief suggested an alternative perspective of how to measure the impact of mentoring. Desimone's brief may not carry as much weight as an experimental model or research study, but it was published by the respected organization American Educational Research Association (AERA) and provided a foundation for future direct research. The subsequent study of Desimone, Hochberg, and McMaken (2016) built upon impact measures in a study of 45 new middle school math teachers across several states and employed an instructional quality measure used in previous studies, thus reducing questions of instrument reliability. In this study, Desimone et al. (2016) found that the beginning teachers in the study had low levels of mathematics knowledge but did improve during the first two years of teaching.

Adding to Desimone's (2009) argument, Van Zandt Allen's 2013 study in Texas supposed three areas where teacher quality can be impacted: supply and demand, preparation, and retention. Multiple measures of teacher retention and effectiveness were used, including self-report data from former graduates coupled with postgraduate training follow-up. The response rate was 73%, which is robust. The author explored limitations of the study, including the fact that participants were graduates from only one preparation program and the limitation caused by optional attendance as opposed to required participation. The optional nature may

hold implications for the dispositions of study participants, which may be as much a factor in impact as was the participation itself. The findings suggested that postgraduate support via induction may positively affect teacher development. Van Zandt Allen (2013) then suggested that the creation of new structures of support and professional development may be called for.

Wechsler et al. (2010) analyzed structures of support across 39 programs in the state of Illinois by using teacher and mentor surveys and case studies, which included program interviews and document reviews. But again, to examine the effects of induction on student achievement, they compared student test scores, which they identified as a challenge. The challenge of using test scores was due in part to the ways that induction was carried out across the state and in part because the analysis was limited to fourth- through eighth-grade teachers in self-contained classrooms. Even with contextual considerations, they found no significant difference between "mean student achievement in either mathematics or reading" (p. 405). So, either there is no significant difference or these were not the correct metrics to measure teacher impact.

Moving Forward With Technology

This literature review started with a broad historical perspective on teacher development then focused on induction and initiative mentoring. I now shift to more closely focus on the literature on teacher learning with technology. A challenge to deepening our understanding in educator preparation is that technology is still quite inchoate. To provide some scaffolding structure, I will first examine online technology then address specific studies on video technology.

Built initially for advanced research projects in the 1970s, networks for electronic communication have become ubiquitous. Klecka, Cheng, and Clift (2004) explored the potential of electronic mentoring as distributed communities of practice when they explored asynchronous communication within an Illinois novice teacher program. They relied on open-ended surveys, focus group interviews, and field notes as well as reviewing posted messages and user login data. After three years of data collection, inclusive of adjustments to data collection, they found,

> Participation depends on much more than providing access to workshops or to electronic mentors. With a new medium, such as electronic mentoring, the barriers that prevent or incentives that encourage one to login and engage in conversations help to define the nature of participation. (p. 8)

The nature of participation is an important contextual element of any community and is often addressed in mentor and induction studies.

When reviewing the great number of technology studies, it becomes evident that there are still significant numbers of skeptics who discount technology as a viable tool for learning and communication. Some of these skeptics include university instructors and school boards (Allen & Seaman, 2013). Many of the studies and arguments by Dixson (2015), Koutropoulos (2011), Surrette and Johnson (2013), and Lineweaver (2010) were positioned to either support or refute the effectiveness of online learning, and they often included measures of engagement. Still other studies, such as Duncan-Howell (2010), Noroozi et al. (2011), and Quintana and Zambrano (2014) began with the perspective that technology and online mentoring may be helpful where geography creates challenges.

Alger and Kopcha (2011) examined the clinical experiences of preservice teachers supported with technology tools. While the researchers ultimately stated the positive outcomes

for the preservice teachers in their study, the definition of coaching was not congruent with other researcher and did not employ the use of invitational stem language. Examples of the coded language in the study included the following behaviors grouped under coaching: “experts make comments on lessons; expert feedback on videotape lessons; experts made comments on lessons; feedback provided via templates; triad members shared advice and solutions” (p. 76). The most likely rationale for this type of nonreflective coachin*g* was that study participants were in the preservice level of teacher preparation and the comments were appropriate to their developmental level.

Setting aside the concern of problematic terms, Gentry (2011) highlighted the difficulties in crafting a research study to address mentoring and special education teachers. Although not published in a peer-reviewed journal, Gentry’s dissertation added extensively to the computer-aided dimension of mentor work. The purpose of Gentry’s study was to determine the type of support “special education teachers seek and receive from their online mentors” (p. 113). Gentry’s study focused on the effectiveness of the computer-mediated environment and included “the content of the conversations and perceptions of the program based on surveys completed by mentors and mentees” (p. 25). Gentry also found an alignment between the expertise of the mentor and the quality of the mentoring relationship.

McAleer and Bangert (2011) studied 40 math teachers and the aspects of their experience that contributed to teacher growth. The strong explanation of theoretical perspective explores both cognitive and social presence of the teachers and supports the study across nine states. The authors addressed content validity and the pilot of the survey instrument before implementation. Participant quotes added to the quantitative components, further connecting this study to the

goals of my study. The researchers contended that the measures of engagement do not adequately capture engagement and suggest future use of additional measures.

Computer-Supported Collaborative Learning (CSCL)

A significant number of CSCL studies have been excluded from this review because technology changes rapidly. Studies that were published more than eight years ago, such as those by Rovai (2006), Conrad (2005), Barbera (2006), and Stahl, Koschmann, and Suthers (2006) have been omitted. So too are those that represent a setting dissimilar to that of induction. While Hayes, Smith, and Shea (2015) provided insights to shared regulation in an online community, the setting of online course work was not as close a match as those that were ultimately included. The same is true of other studies, some of which focused on mentoring of college instructors, such as McCrary and Mazur (2008), and other contexts such as Zhu (2006) and Zhang (2009). While not included in this review, CSCL studies can inform technology use by educative mentors. A review of Baglione and Nastanski (2007) is included in the review of methodological issues section of this review because of their inclusion of faculty perceptions and use of both qualitative and quantitative methodology.

Lafferty and Kopcha (2016) drew upon Horn and Little's (2010) description of generative discourse and Feiman-Nemser's (2001) concept of serious conversations as they examined online discussion of preservice teachers. Lafferty and Kopcha's (2016) qualitative case study examined 18 threads of conversations for 28 preservice secondary teachers. The authors analyzed the types of problems of practice presented in the conversations and identified the existence of extended discussions, while other discussions "remained at the shallow level" (p. 81). Lafferty and Kopcha contended that one potential implication of the study is that supervisors might intentionally model conceptual moves.

Jordan (2011) used content analysis to study 64 participating teachers and the written record of smaller online communities. In these online communities, groups of four to six beginning teachers engaged in responses to simulations. Jordan used message units, which were presented in a scenario table, for the analysis of online discussion. The methodology of this study provided useful insights and was referenced when crafting the study, yet the posting of scenarios by the instructor was not similar to induction experiences.

Following the thread of content analysis studies, Grogan (2015) provided a more explicit analysis of the instructional and dialogue shifts of 30 elementary teachers across their 57 chats. Grogan claimed that the participants are "part of a community of inquiry" (p. 339) and outlined the Scottish elementary teaching settings. The codes and subcodes used for analysis are useful in creating figures and charts to aid in the analysis of the experience. Grogan found that 70% of the online conversations were related to cognitive discourse and found evidence of critical reflection on the part of the new teachers.

Although the study by Cho, Gay, Davidson, and Ingraffea (2007) is 10 years old, the use of social network analysis and longitudinal survey data aided in considerations of my study design. Data collection included a survey at the beginning of the year and Likert type scales of self-reported communication variables. In addition, the authors included a review of social network and learning performance and included surveys, which was helpful in my study.

Regarding the written dialogues of new teachers, Bang and Luft (2014) examined participation patterns of new teachers; more precisely, the authors studied the impact of online conversations on teaching practice. They studied 22 pairs of mentors and mentees who were participating in a nationwide online mentoring program for secondary science teachers. In the analysis of written dialogue, they found tensions and conflict between mentors and mentees.

They also found evidence of the construction of teaching knowledge. The conceptual and theoretical construct of community also informs the future studies of online induction as does the understanding that online mentoring is "critical for beginning teachers who are likely to be teaching in mentor-free environments" (p. 31).

Berry and Byrd (2012) studied new teachers in Connecticut. The study was based on the depth of analysis and the interpretations of teacher posts within an online community of mentors and new teachers. Berry and Byrd concluded that virtual mentors, because they are not in the mix of campus personalities and interactions, may rely on data rather than impressions. The authors contended that having mentors online rather than on campus may help novices negotiate complex situations. Similarly, Risser (2013) studied induction teachers in Connecticut and concluded that finding mentors for novice teachers has been improved with the expanded use of online platforms.

The last two studies discussed in this section are specific to computer-supported collaboration and the use of social media sites such as wikis, Twitter, and Facebook. The study by Kelly and Antonio (2016) provided coding suggestions for quantitative studies yet also brought up the ethical concerns of the environment. In addition, the online use was mandatory, which brings forth questions of authentic use versus required task completion posts. The researchers coded for types of support, which included feedback, reflection, and classroom practice. This system of coding may aide future studies. Hutchison and Colwell (2012) employed case study construction for analysis of induction teacher wikis using 26 elementary and middle school induction teachers in the Midwest. From these 26 teachers, Hutchison and Colwell (2012) collected 318 wikis and followed up with semistructured e-mail interviews. During the follow-up interviews, one teacher expressed her experience: "I think

educators may be overestimating the value of wikis and underestimating the value of what actually happens during face-to-face collaborative conversation between a new and mentor teacher" (p. 286). This statement along with others led the researchers to suggest that districts consider using an online learning community in conjunction with face-to-face mentoring.

The Role of Video in Professional Development

Video as a data collection method and instructional tool in education has been widespread, and there has also been variety in implementation. The studies discussed in the previous section support the claim: much of the research on teacher video use is situated in preservice settings. The preservice setting has included the tension between theory and practice while the in-service setting has included teacher and student actions.

The scholarly literature on video-based analysis ranges from boardrooms to colleges and elementary classrooms. Video tools are promoted at trade shows and educational conferences. Some teacher preparation and licensing courses rely on the use of avatars for preservice simulations, and in California, preservice teachers include video-recorded lessons in their final Teacher Performance Assessment (TPA; California Commission on Teacher Credentialing, 2017). Other researchers, such as Yaw (2007), argued that there are positive implications for human resource development professionals. However widespread the use of video may be, in education the question continues to be about the impact video might have on teacher practice. The following studies are organized first by experiences situated in preservice settings, followed by those in-service, and conclude with university-based instructors.

Preservice video use. In most studies on video use, preservice teachers use videos of others to learn teaching techniques and then record themselves as they practice new strategies.

The teacher candidates then reflect on how this iterative experience might inform their professional practice. Seminal leaders in the area of teacher video use include Borko, Jacobs, Eiteljorg, and Pittman (2008) and Sherin and van Es (2009). These authors have added knowledge and clarity to the field and have collectively asserted that video is popular for both teacher education and professional development. They contend that preservice teachers are routinely asked to videotape themselves teaching and suggest that in-service programs should increasingly include video.

In other preservice studies, Calandra, Brantley-Dias, Lee, and Fox (2009), Baecher and Connor (2010), Kleinknecht and Gröschner (2016), Coffey (2014), Nagro, deBettencourt, Rosenberg, Carran, and Weiss (2017), and Calandra, Sun, and Puvirajah (2014) concentrated on helping novices to notice teaching and student details and then use the video to foster reflection. Calandra et al. (2009) built upon Mayer's theory of generative multimedia learning and introduces the term video-enhanced reflection to research video use. Tripp and Rich (2012b) and Trent and Gurvitch (2015) asserted that technology has increased teachers' ability to reflect on practice and is, therefore, an important element of improving practice. More a program review than first line research, Trent and Gurvitch (2015) outlined how video editing is used with preservice teachers in a program in Georgia. While the literature brings procedural details to preservice experiences, the contextual elements of assignments and grades are not precisely in line with the use of video in an induction experience.

Borko et al. (2008) brought attention to the "situative perspective" (p. 418) of professional development. The authors referenced Lave and Wenger's (1991) identification of physical and social contexts, claiming that a need exists to bring these contextualized experiences in to professional learning communities outside of the classroom. In the study,

Borko et al. (2008) began by considering that video has largely been used as an artifact of practice, which might include using video as supporting evidence that a specific strategy or technique has been implemented. Furthermore, these video artifacts can then be used to demonstrate techniques to a wider audience. A key insight, congruent with that of Brophy (2004), is the distinction of video *for learning*. As a tool for learning, Borko et al. (2008) stated, "video must be viewed with a clear purpose" (p. 419). This insight becomes a turning point for how video is used, not as evidence, but as a tool. This shift from artifact to tool is not yet congruent with video use by mentors.

The mixed methods study by Baecher, Kung, Jewkes, and Rosalia (2013) explored teacher candidates' capacity to self-evaluate during early fieldwork. In addition to video of candidates' teaching, the program also employed the use of comparative rubrics and self-evaluation. The results, based on 31 preservice participants, indicated that video models enhanced pedagogical understanding, resulting in a more consistent use of a self-rating rubric.

In-service video use. Studies, such as those by van Es, Tunney, Goldsmith, and Seago (2014), coupled teacher video analysis with facilitation or learning how to use video. In their study this emphasis on facilitated video analysis resulted in extended conversation regarding professional development. Over the course of a school year, fourth- and fifth-grade teachers met monthly in a mathematics video club where they viewed video segments from each other's classrooms. Data collected for the study included videotapes of the meetings, which were then transcribed. The conceptual framework, which supported the exploration of video facilitation, included a focus on productive discussion, "including generative dialogue and dialogic discourse" (p. 344). Member checking between researchers and program facilitators strengthened the data

analysis of this study. The researchers found patterns of practice that included highlighting effective practices and bringing the practices forward to "promote teacher learning" (p. 352).

Sherin and van Es, both together and separately, have contributed greatly to the literature on the use of video and effects of video club participation. Their 2009 study explored yearlong mathematic video clubs, which suggested that professional vision was developed through participation in the club. Sherin and van Es (2009), as in the van Es et al. (2014) study, explored the conversations that occurred in these clubs. The inclusion of their analysis table, inclusive of teacher analysis and professional vision greatly adds to understanding the teachers' experiences.

Nearly eight years later, Sherin collaborated with Dyer (2017) in one of the most recent overviews of teacher self-captured video. Their report explored the anti- or contra- examples of how video is used by unpacking three myths and resultant recommendations of good practice. As with the other studies discussed, Sherin and Dyer found that value is most often derived from the collaborative dialogue. Sherin and Dyer (2017) wrote, "The value of video as a medium is that it provides space for reflection rather than action" (p. 54). Situated in California, Santagata and Guarino's (2011) study on video-based professional development for mathematics takes a different perspective on the use of video. In this study, teachers used video as learning tools rather than as reflective tools. As in similar studies, they analyzed teacher and student actions but focused on teacher mathematical knowledge. Santagata and Guarino were funded by a teacher quality program grant and the objectives included increased teacher mathematical knowledge and suggested revisions to "better assist teachers in the acquisition of knowledge" (p. 50). While mentors in the study attended to content-specific knowledge, the mentors did not thoroughly address how to model discourse for students.

Studies by Borko et al. (2008) and Roth et al. (2010) used content-specific settings for their studies of teacher video and professional development. The study by Roth et al. (2010) was part of a science professional development program and included a predictive model after the professional development. The authors offered compelling evidence that video made a difference for the teachers who participated in the program and found that effective science practices were implemented in the elementary classroom. While program staff guided the participating teachers, program instructors were not assigned to designated teachers; the program staff did not function as mentors would in a new teacher induction program.

The study by Borko et al. (2008) collected mathematics teacher video data over a two-year period. When viewing video of math instruction, the teachers were guided to analyze both the teacher actions and the resultant student behaviors. While watching the videos, the participants "appeared to be cautious" (p. 432) to go in depth to explore pedagogical practice. Over the course of the two years, as the teachers engaged in subsequent problem-solving cycles, the authors found, "The teachers appeared to feel more comfortable addressing limitations in their understanding of the mathematics content, without continually making reference to their students or otherwise couching the conversation" (p. 433).

McCullagh (2012) included case study and interview data of one participating teacher. The study focused on the dimension of noticing self and the use of video. McCullagh claimed that video provides for closer examination of our practices, which may reveal both positive aspects and problems. In the case study, McCullagh traced learning theory and teacher action to the power of video. The author concluded that video technology provides an important vehicle for teacher self-reflection and continued professional development.

Tripp and Rich (2012a) presented six themes to use when analyzing the impact of video on teacher practice. In the study, groups of teachers worked together to record and share their classroom practice. The teachers were grouped by their teaching context of special education, English language learner, or religious education. The researchers outlined a set of procedures for the participants and developed six themes of analysis that were applied over two months. Changes in teaching practice were made by all participants, and the researchers found that participating in video analysis created a desire to change when the teachers could see the need for improvement. From the video, the participants also "understood more clearly how to change" (p. 739). The role of an induction mentor as growth agent may be an important variable to consider for future studies.

In meditational mentoring, Lipton and Wellman (2003) asserted that learning-focused conversations can use a third point to facilitate thinking when pairs are working together:

> A third point is an inanimate object in the room that becomes the focus of attention. In that case each partner is a point and the text or graphic material is the third point. Third points might include professional articles or text selections, samples of student work, displays of quantitative or qualitative data, or expected standards. (p. 62)

The video can become the third point, which allows both mentor and mentee to talk about a piece of evidence (in this case, the video). The use of the third point provides an opportunity for collaborative analysis of the video to facilitate thinking.

While the studies by McNally (2016) and West, Rich, Shepherd, Recesso, and Hannafin (2009) did not use the precise terminology of "third point," both studies used video as evidence within new teacher induction program. West et al. (2009) included video, focus group interviews, a continuum of learning and self- assessment data in measuring support for new

teachers. The authors purposefully selected 26 teachers, mentors, and administrators to participate. At the beginning of the study, the authors identified that participants differed in their ability to discern teaching attributes; in other cases, participants indicated that video evidence was useful but limited. General discussion topics brought forth, "It may be especially important for teachers to involve others during video review" (p. 385). The authors argued that although there has been expanded use of video, "induction teachers may require mentor support" (p. 372).

McNally's (2016) study added to the literature by including a variety of video methods used by participating teachers. In McNally's study, participants engaged in video recorded observations that included observing both teacher and student behaviors. The new teachers value observations for the "feedback they provide" (p. 493). Video recorded observation also impacted the mentoring approach and expanded conversations about data within induction inquiry cycles. Surprising conclusions of the study find that "while the research literature (e.g., Santagata et al., 2007) indicated that addressing science learning goals could be anticipated when using a disciplined inquiry approach, the findings from this study do not fully support this claim" (p. 474).

Video use by teacher educators. Of the hundreds of studies reviewed, the 2013 study by Baecher et al. provided the closest parallel between reflective video use and educative mentors. The study was situated in a university-based teacher education program and explored video use by university instructors to improve their practice. The study was designed to explore collaborative video inquiry and included faculty members across multiple preparation programs. Descriptors and coding, in addition to observation notes and focus group conversations, produced data on the teacher educator habits when viewing video. The group conversations also

resulted in producing a lexicon from the coding, which was used in focus group conversations. It was the reflective focus group conversations that focused participants on their practice. Unfortunately, the shortcoming of this study is that the participants did not use video of themselves but rather video of preservice teachers. The discussion and conclusion of this study focused on how university-based teacher educators might develop video discussion groups to impact their practice in teacher education.

Making the connection between teacher development and tools for reflection, Masata and Dooly (2011) moved to the mediating role of technology and argued that teacher training (both preservice and in-service) should help teachers "learn to observe, reflect and think critically" (p. 1152). They suggested a distinction between video-modeling and video-coaching. This important distinction, coupled with Tunney and van Es's (2016) argument that mentor teachers "receive little to no guidance regarding the essential feature of their work" (Zeichner, 2002, as cited in van Es, 2016, p. 107) supports my argument that the educator preparation community should know more about the use of video for mentor development.

Review of Methodological Issues

Methodological Choices

New teacher development and effective components thereof have been studied from a variety of perspectives. The range of research includes studies about the conditions necessary for transfer of teacher learning into classroom practice (Joyce & Showers, 1980) to large-scale metastudies financed by one or more well-funded agencies (Fletcher et al., 2008; Glazerman et al., 2010; Ingersoll, & Strong, 2011). Regardless of scope or scale, these studies generally built upon a variety of conceptual frameworks and were based on theorists such as Vygotsky (as cited in Clark & Byrnes, 2012; McConnell, Parker, Eberhardt, Koehler, & Lundeberg, 2012; McCrary

& Mazur, 2008), Schön (as cited in Parker et al., 2008; Trent & Gurvitch, 2015) and Wenger (as cited in Berry & Byrd, 2012) as well as theories such as Berliner's stages of cognitive development (as cited in Davis & Higdon, 2008) and Roger's innovation diffusion (as cited in Panopoulos, & Sarri, 2013). Just as Schön's (1983) theory of reflective practice is interwoven with the literature and practices of teacher development (inclusive of induction), the other theories are woven into the arguments for varying research designs and methodology. This intentional connection between conceptual theories and methodological choices both challenges and strengthens the review of methodological issues.

Arguing as I have for the nested nature of teacher induction, the forging of induction program components, experiences, and contextual factors might be described as an amalgam. These elements include induction program design, mentoring, computer-supported learning, video annotation, and impact on student outcomes. Therein, careful methodological selection was crucial to examine the inherent strengths and weaknesses of various methodological choices and the theories and frameworks they are connected to. Because of this amalgam, methodology selections may be drawn from various fields of study. For example, Thomas (2011) asserted, "Case study research is one of the principal means by which inquiry is conducted in the social sciences" (p. 511). A case study approach, Thomas argued, may also have the potential to provide expanded schemata beyond how it has been employed to date. The overwhelming number of qualitative case studies found during the literature search supports the contention that this methodology is a favorite in social science. Of more than 150 social science studies reviewed to date, 30 are qualitative. If educators concur with Thomas's claim regarding the preponderance of case studies and also assume that teacher development and induction are part of thesocial

science community, it follows that case study could then move from the broader field of social science and be applied successfully to the more specific area of education.

Contrastively, rather than rely on a discipline-centric perspective when determining methodology, Kumar (2007) drew on Creswell and Miller (2000) along with Rossman and Wilson (1994) to argue in defense of mixed methodology. Kumar (2007), working within the field of education technology, contended that a mix of qualitative and quantitative methods provided for richer understanding where "schools encourage expanded use of technology and innovation in teaching approaches" (p. 34). Kumar (2007) further supported Rossman and Wilson's (1994) contention that there are three advantages to mixed methods by including the element of video instruction with preservice teachers.

Finally, within the more inchoate field of electronic literacy mentoring, Bhatt, de Roock, and Adams (2015) argued for "an evolution in the traditional ethnographic toolkit of literacy researchers to include ways of documenting interactional practices, which intertwine online and offline actors" (p. 479). Bhatt et al. argued that ethnographic iteration allows for a "deep-dive" (p. 477) of complex, digitally mediated, and multilayered interfaces, specifically using the method of ethnography and data from digital texts. Following the pattern of progressing from the general to the more specific, methodological issues were dealt with seriatim, moving from quantitative to qualitative, and finally to mixed method.

Quantitative Studies

Across the range of induction studies, there are fewer quantitative studies than qualitative. A recent ProQuest search resulted in a ratio of nearly three to one qualitative mentor studies to quantitative mentor studies. However, when quantitative measures are employed, the studies, such as those by Adams (2010) and Ingersoll and Strong (2011), were overwhelmingly

focused on measuring teacher or program effectiveness. These quantitative studies have included measures of student achievement, largely as a proxy for teacher effectiveness, and have relied predominately on end-of-year state or national achievement tests. The debate regarding national standards and timing issues related to delayed test reporting create difficulty in using these specific measures.

Survey data is also a popular feature in much of the research literature. Studies such as Cho et al. (2007) often use pre- and postsurveys, and several include regression analysis. In addition to surveys, Hughes, Wu, Kwok, Villarreal, and Johnson (2012) built their exploration of educational quality around teacher questionnaires and student literacy scores. In a postgraduate setting, Parker et al. (2008) utilized surveys with more than 200 business students to determine instructional implementation.

In order to explore discussion board posts, Gareis and Nussbaum-Beach (2007) applied a quantitative approach to the coding of interactions resulting in content analysis. In the most simplified application, their study provided tables and frequency of interactions. A more sophisticated coding analysis is found in a study by Sherman and Camilli (2014). Because their study was conducted in an online environment, the design has implications for the design of my study.

Although not readily evident from the description of the previous studies, there are times when a quantitative approach is used to find evidence to support or contradict a hypothesis. Depending on design, quantitative studies may provide the ability to collect from a broad range of respondents. At the same time, other researchers argue that there may be structural bias in the creation of surveys. Because this study focuses on understanding how mentor behavior can influence change, a strictly quantitative study may limit my ability to understand teacher and

mentor behaviors. A strength of a quantitative design would be the reduction of bias. The strength of potential study designs is explored more thoroughly in Chapter 3.

Qualitative Studies

An overwhelming number of mentor studies reviewed for this literature review have been qualitative in nature. Orland-Barak and Hasin (2010) examined mentor perspectives using a collective case study of five mentors and included "semi-structured interviews; observations of the mentors at work, and interviews of mentees" (p. 431). The authors claim this approach presented unique perspectives that provided the ability to create semantic categories. Similarly, using case study that included categories and coding of conversations, Hennissen, Crasborn, Brouwer, Korthagen, and Bergen (2008) sought perspective on mentoring roles. However, Hennissen et al. (2008) structured the study around mentoring dialogues as the empirical evidence source. These dialogues where then coded against a MERID model, looking for patterns in the types of dialogic interactions. The study by Onchwari and Keengwe (2008) included one-on-one interviews as well as classroom observations of 44 Head Start teachers. Data collection allowed for the grouping of common themes regarding challenges of program implementation.

Numerous qualitative studies have included focus groups, including studies by Cherubini (2009), Conrad (2005), Clark and Byrnes (2012), and Bang and Luft (2014). While Cherubini (2009) used an open coding system in a face-to-face environment, Bang and Luft (2014) used coding to explore computer-mediated communication. Also situated within the realm of online environments, Hutchison and Colwell (2012) captured asynchronous discussion posts within a Wiki-based environment. Regardless of the contextual environments, the studies were structured to make sense of an experience. Finally, Denzin and Lincoln (2013) discussed qualitative

research as being a situated activity while Creswell (2013) stated, “Qualitative research consists of a set of interpretive, material practices that make the world visible” (p. 43) in order to answer a range of research questions about an experience. Taken collectively, the qualitative studies reviewed here support the level of understanding that can be derived from qualitative studies.

Mixed Methods

Of the reviewed studies, quantitative methodology was often coupled with qualitative methodology in a mixed method, as in studies by Stuhlman and Pianta (2009) and Baglione and Nastanski (2007). The commonality between both the study by Stuhlman and Pianta (2009) and Baglione and Nastanski (2007) is the use of observation notes although Baglione and Nastanski also included the analysis of online discussions. Davis and Higdon’s (2008) mixed method study included classroom observations in teachers’ classrooms where all participants were graduates from the same university program. Griff Jones et al. (2016) employed a needs survey followed by participant interviews to study online coaching for STEM teachers. Finally, Lozinak (2012) used both questionnaires and surveys focused on satisfaction of mentor and mentee matches. The range and scope of these mixed methods seem to be built upon Creswell’s (2013) assertion that “qualitative researchers try to develop a complex picture of the problem or issue under study. This involves reporting multiple perspectives, identifying the many factors involved in a situation, and generally sketching the larger picture that emerges” (p. 47).

Approach for the Study

What I have termed as an amalgam, Bhatt et al. (2015) similarly referred to as “the entangled nature of learning practices” (p. 485). Regardless of preference for either terminology, the nature of mentoring calls for multiple instruments that fully explore the multidimensional context of induction mentoring. While there may be ongoing debate about case study, with some

researchers even referring to case study as the "country cousin" (Schramm, 1971, p. 1) of the experiment, Hyett, Kenny, and Dickson-Swift (2014) contended, "Case study research has a level of flexibility that is not readily offered by other qualitative approaches such as grounded theory or phenomenology" (para. 2).

My exploration of induction mentoring includes elements of dialogic reflection in which relationships are created and mediated across a variety of technologies, thus requiring just such flexibility with multimodal approaches. Therefore, I used a case study approach to my research design. The empirical data were drawn from five induction mentors and the teachers they support.

I used demographic questionnaires to gather data on mentors' teaching context and experience while my qualitative elements included observations, mentor self-reflection, and interviews about the experience. One strength of a case study is the inclusion of details; qualitative data collection allowed me to analyze and understand mentor-mentee interactions in a more in-depth, meaningful way. Methodologies such as those suggested in Snee, Hine, Morey, Roberts, and Watson (2016) may expand current practice in digital methods.

Synthesis of Research Findings

What is known about teacher induction is concurrently varied, vast, and yet also incomplete. Teacher induction has been in place across the United States for at least 20 years. As of 2016, 29 states use induction as a tool for support of quality teaching and the retention of teachers new to the profession (Goldrick, 2016). In theory, induction programs include support for new teachers, which includes assessment curriculum coupled with a mentor (coach). In some induction settings, induction is provided for one year; other programs are built on a two-year model.

Education funding in the United States is significant. In 2016, The U.S. Department of Education operated on a budget over $70,000,000,000 (U.S. Department of Education, 2016), and the allocation for education in California's 2017 state budget included more than $76,000,000,000 (California Department of Education, 2016). Of California's education budget, nearly 10% comes from federal money. Many of these financial resources have been expended in support of new teachers, teacher quality, and induction programs.

The scope and significance of induction has been such that in 2004, the Association of Teacher Educators (ATE) created the Commission on Teacher Induction and Mentoring. Over the duration of the commission, induction researchers have included Wang and Odell (2007), Stanulis et al. (2014), Strong and Baron (2003), and Wang, Lin, Spalding, Klecka, and Odell (2011), Wang and Fulton (2012). Analysis of their work has moved research and the profession forward toward understanding effective practices as has other state and national level work by Kapadia et al. (2007).

Moving from the national perspective to state-level specifics, the California Commission on Teacher Credentialing (2015) Program Standards asserted,

> Induction is the support and guidance provided to novice educators in the early stages of their careers. Induction is an individualized, job-embedded, two-year program. The design of the program is based on a sound rationale informed by theory and research, is primarily coach-based, and includes personalized learning. (p. 3)

The topic of teacher growth in new teacher induction continues to expand as technologies are added as program components. To understand classroom impact, the literature has relied on classic mentor models, initiative-based experiences, and most recently studies of video as an increasingly common component. Grogan (2015) talked of disentangling the threads of online

discussion, yet the term also applies to the entangled nature of mentor and mentee interaction in face-to-face environments. The literature cannot be synthesized into one neat and tidy package of findings that can be handed to mentors and new teachers. Many studies show that there are developmental and contextual issues that impact each study and each teaching experience, even those outside of teacher induction (Hattie, 2008). Yet, evidence continues to exist that there is a link between induction experience and classroom practice.

Critique of Previous Research

At the present time, with the long term and broad research base as previously described, there are several contentions that support the appropriateness of the research question. In 2004, there seemed to be near unanimous agreement among researchers that new teacher induction programs had two potent impacts on the public school teacher workforce (Darling-Hammond, 2000; Moir & Gless, 2001). However, the results of a randomized experimental study by Glazerman et al. (2010) suggested contradictory conclusions, finding no impact of induction on the performance of students or retention of new teachers. The result is an important conundrum for researchers interested in the impact of induction programs. With the publication of the Glazerman et al. study, it is clear that more needs to be done to distinguish the effective elements of the induction process from other forces. While important, most of the new literature continues the practice of small-scale qualitative studies.

Impact of Induction

In the quest to develop this deeper analysis of induction program activities, hard evidence of systematic impact has been elusive. With the expanded use of technology, the literature is devoid of any analysis of what substantive instructional or pedagogical expertise can be developed through online links between novice and experienced teachers (Mitchell et al., 2017).

Although Berry and Byrd (2012) argued persuasively that it is at least possible to produce substantial levels of trust in cyber communities, it is not yet clear whether online relationships build the needed coaching trust and subsequent mentee actions.

Researchers repeatedly make a strong case for the knowledge and skills of coaches regardless of country or geographic region. Collectively, the studies by Batt (2010), Rush and Young (2011), and Onchwari and Keengwe (2008) examined the practice and beliefs of more than 1,700 teachers. Zwart et al. (2009) provided qualitative and quantitative data on 28 Dutch secondary teachers. Induction program results from Onchwari and Keengwe (2008) highlighted the collaborative and coaching approaches within the induction program in the U.S. Midwest.

Several studies have found that coaching does provide benefits (Batt, 2010) and that teacher practice has been transformed (Sherris, as cited in Volkan & Eby, 2014). Yet, the information from reviewed articles is just the beginning of an understanding of the depth and intricacies of mentoring. Therefore, it continues to be important to understand the behaviors and conversations that make an impact for the mentee and in the classroom. The use of technology to foster mentees' thinking adds to the intricacy of understanding teacher behaviors and results. A follow-up question that is not currently addressed in any of the reviewed literature is the use of questioning and reflective prompts to provide an environment that allows for "confrontation of ideas about what constitutes good teaching, ideas about good teaching styles, and student learning" (Zwart et al., 2009, p. 252).

Given the staggering projections for numbers of teachers new to the profession, approximately 300,000 per year (Learning Policy Institute, 2016), and those who are currently negotiating the Common Core State Standards, it is of continued importance to facilitate meaningful postcredential learning. By developing teachers' ability to reflect, the mentoring

relationship portents that educators can progress in their professional development, unshackled of silo-like environments. The mentor helps teachers examine their professional practice, and it behooves the education community to provide educative mentors with tools to help them develop impactful practice. As never before, the tools will also include the "relative importance of technology to the relationship" (Dawson, 2014, p. 142) and the expanded use of video provides an important vehicle for mentor work with new teachers. Useful and meaningful work from collaborations will continue to be captured, assayed, and built-upon.

The intended study of mentor teachers using video in an induction program may make a significant contribution to the issue of mentor development. Consequently, I expected that the qualitative data would document the ability of mentors and the ways they provide advice. The mentor participants were purposively selected in order to examine the depth of teaching experiences and contextual settings. The method of participant selection was based upon Babbie's (2010) explanation of purposive sampling. The research questions and the purposively selected cases provide an approach to better learn about the impact of mentor-mentee interactions.

Chapter Summary

The aim of this review was to provide a theoretical framework of learning as well as an overview of the literature on induction and educative mentors. In doing so, this literature review has examined teacher preparation, teacher development, induction, mentoring, teacher quality, CSCL, and video technology. The work of seminal researchers, quantitative and qualitative methodologies, and theoretical and conceptual frameworks has also been reviewed.

Findings and key points include repeated studies that confirm teachers do not exit teacher preparation knowing all that they need to know (Darling-Hammond & Bransford, 2005) but that

skills and expertise develop over time. Based on the need for ongoing teacher development, many states employ a learning-to-teach continuum in which novices are supported during their first years (California Commission on Teacher Credentialing, 2011; Educate Texas, 2012; Ferraras 2009). Overwhelmingly, induction is conceptualized and accepted as a systematic method to support novice teachers during these initial years.

Mentoring is a significant component of induction that provides support during the early phase of teacher development. Across a wide selection of mentoring literature, best practices have been identified. Technology, while an anomalous development, is gaining in use and appears poised to expand further, thereby gaining in importance. At the same time, the education community has expanded induction initiatives to support new teachers. The mentor and mentee induction relationship nested within the changing teaching context should focus on continual growth and reflection on practice.

My unique conceptual framework of mentor development is coupled with a theoretical framework to understand adult learning. Based on the literature reviewed, there is sufficient evidence that an investigation examining the experience of video use by mentors would yield significant findings on this important topic. Given that there are more than three million TK-12 teachers in the United States and nearly 300,000 new teachers who join the profession each year (Learning Policy Institute, 2016), it is of significant importance to measure the impact of the growing field of online induction. This literature review has provided support for a research project guided by the topic of how video-aided mentor reflection impacts mentor practice. The research questions addressed were as follows:

1. How does video-aided self-reflection impact mentor practice?
2. How does video-aided peer feedback impact mentor practice?

Chapter 3 includes a rationale for the methodology and approach for my study. The chapter also includes a detailed description of the design, approach, and analysis methods for my study within the induction context. Chapter 3 also provides a narrative and graphic representation for the sequence of instrumentation as well as an exploration of ethical issues.

Chapter 3: Methodology

The inherent complexities of *learning-to-teach* have called for mentor support within the context of new teacher induction. I theorize *learning-to-teach* from a sociocultural (Vygotskian) and constructivist perspective. Because of this, I also expect that educative mentors who support new teachers will develop their skills over time and learn to mentor more effectively when in collaboration with others in the field. Whether defined as mentor preparation (Bullough, 2005) or collaborative inquiry groups (Graham, 1997), complexities are evident in learning to mentor. In understanding mentoring practices, Langdon (2017) asserted that "mentor development is non-linear, interactive, and complex" (p. 2). Some of the complexities include the foundational understanding of the difference between mentor and coach roles and the purposes associated with each.

In spite of how challenging or multifaceted mentoring may be, the growing numbers of newly credentialed teachers continue to create an increased need for mentors. This increased need for mentors thereby accelerates the importance of developing highly skilled mentors. According to O'Brien, Prytula, Ebanks, and Lai (as cited in Hudson, 2016), "Mentors demonstrate a range of levels of interacting, which can contribute to the quality of outcomes" (p. 31). If self-evaluation is incidental (Baecher et al., 2013) and reflection is limited or incomplete, growth opportunities may be hindered or uneven. The disparity in mentor practice can create inequities in new teacher experiences.

Chapter 3 describes the design, approach, data collection and analysis methods, and ethical considerations for a study within the existing induction context. The chapter includes a graphic representation of multiple data collection methods. As subsequently outlined, by using

multiple sources of data, this study allows for the examination of a specific component used in mentor development: video-aided reflection.

Purpose and Design of the Study

In order to address and foster mentor growth more effectively, this qualitative case study was intended to provide an understanding of the experience of video-based reflection by mentors, which can thereby guide future processes, instrumentation, and instruction. This study was structured to be neither a program review nor a program self-study. As a program review, an array of measures across all program participants would be necessary. In addition, within a program review context, the institution's governing board would select data sets and processes for the unit. In contrast to such a broad reaching unit assessment or program review, this study focused on mentors and development of their expertise (Langdon, 2017) by using video as a tool for mentor development. This study was guided by the topic of how video-aided reflection impacts mentor practice. The research questions addressed were:

1. How does video-aided self-reflection impact mentor practice?
2. How does video-aided peer feedback impact mentor practice?

As with other sections of my study, a review of literature and analysis of methodologies, approaches, and methods from previous studies guide the determination of the most appropriate research design for this study.

Rationale for Qualitative Methodology

As presented in Chapter 2, the review of more than 150 mentor and induction studies revealed that the majority of studies utilized qualitative methodology. Studies based on quantitative and mixed methods methodologies, while not highly representative, provide insights to the rationale for selecting the appropriate methodology for this study. One such mixed

method example, situated in a higher education environment, focused on relationships between college faculty members and included threaded conversations with univariate and multivariate data (Baglione, & Nastanski, 2007). Additional mixed method studies by Frels, Zientek, and Onwuegbuzie (2013) and M. Clarke, Killeavy, and Moloney (2013) examined both mentor and mentee experiences. One study by Hunt, Powell, Little, and Mike (2013), situated in an online environment, was misidentified as a mixed methods design because of the use of numerical questionnaire data; however, the balance of their collected data was qualitative, including the use of focus group interviews. The mentor studies provided insights by defining important and effective program components for induction teachers. Collectively, the quantitative induction and mentor studies do not present a strong case for quantitative methodology to address the study questions. Descriptions and illustrations of data collection methods, such as those included in the study by Hunt et al. (2013), provide foundational knowledge for questionnaire data. The Hunt et al. (2013) questionnaire informs the use of a demographic questionnaire in thisstudy.

Denzin and Lincoln (2013) stated, "Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world" (p. 3). Denzin and Lincoln further contended, "Researchers, emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes" (p. 10). Stake (2005) added further depth to the understanding of qualitative methodology and emphasized that studies must begin with the primary criterion; they must have a focus on learning. Merriam (2009) addressed qualitative methodology and case studies in particular as having the ability to focus on a particular situation.

Learning to teach is a socially embedded experience, understanding this experience then requires the telling of participants' stories (Baxter & Jack, 2008) and a report, which represents a "final tale from the field" (Denzin & Lincoln, 2013). As referenced in the introduction to their qualitative research handbook, Denzin and Lincoln stated that the telling of stories may be similar to "making a quilt or the creation of a film montage" (p. 4).

Rationale for Case Study Approach

According to Creswell (2013), "We conduct qualitative research when we want to empower individuals to share their stories, hear their voices" (p. 48). Concurrently, in a socially embedded experience there are multiple perspectives. Case study can be built upon a constructivist paradigm, whereby truth is relative and dependent on one's perspective (Baxter & Jack, 2008). Focusing on telling the story of "generative collegial exchanges," Horn and Little (2010, p. 186) employed a comparative case study of both professional community and professional learning, situated in two urban high schools. The telling of the teachers' stories included observations, interviews, and videotape records of "teachers' regularly occurring meetings" (p. 188). The resulting analysis provided insights about how the teachers had experienced normalizing, specifying, revising, and generalizing during their professional learning meetings.

Supported by a constructivist paradigm, case study allowed for the telling of participant's stories. Creswell (2013) stated, "Typically, case study researchers study current, real-life cases that are in progress so that they can gather accurate information not lost by time. A single case can be selected or multiple cases identified so that they can be compared" (p. 98). Creswell further contended that across the five major approaches to research, the approaches employ similar data processes.

Based on the purpose of the study, a case study approach was most appropriate as a means to follow the progression and cycles of learning, implementation, feedback and reflection (Crawford, Zucker, Van Horne, & Landry, 2016). Stake (2005) asserted that case study optimizes understanding. Additionally, according to Yin (2014), case study is a preferred method when examining operational links traced over time. Taken together, these experts and the reviewed studies indicate case study is the appropriate methodology for this study.

While I am secure in my assertion that qualitative methodology and a case study approach is the correct design to answer the research question, I am also aware that case study may continue to draw criticism from some in the field of research. Some of these criticisms are based on older paradigms of physical science, which place scientific experimental models of research above case study in a type of hierarchy organization. Yin (2014) acknowledged that single-case studies may draw criticism about rigor and suggested that having more than two cases "will produce an even stronger effect" (p. 64). Adding more precision to the understanding of "case," Creswell (2013) argued, "However, researchers typically choose no more than four or five cases" (p. 101).

Creswell (2013) contended that case study takes a rigorous approach to data collection and detailed methods. Within the case study approach for this study, the data collection instruments included: initial demographic questionnaires to mentors, mentor self-assessment rubrics, written reflections by the mentors, video observations of mentors coaching their mentees, and interviews of mentors and mentees. I have categorized instrumentation by the three different purposes they will serve. The purposes are demographic information, impact information, and triangulation data. The scripted observations from mentor videos provided evidence of practice at the end of the mentor training cycle and were used for triangulation.

As defined by Yin (2014), triangulation is the "convergence of data collected from different sources, to determine the consistency of a finding" (p. 241). While an operational definition of triangulation is important, of equal importance is the understanding that multiple sources of evidence provide. Yin argues that the most important advantage to triangulation is the "development of converging lines of inquiry" (p. 120). Creswell (2013) addressed triangulation from a variety of scholarly perspectives and identifies triangulation as important as one of four types of validation. In this study, triangulation was facilitated by the use of multiple data collection methods; it was also developed during interview or observation coding. Details of the protocols and instrumentation development are addressed in the instrumentation section.

Research Population and Sampling Method

Many elements factored into the strategic decisions for this study. As addressed in Chapter 1, my role as an administrator has an impact on identifying the study problem. My role also influences my perspective of where the study should take place and who should be involved. Pragmatic issues of feasibility (Patton, 2002) factor into the determination of population, while my social constructivist perspective informs my selection of information-rich cases, which yielded an understanding of the experience.

For telling their story and weaving together an understanding of mentor practice, participants included teachers currently teaching general education classes ranging from transitional kindergarten (TK) through high school and who also mentored new, first-year teachers. The purposeful sampling of fully trained mentors who meet the selection criteria (see Figure 4) within the XYZ induction program provided for a range of participants (Stake, 2005) and a range of discoverable data (Merriam, 2009).

Inclusion criteria
Mentoring in the XYZ program during the 2017-2018 school year
Fully trained mentor (more than 2 years of mentoring experience)
Mentoring first-year general education induction teacher candidates

Figure 4. Criteria for selecting participants.

The population for this study was fully trained mentors who attend training sessions within the geographic region and who work for one of four unified school districts in the area. Districts in the region had anticipated that mentor enrollment for 2017-2018 will be similar to 2016-2017, providing a total population of approximately 70 mentors. Studies such as those by Menegat (2010) and Orland-Barak and Hasin (2010) used pairs within their respective studies, and the participant numbers ranged from two to six. The target size for the study is four mentors and the first-year mentee they each supported. In this study, due to possible attrition, seven mentor and mentee pairs were initially selected to participate.

Data Collection

Data collection methods must be informed by the purpose of the study (Janesick, 2000). The aim of this study was to understand the impact of video-aided reflection on mentor practice. The methods of data collection were conceptually designed to capture a holistic picture of the mentor's experience over time. Data collection rationale and methods are described in this section with a focus on the rationale for the inclusion of the various data sets.

During the fall of 2017, mentors received a recruitment flyer (see Appendix A). Those mentors who indicated an interest and provided contact information, either via e-mail or phone, received an introductory letter (see Appendix B) and a link to the demographic questionnaire (see Appendix C). Data from demographic questionnaires were used to purposively select fully

trained mentors (those with more than two years of mentoring experience in the XYZ program) working with first-year general education teachers. Mentor Consent Forms (see Appendix D) were sent to those meeting the outlined study requirements (see Figure 4). A second round of requests would have been sent if fewer than seven mentors responded. Once the mentors were identified, an Introductory Letter to Mentees (see Appendix E) and Mentee Consent Form (see Appendix F) were provided for the mentee. The timing of this request is in line with other "beginning of the year" activities for the mentors, including program orientations that take place each year in each district.

Due to the structure of existing mentor training schedules and school calendars, the sequence of video observations was expected to be completed in mid-December, 2017 when most districts close for the winter break. I had anticipated that interviews could start in January 2018. Many of the mentors were ahead of schedule, and one-on-one interviews began in December 2017. Hennissen et al.'s (2008) data collection and analysis cycle were based on 16 mentor dialogues, which were held one month before training and one month after. The timing of data collection, including interviews, was based on Hennissen et al.'s model as well as studies by Ewan Ingleby (2014) and Marion Jones (2015), each of which were conducted over 5 months.

Suggestions for recording interviews and details about adequate recording procedures are provided by both Seidman (2013) and Creswell (2013). While Seidman (2013) suggested the use of a microphone, Creswell (2013) urged the use of two lapel microphones. Audio quality was important for accurate and timely transcription. Given that the accuracy of the transcribed transcript is dependent on the quality of the recording, I used a digital recorder with an exterior microphone. Audio transcription was completed by an online transcription service, Transcription Panda, which is used and endorsed by numerous U.S. universities.

Data for this study were collected and housed using a variety of secure technology resources. Consent forms were collected and reviewed prior to beginning any data collection; they were maintained in a locked file folder in my office. The demographic data were collected via a secure, password-protected online tool, Qualtrics. Only the researcher had the password to access survey responses. As the primary researcher, I was responsible for the collection, coding, analyzing, and interpreting of the data.

Participant anonymity was protected by the use of pseudonyms on all written and uploaded documents. With permission from participants, the focus group sessions were recorded. The nature of focus groups does not provide for complete anonymity although all documents included the practice of pseudonyms. To further protect the research subjects, the study provided only anonymous reporting. I retained only de-identified data for future analysis. All records will be destroyed after three years. The destruction of research records included paper shredding and scrubbing of electronic media. The date for this is June 2021.

Sequencing of Instrumentation

Throughout the study, mentor participants engaged in a series of activities that includes self-assessment, video reflection, and peer feedback. The instruments that the mentors and researcher used for these processes are described in this section and are organized in the order they were used. In addition to the data collection and retention practice described in the data collection section, the sequencing of phases and instrument are described in more detail in this section (see Figure 5).

Phase One: Before Training Session

Educators familiar with induction and other teaching colleagues previewed the Mentor Demographic Questionnaire draft (see Appendix C). This questionnaire not only provided

demographic data about the teaching and mentoring experience of the participant, it also included two questions about video use. Much of the literature on video use by teachers indicates that preservice teachers have used video for the development of their practice (Borko et al., 2008; Coffey, 2014; Lafferty & Kopcha, 2016; Sherin & van Es, 2009). The research about video use provided focus during data analysis.

Figure 5. Mentor instrumentation by phase. Mentor instrumentation by phase outlines the iterative cycles of video, reflection, and implementation. Mentors engage in self-assessment and reflection (Phase 1), engage in partner feedback (Phase 2), then complete Phase 3 with another video and summative self-reflection. Created by author for this study using Vengage software.

The mentors selected to participate (based on selection criteria) and who completed a mentor consent form self-assessed using the 2017-2018 Mentor Self-Assessment (see Appendix G). The concept of mentor self-assessment is based on long standing practice in California's

induction community although there is not a state- or program-approved document for this process. The induction community has informally used two versions for mentor self-assessment, one in draft since 2011. The conceptualization of the 2017-2018 Mentor Self-Assessment is based on existing program protocols but created by the researcher for this study.

The content of the self-assessment response was not accessed by anyone other than the mentor and researcher and was not included in any formal assessment of the mentor. The completed tools were uploaded to a secure, password protected Google folder that was fully managed by the researcher. Each mentor had an assigned, separate locked folder for uploads.

Following the self-assessment and before attending a mentor training session, the mentor videoed himself/herself engaging in a mentoring conversation with his or her mentee. After watching their video, mentors completed a Mentor Video Observation Phase 1—Before Training form (see Appendix H). The completed Mentor Video Observation Phase 1—Before Training form was uploaded to the secure, password protected Google folder. Mentor participants brought their video to the training session to review and share with a peer. This process is outlined in Phase two: During Training Session.

Phase Two: During Training Session

For this portion of the study, much remained the same for study participants and non-study subjects alike. Mentors formed dyads or triads and accessed their video for peer feedback during training. Directions were provided to the training room at large, indicating grouping and the use of breakout rooms for this part of the training session. The facilitator guided mentors participating in the study to a specific location without their being identified. The mentors then watched each other's videos in dyads or triads and provided written and verbal

feedback to one another using the Partner Feedback and Implementation Plan Phase 2 (see Appendix I).

Sharing mentoring video and observation notes provides elements and structure, which foster a community of practice (Wenger, 1998). Knight (2009) further contended that the sharing of video "serves to open the classroom door" (p. 16) and that being vulnerable increases meaningful interaction. Following the sharing of videos, mentors used the Partner Feedback and Implementation Plan Phase 2, During Training form. Each mentor reflected and made action plans to implement a change in future mentoring conversations. The Partner Feedback and Mentor Implementation Plan was uploaded to the protected Google folder.

Phase Three: Post-training Session

Following the first training session of the year and the resultant writing of the Partner Feedback and Mentor Implementation Plan during the session, the mentors repeated the observation cycle by: video recording their mentoring conversation, watching their own video, and completing a reflection of practice using the Mentor Video Observation and Reflection Phase 3—After Training (see Appendix J). Each mentor then completed the reflection with a second (summative) marking of the 2017-2018 Mentor Self-Assessment (see Appendix G) and uploaded the summative self-assessment to the assigned Google folder. At this point, all mentor instruments had been uploaded to the secure Google folder.

Interviews. In order to gain insight into the mentor's perceptions about the experience of video reflection, face-to-face mentor interviews took place after the uploading of the mentor instruments. I anticipated that interviews would offer the most in-depth insights of mentor interactions. Interviews are indicated when the sensibility is complex and subtle. Krathwohl

(1998) contended that interviews are key when gaining knowledge of a person's "perspectives, feelings, or emotions, or to study a complex or social behavior" (p. 286).

A number of authors (Burns & Grove, 2005; Fontana & Frey, 2000; Polit & Beck 2006) differentiated between structured, semistructured, and unstructured interviews. Structured interviews may use a questionnaire format with closed questions. Such a structured interview method is frequently used to provide quantitative data. Semistructured interviews provide for some open-ended responses. While semistructured interviews are organized around a set of predetermined questions, other questions can emerge. Unstructured interviews do not use a structured interview guide. The interviewer and interviewee engage in topics such as oral history (Fontana & Frey, 2000) and questions are open ended. For this study, I kept the protocol and the questions the same. Some of the probing questions were different depending on how the mentor responded.

Individual interviews followed a consistent protocol using the Mentor Semistructured Interview (see Appendix K) for all participants. Participants were informed that the interviews and focus group sessions would be recorded and that participation was voluntary and confidential. The strength of the semistructured interview is to allow the interviewee to speak more widely on the issues raised by the researcher. The answers are open-ended, and there is more emphasis on the interviewee elaborating points of interest (Denscombe, 2010). The interviews for this study focused on mentor perception of their change in practice, the impact of video-aided reflection, and resultant mentor and mentee interactions. Research suggests that interviews may take 30 minutes to several hours (DiCicco-Bloom & Crabtree, 2006). For this study, individual interviews lasted approximately 30 minutes although sessions were scheduled in 45-minute increments to allow for variance of responses and follow-up. Interviews took place

in a mutually agreed upon location, which included coffee shops and restaurants. I had anticipated that mentors may have wanted to use their classrooms, but only one mentor, Sarah, selected this option. Doyle (2007) recommended that offsite interviews be conducted in a public place where both interviewer and candidate are comfortable, where the interviewer can focus on the person. I had included the possibility of using the mentor's campus based on the assertion by Seidman (2013) that "because of the time and energy required of both participants and interviewers, every step the interviewer takes to ease the logistics of the process is a step toward allowing the available energy to be focused on the interview itself" (Some Logistical Considerations, para. 2).

Following the mentor interviews, analysis of the interview transcript was sent to each mentor. The Member-Checking E-Mail to Interviewees (see Appendix L) asked for their review and response. Questions asked whether the analysis matched their experience and whether the mentor would like to change or add any details. A response deadline of two weeks was included.

Focus groups. The face-to-face mentor interviews were followed by two role-alike focus groups, following the Educative Mentor Focus Group Interview Questions (see Appendix M) and Mentee Focus Group Interview Questions (see Appendix N) questions. The mentee focus group session in March 2018 concluded the collection of study data. A focus group interview is best used to gauge attitudinal dimensions "where meaning is not only interpreted by the researcher, but also is negotiated between the interpreter and the research participant" (Doyle, 2007). The same considerations of comfort and convenience were employed, but the mentees preferred an electronic group, where I used Zoom technology (online synchronous session).

Prior to beginning the focus group session, the mentees completed a Mentee Demographic Response Card (see Appendix O), which includes basic demographic information.

This response card also asked for permission to contact the mentee if clarification was needed. Participants were informed that the interviews and focus group sessions would be recorded and that participation was voluntary and confidential.

Written transcription of the individual interview was provided to each mentor. In order to facilitate their review and response, a response template was included within the Member-Checking E-Mail to Interviewees (see Appendix L). Member checking serves the purpose of increased trustworthiness/credibility by providing an opportunity for participants to check the interpretation of the data they provided (Doyle, 2007; Merriam, 2009). Creswell and Miller (2000) posited that procedures for trustworthiness, including member checking, should be largely determined by incorporation of three lenses: of the self (the researcher), of the participants, and of the external readers of the final research report. Member checking is considered one of the most significant methods within qualitative research for establishing or strengthening the credibility of a study.

Data Analysis

The five individuals of this case study were examined and analyzed from multiple perspectives using qualitative procedures of interpretation (Orland-Barak & Hasin, 2010). Onwuegbuzie and Teddlie (2003) deepened the understanding and potential organization of data collection and analysis with their outline of exploratory and confirmatory data analysis for both quantitative and qualitative data. In addition to providing a categorization table, Onwuegbuzie and Teddlie (2003) further clarified multiple approaches to data collection and also create a potential framework for data analysis.

Within this study, the collection of uploaded data sets (self-assessment, mentor reflection, and mentor implementation plan) and analysis occurred concurrently. Creswell (2013) outlined

three “steps in qualitative data analysis: (a) preparing and organizing the data, (b) reducing the data into themes, then (c) representing in either tables, figures, or discussion (p. 180). Creswell further outlined that the coding of data is meant to reduce the data into meaningful segments, naming the segments, and combining the codes into broader themes” (p. 180).

Bogdan and Biklen (1994) outlined the necessity of description, analysis, and interpretation of data whereas Patton (2002) affirmed the inductive nature of qualitative research. Adding further detail, the constant comparative method involves breaking down the data into discrete “incidents” (Glaser & Strauss, 1967) or “units” (Lincoln & Guba, 1985) and coding them into categories. Categories then arise from either those that are derived from the participants or those that the researcher identifies as significant to the inquiry. Thus, “the process of constant comparison stimulates thought that leads to both descriptive and explanatory categories” (Lincoln & Guba, 1985, p. 334). These categories undergo changes as they are compared and categorized. The importance of this constant comparison is the ability it affords to identify emerging themes. With this emergent (inductive) coding, no a priori categories were selected. Categories emerged from data and were defined as a result of analysis. Data analysis in this study included the generated themes presented in tables and discussion, which avoids treating each data source independently (Baxter & Jack, 2008).

The interview responses, including the digital recording, were reviewed for completeness immediately following each interview. These were then transcribed, coded, and analyzed using the powerful coding tool, NVivo©. The coding followed best practices in the field, which include a case study protocol (Yin, 2014) and a data analysis spiral (Creswell, 2013). The protocol included the instruments, procedures, and rules to follow in conducting the data analysis. While the estimated time for each interview was 30 minutes, the review and analysis

protocol were scheduled for extended periods of time immediately following the interviews and beyond. This time include the steps of reading and memoing (Creswell, 2013), which lead to coding.

Coding began by capturing significant information, labeling and describing these nodes, and then sorting by similarities and unique relationships. Saldana (2016) defined a code as, "a word or phrase that captures the essential attributes" (What is a code, para. 5). This was aided by NVivo©, which is a valuable tool to "graphically displaying codes and categories" (Saldana, 2016, p. 204). These visual displays assisted me in processing what I had collected. This tool, while useful in coding and generating themes, merely supports analysis by the researcher who develops the schema to explain the experiences.

In order to investigate how video-aided reflection impacts mentor practice, the researcher collected and analyzed data from four mentor and mentee pairs using an iterative coding process of participant documents (Creswell, 2013). The change in mentor practice was measured by the pre- and post-self-assessment that mentors submitted at the beginning and end of the study cycle. Individual mentors generated the data collection sources, yet the case study analysis included individual and collective experiences in the report of findings.

Limitations of the Research Design

This case study involved mentor participants from a range of districts within a Southern California region and offers their perspectives as they experienced video-aided reflection within the XYZ induction program. The limitations of this case study may be due to the sample size, research focused in a specific geographic orientation, or the bias of the researcher. The experiences collected are those of teachers working in an area covering nearly 27,000 square miles with a population of approximately four million people. Across the geographic area, schools

in the region support nearly one million students. Using convenience sampling for this study, the results cannot be generally applied to this larger population.

Adams and Woods (2015) argued, "Qualitative research occurs in the natural setting" (p. 112). The implications for this study include the potential impact that living and working in the region may limit teachers' experiences. At the same time, this region and program are part of the mentor's experience. The natural setting within the XYZ induction program as well at the potential for volunteer bias has implications for both construct and internal validity. For example, the 2017-2018 Mentor Self-Assessment is generated from self-report data and does not specifically require mentors to cite supporting evidence for the self-ranking (see Appendix G).

As discussed in Chapter 1, the limitations of this case study research design also include the role of the researcher in the creation of the conceptual framework. Baxter and Jack (2008) addressed one drawback of conceptual frameworks and provided suggestions to "safeguard against becoming deductive" (p. 553). Further limitations may be inherent in the instruments, including the questionnaire design, questionnaire tool, and other program instruments.

Validity

Validity criteria and measures that are employed in quantitative research are typically not suitable to enact in qualitative studies. The challenge or inability of qualitative research to provide expected assurances has been at the heart of the long running debate between quantitative and qualitative researchers. There has been progress made in bridging the divide, and Creswell (2013) asserted, "Writers have searched for and found qualitative equivalents that parallel traditional quantitative approaches to validation" (p. 245). Other authors eschew the term validity in favor of credibility. For the purpose of this study, the term validity was used.

Because of the inherent questions of construct validity and reliability, the documentation of procedures was crucial, beyond being a "good 'listener'" (Yin, 2014, p. 73). As the researcher, I was vigilant in asking carefully crafted questions and recording them accurately, maintaining a focus on the purpose of the case study and using an uncompressed digital recorder to enhance accuracy. Because both construct and internal validity are important to identify and address, the analysis and inference process therefore included protocols. Over the short course of the study there might have been changes in the patterns of interactions between mentors and mentees, which will impact construct validity. Creswell (2013) contended, "'Validation' in qualitative research to be an attempt to assess the 'accuracy' of the findings, as best described by the researcher and the participants. This view also suggests that any report of research is a representation by the author" (p. 250). The accuracy of data collection methods for this study included member-checking by the study participants, which provided an opportunity for the interviewee to validate the accuracy of the transcript. Ultimately, qualitative research can possess high levels of validity by determining the accuracy of findings from multiple perspectives such as the researcher and the participant (Menegat, 2010).

Expected Findings

Qualitative researchers must 'bracket' (Tufford, 2010) their personal biases about the phenomena to allow the meanings to emerge from the data. Because of my close relationship to the area of mentor development research I hold expectations from this study. Research indicates that video has been proven to be a valuable tool for teachers (Blomberg, Sherin, Renkl, Glogger, & Seidel 2013; Calandra et al., 2014; Knight, 2009; Sherin & Dyer, 2017). I expected to find a range of mentor experiences and development in practice. To reduce the biasing effect of my expectations I began by being cognizant of my bias. I then implemented operational methodsto

reduce my impact. Operational methods included self-reflexivity (which I recorded) and the use of a field notes journal. Design methods to reduce bias include multiple data sets from study participants. The researcher was vigilant to check for and ensure unbiased data analysis throughout the study. An added assurance against researcher bias was the reliance on member checking. Details are further outlined in the following section on ethical issues.

Ethical Issues

Any form of research will present ethical issues. Researchers must consider and protect participants from risk of harm or discomfort. With increased use of technology, protecting the privacy and confidentiality of participants was carefully planned and monitored. Participant anonymity was protected by the use of pseudonyms on all written and uploaded documents. Focus group participants were assigned a number generated by the researcher and the group protocol requested that mentors and mentees refrain from using any names during the interviews. The recordings and transcription used only the identifiers assigned by the researcher.

Conflict of Interest Assessment

The researcher, as previously identified, acknowledges a professional relationship to the induction program participants (mentors and mentees). I have an ethical and moral interest in the quality of services provided to teachers in the region, not only in relation to my position, but also in my understanding of the moral imperative of public education. The researcher/participant relationship, researcher's subjective interpretation, and research design all require ethical consideration in designing a study. In order to address potential conflicts, I carefully considered and identified how my "assumptions are deeply rooted in our training and reinforced by the scholarly community in which we work" (Creswell, 2013, p. 19). So as not to exert undue

influence, participants were reminded that they could withdraw from the study at any time, without penalty.

Ethical Practices

Ethical practices were ensured and supported through multiple processes and university regulations. Consistent with The University of Concordia Portland's Internal Review Board (IRB), as the researcher, I engaged and passed the Human Subjects Protection Training, provided through the Collaborative Institution Training Initiative (CITI). Following Concordia's IRB approval process, I provided each participant with an informed consent form. The consent form included the purpose of the study, an overview of the potential risks, benefits, confidentiality, and right to withdraw from the study. I acted ethically in the collection and analysis of study data, protecting participant identities, and accurately representing their data and the meaning they make of the experience. Because I have a responsibility to scholarship, I did not seek to use this case study as a way to substantiate a preconceived position (Yin, 2014).

Chapter Summary

This chapter detailed the study design, instrumentation, data collection, analysis procedures, and ethical considerations for a study within the existing induction context. A rationale for the methodological design and approach was presented. Built upon multiple expert opinions, this study included a qualitative methodology design using data collection methods of questionnaire, observation, and semistructured and focus group interviews. Furthermore, the multiple step process of constant comparison included an exploration of the limitations as outlined. By triangulating data through multiple sources, this study allowed for the examination of a specific component used in mentor development: video-aided reflection. Chapter 4 presents the results obtained from the case study.

Chapter 4: Data Analysis and Results

The purpose of this qualitative case study was to understand the experience and impact of video-aided reflection by induction mentors. Research indicates that the greatest changes in teacher practice take shape between the first three to five years of teaching experience (Darling-Hammond & Bransford, 2005). Research consistently suggests that interaction with a mentor is a vital element of effective induction programs within the first two years of teaching (Kapadia et al., 2007), providing much needed support for teachers during their first years of teaching. Within the continuum of learning to teach, which occurs in preservice (preparation) and in-service phases, induction and educative mentors are important elements of new teacher development and support. However, the research appears to ignore the effective elements of new mentor development. Because mentor interaction is a key to effective induction programs, this study focused on the experiences of induction mentors using video for reflection.

By exploring such mentor experiences, this study was organized to answer two research questions:

1. How does video-aided self-reflection impact mentor practice?
2. How does video-aided peer feedback impact mentor practice?

This chapter, focused on results and findings, initially provides the description of the sample followed by how research and analysis methodologies were employed. The chapter continues with the presentation of data analysis and results related to the two research questions. The results are organized in two sections, one for each research question. Following the presentation of the data and results, the chapter concludes with a summary of the findings.

Description of the Sample

A total of five induction mentors and five new teachers (mentees) were selected to participate in the study. Study participants were recruited from across a regional induction consortium in Southern California. Experienced educative mentors who were coaching in the program during the 2017-2018 school year were solicited for participation. Recruitment took place in district and county offices throughout the region, and flyers were handed out during orientations at the beginning of the 2017-2018 school year. The recruitment flyers (Appendix A) provided contact information for those interested in participating in the study. The applicants were then sent a demographic questionnaire (via Qualtrics©). From the regional population of 70 experienced mentors, seven educative mentors indicated an interest in participating, which included completion of the demographic questionnaire and consent form.

Of the seven mentors who indicated an interest, two were excluded based on selection criteria for this study. Both of the excluded mentors were supporting education specialist teachers rather than general education teachers. An expanded explanation of participation criteria was discussed in Chapter 3 with the research population and sampling methods. A literature review on mentor case studies (Bower-Phipps et al., 2016) and review of research authorities such as Creswell (2013) and Yin (2014) indicated that a case study of four mentors and their mentees would be in line with other studies. In planning the study, I had anticipated and planned for potential attrition and hence retained the fifth participant. Although there was not attrition during the study, I retained the fifth participant because he was the only male participant and he teaches on a high school campus. I believed his participation would provide for a more thorough understanding as it related to the research questions. Once mentors and

their mentees were selected to participate, I assigned pseudonyms as a provision of confidentiality.

Demographic Information

A breakdown of participant demographic data is shown in Table 1, and the paired mentor and mentee matched data are presented in Table 2; further profile descriptive narrative immediately follows these tables. Recruitment and enrollment were not crafted to obtain an even distribution of individuals participating from each ethnicity/race. Due to a disproportionate number of females to males in the teaching profession, this study did not seek to be representative of that typical ratio.

Table 1

Participant Demographics

Name*	Ethnicity	# of years teaching	Grade span	# of years mentoring
Abbey	White	8+	Elementary	7
Allison	White	8+	Middle school	15
Grace	Hispanic/Latino	8+	Middle school	5
Peter	White	8+	High school	12
Sarah	White	8+	Elementary	10

Note. *Pseudonyms are used in this chart and throughout the study.

Mentor Profiles

The five mentor teachers who participated in the study had between 10 and 25 years of teaching experience. The average number of years mentoring was 10; Grace had the fewest number of years (5), and Allison had the most (15). Two mentors, Abbey and Sarah, taught at

the elementary level in two different districts; two mentors, Allison and Grace, taught at the middle school level. They were in the same district but not the same school site. Peter, originally part of the attrition plan, represented the sole high school mentor. All five mentors worked at different school sites as did the teachers they supported. All five of the mentors were matched and began working with their new teachers at the beginning of the school year in their respective districts. The mentors continued to support their teachers throughout the school year and the duration of the study.

Table 2

Paired Mentor and Mentee Teaching Context

Mentor*	Mentor campus type	Mentee*	Mentee campus type	Grade span match	Content-subject match	Campus match
Abbey	Elementary	Brandy	Elementary	Yes	Yes	Yes
Sarah	Elementary	Pru	Elementary	Yes	Yes	Yes
Allison	Middle	Goldy	Middle	Yes	No	No
Grace	Middle	Greta	Middle	Yes	Yes	No
Peter	High	Zoe	Secondary	No	Yes	No

Note. * Pseudonyms are used throughout this study.

All five mentors hold a master's degree, and Peter has started a doctoral program. Allison has taught education methodology courses for the California State University although she was not teaching during the 2017-2018 school year. During the time of the study, Sarah was also participating in an instructional coaching program through her district. Peter worked in the same district as Sarah but was not participating in any other coaching or mentoring programs. The youngest mentors, Grace and Sarah, had both been new induction teachers when they started

their teaching careers. Grace and Sarah do not work in the same district as one another, but they have continued to teach and mentor in the districts where they started their careers.

Research Methodology and Analysis

The purpose of this qualitative case study was to understand the experience and impact of video-aided reflection by induction mentors. For this reason, I employed a case study design that provided structure and parameters to bound the study. The case study approach and data collection methods provided a comprehensive path to analysis and synthesis, which was required to understand the varied facets of the mentor experience. This section provides an overview of the methodology based on the conceptual framework presented in Chapter 1, the theoretical framework presented in Chapter 2, and data collection strategies presented in Chapter 3. Following this methodological grounding, I have collated, organized, and presented the data and results in summary form.

Overview Grounding

Based on readings, the review of literature, and experience in the field, I began this study by outlining both a conceptual framework and a theoretical framework. The conceptual framework provides a way of understanding concurrent aspects of support and growth-focused elements during mentor and mentee interaction. The theoretical framework for this study provides a schematic for the interplay of seminal researchers and theorists such as Schön (1983), Wenger (1998), and Mezirow (1991). I present an overview of the main tenets of both the conceptual and theoretical frameworks to provide understanding and a rationale for the methodology and analysis employed in this research.

Developing the conceptual framework provided a vehicle to prioritize variables and allowed me to analyze relationships. For example, the mentors in this study met with their

candidates on a weekly basis. The mentors also met with other mentors during mentor trainings. During these meetings, an array of topics may have been discussed. My conceptual framework (Figure 2 in Chapter 1) prioritized a focus on the concepts of challenge and support. For growth, the exchange would include both a challenge (something to work on) and support (resources or affirmations).

To understand both the supportive and challenging interactions, coupled with adult learning, the theoretical framework is supported by the research of Schön (1983), Wenger (1998), and Mezirow (1991). The theoretical framework is depicted in Figure 3 (in Chapter 2). With the range of teacher demographics and the multiplicity of teaching contexts, this study is grounded on the learning theorists outlined above. It is also grounded on research that suggested the mentor plays a significant role in providing challenge and support for the induction teacher (Boote & Beile, 2005; Helman, 2006; McGatha, 2008).

While the cited research and my conceptual framework suggest that mentors provide challenge and support, there remains a lack of evidence of what takes place during these mentor and mentee collaborative times. More specifically, what is the mentor doing or saying to provide challenge and support within a growth-focused relationship? This study focused on understanding the use of video for reflection as one promising way to develop best practices for induction mentors.

Methodological Strategies

I used documents, observations (video), and interviews as the evidence sources. Interviews consisted of semistructured individual and focus group sessions. As I considered the range of study documents, I created a crosswalk between the research questions and data sources. Table 3 presents the data sets aligned with the study research questions. The data were collected

Table 3

Crosswalk of Research Questions, Data Collection Methods, and Data Analysis Dates

	Data Sets and the Date Analysis Began				
	Mentor documents, including self-assessment and peer feedback	Observations (video)	Mentor individual interviews	Mentor focus group interview session(s)	Mentee focus group interview
	October 2017	October 2017	December 2017	February 2018	March 2018
Research Question 1 How does video-aided reflection impact mentor practice?	Yes, the documents provided a mentor self-report across a compendium of mentor communication skills and attitudes about video use for reflection.	Yes, the observation notes and video as empirical evidence of mentor practice when coaching their new teacher	Yes, mentors commented and provided perspective on the full range of semistructured interview questions.	Yes, focus group interviews provided expanded perspectives on video-aided reflection.	No, these interviews did not provide substantial data for RQ1. Mentee focus group interviews provided mentee demographic and background information regarding their experience.
Research Question 2 How does video-aided peer reflection impact mentor practice?	Yes, the collected documents captured mentors' perceptions of peer impact using narrative and a 5-point scale.	Yes, the first video was submitted prior to peer reflection. Second videos were submitted after. Provided compare/contrast opportunities.	Yes, mentors commented and provided perspective on the full range of semistructured interview questions.	Yes, focus group interviews provided expanded perspectives on video-aided peer reflection.	Yes, mentees provided another perspective on the impact of peer collaboration and video for reflection.

Note. In this table I have included the full range of data collection methods, indicated the date that data collection and analysis began, and identified how the data either did or did not address the research questions. Adapted from *Mentor/Protégé Interactions and the Role of Mentor Training Within Novice Teacher Mentoring Program* (Doctoral dissertation), by G. Menegat, 2010, p. 235, retrieved from ProQuest Dissertations & Theses database. (UMI No. 3403009).

in phases, or rounds. The documents included mentor self-assessment and peer feedback forms collected between October and November 2017. Observation videos were collected and coded between October and November 2017. Individual mentor interviews began in December; the mentee focus group interviews were concluded in March 2018.

Documents. Because I wanted to understand mentor video use as it existed in the context of the induction program, it was important to the study design that data collection methods were congruent with existing practice. For this study, I modified existing program documentation and included only one additional document for study participants. The mentor self-assessment and the peer feedback forms were the first data sets that were collected (see Appendices G and I). These documents were collected during the first mentor training session of the year. As described more fully in Chapter 3, these documents were already part of the mentors' experience. The follow-up feedback form was collected after the second round of video reflection. As a source of evidence, one of the strengths of documentation is the stability it allows (Yin, 2014). Yin (2014) also contended, "The most important use of documents is to corroborate and augment evidence from other sources" (p. 107). I expand on the data provided from these documents in the findings section.

Observation (video). Mentors uploaded videos of themselves interacting with their mentees. Two phases of video uploads were called for in this study. The first video upload took place before the initial mentor training session of the year. The first video was used for the mentors to watch themselves before attending training. The first video was also used to provide feedback to one another during the training. After the training, mentors were asked to engage in another recorded mentoring conversation and then upload a second video. Figure 3, presented in Chapter 2, depicts the mentor data collection by phase.

I scripted the observation videos to record mentor language and ultimately coded the interactions that I observed. This observational evidence was useful in providing additional information about the behaviors and actions of the mentors. Although having another observer may have increased the reliability of the evidence (Yin, 2014), I have relied on rewatching the video and my written notes to address reliability.

Interviews (individual). Individual mentor interviews began in early December 2017. There were five individual mentor interviews in all, and these were all completed by the beginning of January 2018. The first interviewee, Grace, selected the time and a place close to her home and the school where she teaches. In this face-to-face interview, questions were grouped around self-reflection, peer-reflection, and thoughts about the experience (see Appendix K). Each group of questions had two to three more specific prompts. I took notes as the mentors talked but was concerned with staying very close to the interview protocol and script. With Grace's permission, I recorded the interview and sent it out for transcription. Although we met for nearly 30 minutes, the interview was the shortest of all interviews I conducted (22 minutes).

Individual mentor interviews continued through January 2018. As I gained experience in conducting interviews and trusted my recording equipment, I was able to prompt for more specificity from the interviewees. In a similar adjustment, when I was interviewing Allison, she talked about "bombarding people with a lot of information" (personal communication, December 12, 2017). I asked her if she could pause and go back to provide more detail. Later in the interview, when talking about peer feedback, I used the stem "So, tell me a little bit more about that."

To compare the length of the two interviews, Grace's interview resulted in five pages of transcript. Her longest response to any question was seven sentences in length. Allison's

transcript was seven pages in length, and her longest response was 17 sentences. I conducted member checking by e-mailing the transcriptions to the participants. A due date was included; the participants checked for accuracy and were asked to make any corrections they thought appropriate (see Appendix L) and respond via e-mail. The participants had no revisions to suggest.

Interviews (focus groups). I scheduled the mentor focus group for a date after I had read and begun to analyze the individual interviews. Although the analysis of individual interviews was not yet complete, this progression provided me the opportunity to fine-tune the specifics of the focus group interview questions. The focus group interview took place in late January 2018 and resulted in a deepening of my understanding of the experience. During this phase, I spoke less and collected more notes than in the previous interviews.

The focus group interviews were conducted following a unified protocol (see Appendix N) and held in local restaurants. The mentors selected the location and time most convenient to the end of their school day. I arrived early to reserve seating in a quiet corner. I also used the extra time to test my microphone and review the interview questions.

The first focus group, with Grace and Abbey, ran from 4:00 p.m. until 5:00 p.m. They answered the interview questions and built upon one another's responses. They talked equally and exchanged ideas as much between the two of them as with me. Both Grace and Abbey were in agreement throughout the interview. One example was when Grace said, "I'm trying to think of something else that I could add to what Abbey said." Abbey then asked if she could give Grace an idea.

The second mentor focus group interview was also conducted at a restaurant of the mentors' choice. Although I followed the same interview protocol, Peter, Allison, and Sarah

engaged in ongoing dialogue from the moment they sat down. They did not know one another and did not recall whether they had seen each other in mentor trainings, but they got right into sharing their mentoring and video-aided reflection experiences. For this group, the interview started at 4:30 p.m. and concluded at 6:00 p.m. Each of the three mentors had extensive information to provide on all interview questions. They also complimented one another and built upon one another's responses. As an example, Sarah said,

> I completely agree and felt the same way. It's more like you are thinking about what to say and how to respond and not give them too much of the direction to go in. . . . It just made me more aware of what I was doing and think about it more.

Peter later responded:

> I wholeheartedly agree with you. I felt there's so many times since the beginning of this year that I've wanted to jump in and say "this is how you do that, and it's really simple." But, if I did that I'd be giving them a fish and not teaching them how to fish.

Analysis

Although case study analysis has few fixed formulas (Yin, 2014), I used an iterative process to engage in rigorous thinking about the empirical evidence when analyzing the study data. After conducting the first three interviews, I also began to use the computer-aided data analysis software NVivo© to assist me in visualizing the data. To be clear, NVivo© does not produce coding or analysis; the researcher prepares the elements and conducts the analysis. The word trees and color coding of nodes generated by using NVivo© were used for data visualization and were the starting point for the subsequent tables and diagrams I created, which supported progression toward my general analytic strategy. My strategy was similar to "playing with data" (Yin, 2014, p. 136) and working with the data from the ground up.

The subsequent steps of combining codes into themes, considering the number of themes presented in the data, and considering how to display these comparisons (Creswell, 2013) were aided by my data management decisions despite working with massive volumes of data. In this next section, I first outline the coding of study data before moving to thematic procedures. I provide more detailed description of the themes themselves in the findings section of this chapter.

Coding. After reading through the data, I coded the language (words and phrases) and employed constant comparison while coding and classifying data. This constant comparison included coding and classification within one data set, for example, an interview. Data that were subsequently collected were coded and then compared to the first set of codes. Comparing newly coded data to the initial codes provided for an examination of possible different perspectives and in some cases brought forth the need to be more precise in my coding vocabulary. This pattern was then repeated by comparison between interviews. I did not use an a priori set of codes. Rather, I read and coded the data, producing emergent, or ad hoc coding. Reading and coding in multiple stages allowed me to consider the data, starting modestly (Yin, 2014) and introspectively.

Part of reading and coding in multiple stages included rereading and reexamining study data. I read through the data numerous times in my first attempt to identify trends and create tentative codes (Strauss & Corbin, 1990) for what the mentors were expressing, either in their writing or verbal responses (video and interviews). Throughout the process, I kept journal notes and wrote analytic memos in which I drafted questions about the sense I was making from the data. I used index cards and graphic representations to analyze and examine the meaning of the mentor's language. As new data sets were read, I went back to my original data set to check for

relationships or differences and reevaluated codes. The interview with Grace is one such example of this iterative process of examining codes. I read Grace's interview transcript and developed tentative codes. I anticipated that these codes might later be modified as I read other interviews and became more experienced with coding. Chronologically, Allison's interview was next. I read Allison's transcript, assigned tentative codes, then went back to Grace's transcript to search for connections. A partial list of the initial codes and the mentor language is presented in Table 4, which represents a truncated version of the lengthier code list. As I reread the study data, I used the expanded version of the code list (see Appendix P) and considered mentor language, including phrases and sentences.

Table 4

Partial List of Mentor Language and Initial Codes

Initial codes and resulting themes	Examples of mentor language
Noticing/ awareness	Recognize when I wasn't asking the types of questions that I needed to ask I noticed that I interrupted her I look rushed I was also very aware of what I was doing and think about it more
Questions	I felt I did fairly well asking her questions She asked me if she . . . I asked pointed questions So, I started with some questions I have written out questions Good, because we can ask questions

For the purpose of creating initial codes, a table such as Table 4 was helpful. However, rather than providing a mere synopsis of data, I wrote in my journal, "More important, and certainly more interesting, is how the mentors talk about their experiences, using the terms to do

so." The transition from the raw data to the building of understanding required the next level of interpretation; thus, I established descriptive themes.

Thematic procedures. My goal in this section is to build a valid argument and justification for creating themes and attributing meaning (Constas, 1992) across the interpretive categories I created. This section provides documentation of my actions as a form of accountability in support of my presentation of themes. The use of these themes is focused on providing a clear and coherent answer to the research questions.

In determining the themes for this study, I considered which elements carried over, across, and throughout the data. I knew that the organization of data around themes would strengthen the understanding of this analytic approach and ultimately impact the depth of insights derived from the findings of the study. From an initial list of more than twenty, I culled these to 14 codes. These codes were then organized by reference count and grouped to understand the full sense of the terms. For example, during the interviews the mentors used the term "question" (including stems of the word) 65 times and used the term "talking" 56 times. In order to derive the themes, I asked myself, "As they used these terms, what were the participants really talking about?" In both of these coding examples, the discussions were centered on what the mentors noticed from watching their videos. In some situations, mentors were aware of their own questioning, the mentee's talking, or the amount of wait time between the mentor and mentee exchanges. The stages of thematic development followed this order:

1. Finalize the name (label/term) for the theme
2. Write the description of the theme
3. Illustrate with a few quotations from the study data.

The process of thematic development included affixing a label (name of the theme) to the language of the mentors and then defining the label or name that would precisely identify the theme. I then had to ensure I would be able to recognize the theme in the data. After collecting several examples, as much to describe as to check for accuracy, I then determined what name to affix. The presentation of the themes from this study includes the major categories and the patterns that emerged.

The constant comparison coding and thematic procedure yielded four overarching themes that mentors addressed when engaging in video-aided reflection: (a) *awareness,* (b) *feedback* on practice, (c) *reflection,* and (d) *impact*. Within the theme of awareness, there are two subthemes that are based on the mentors' progressive exposure and experience with video-aided reflection. Descriptions of these themes and subthemes supported by examples and quotes are as follows:

***Awareness*.** Defined as the state of being conscious or the quality of being knowledgeable, the ability to perceive, feel, know, or be cognizant of events. Self-awareness involves being aware of different aspects of the self, including traits, behaviors, and feelings as in "A person with awareness would likely be able to report on his or her internal and external states" (Nugent & Catalano, 2015, p. 16). Examples from the study include, "I was also very aware that [I] should let her have her piece" and "I recognized when I wasn't asking the types of questions that I needed to ask."

The subthemes of awareness are the following:

Self-consciousness. A secondary emotion, such as embarrassment or pride (Rochat, 2003) when mentors initially observe themselves and "focus more often on superficial details" (Kleinknecht & Gröschner, 2016, p. 45), and

*Cognitive awareness of mentor behaviors***.** Where observation "activates prior knowledge and experience" (Kleinknecht & Schneider, 2013, p. 15).

Feedback (on practice). A special case of the general communication process in which the sender conveys a message to a recipient. A general example from education might include, "Some teachers welcome feedback while others are more reluctant" (Flodén, 2017, p. 1056). Examples from the study include, "One thing we said to one another was, just give me some honest feedback" and "We got feedback from three people."

***Reflection*.** Serious thought or consideration. Exploration of one's intuitive thinking in order to make discoveries as in "When someone reflects-in-action, he becomes a researcher in the practice context" (Schön, 1983, p. 66). One example from the study includes, "As I reflected, I realized that I probably should have had something written down."

Impact. Having a strong effect on someone or something**.** One education example reads, "When it comes to student performance on reading and math tests, a teacher is estimated to have two to three times the impact of any other school factor" (Rand Education, 2018, para. 2). One example from the study that reveals impact reads, "The next time I met with her I thought about the video and I made more of a conscious effort to reinforce what she was saying."

The next section relates the findings of the study to begin making meaning of the mentor's video-aided reflection experience. The findings will include descriptions of results from the study. In doing so, I move cautiously between exploring understanding while not moving too far toward drawing conclusions or inferences (Concordia University, 2018).

Presentation of the Data and Results

The data from documents, video observations, and interviews (including focus group sessions), were structured to address two specific research questions and are organized to provide

a detailed and thorough understanding. Throughout the sections for each of the research questions, I have presented the data central to the four key themes and two subthemes to highlight connections across the case study and ultimately lead to study findings.

Research Question 1

How does video-aided self-reflection impact mentor practice?

Key theme: Video watching creates an awareness. Researchers claim that "teachers benefit from opportunities to reflect on teaching with authentic representations of practice" (Sherin & van Es, 2009, p. 21). Video, as an authentic representation of practice, provides a tool for the noticing of behaviors. At the beginning of this study, induction mentors were asked to consider their prior experience with video then use video for self-reflection as they coached a mentee. Mentor documents revealed all five mentors indicated they had previous experience with video in their own classroom; four of the five had used video with their mentees.

The documents and interviews also revealed that mentors experienced a range of thoughts about this video experience. Repeatedly, mentor comments indicated that they noticed their physical mannerisms as well as their behaviors. They were also able to move beyond initial observations and reflect on their practice. The comments ranged from initial negative thoughts about how they looked or sounded in the recording (self-consciousness) to increasingly positive productive perceptions of what they noticed about their mentoring behavior (cognitive awareness of mentor behaviors). The study data and the identification of this progression lead to the identification of two subthemes.

***Self-consciousness*.** Examples of the mentors' early stage of awareness, self-consciousness, is indicated by multiple emotional responses. The mentors made remarks such as "I sound like an idiot" or "I look rushed." Other comments included "I look scared." Peter

expressed his interpretation of his initial experience, saying, “naturally, anytime you’re filming yourself, you’re hyperconscious of your actions.” Peter also mentioned that the mentors “all remarked on the fact that it’s awkward to see ourselves.”

Abbey also began her individual interview with a self-awareness statement. She said, “I hate seeing myself or listening to myself.” The balance of Abbey’s response provided an example of the progression that mentors made from self-awareness to cognitive awareness of mentor behavior. Her full quote was, “I hate seeing myself or listening to myself, but once I got past that, I had to take a minute to make sure my questions were on point.” In this instance, Abbey’s interview has provided evidence about her progression of mentor awareness; as a mentor, she shifted from her initial self-consciousness to higher cognitive awareness of her mentor behaviors.

Cognitive awareness of mentor behaviors. After sharing their thoughts about previous experiences, the mentors then watched their first coaching videos and commented on what they noticed about themselves. As with the comments about self-awareness, the comments on their mentor behavior also began with predominantly negative comments. However, these comments focused on their mentoring, not their own physical traits. For example, after watching her video, Grace noticed, “I’m connecting everything to my own experience as opposed to listening and guiding.” Peter indicated that he was aware of his nodding and “every so often giving a positive confirmation.” Abbey commented on her behavior in relation to her mentee by indicating “I interrupted her.” Sarah also noticed her behaviors in relation to her mentee. Sarah was more positive than the others. In her mentor documents she wrote, “I asked her about classroom management and took notes, then (helped) her problem solving (regarding) classroom management.”

Individual mentor interviews and focus group interviews were conducted after coaches received peer feedback and after they had recorded the second round of coaching videos. After reflecting on the series of mentor videos, Sarah commented, “Video of myself mentoring makes me more aware of the kind of coaching that I provide. Especially in regard to the types of questions I ask and the types of suggestions/advice I may give.” She added, “Video of my teaching forces me to rethink the way I phrase questions then plan out my lessons differently.” Allison commented, “Video use is difficult to implement but worth it.” Repeatedly, mentor comments indicated that they noticed their physical mannerisms and their mentor behaviors. A pattern that began to emerge from these exchanges was the mentor’s awareness of specific mentoring behaviors. These behaviors included both physical actions and verbal interactions. The mentors were also able to move beyond initial self-awareness and analyze their mentor behaviors.

To better understand the way mentors thought and talked about mentor behaviors, I created a mentor terminology table and then culled the three most frequent behaviors that the mentors mentioned. Table 5 indicates that the mentors most often noticed their questioning, talking, and listening when discussing awareness of their mentoring practice.

Table 5

Mentor Terminology When Discussing Awareness of Mentor Behaviors (Including Stems)

Term	Abbey	Allison	Grace	Peter	Sarah	Focus group session 1	Focus group session 2	Number of times term is used
Questioning	14	9	3	10	13	9	7	65
Talking	13	5	3	5	7	11	12	56
Listening	11	2	1	1	2	5	5	27

Questioning. Both interviews and mentor documents provide evidence that awareness of questions and questioning stems was a dominant factor among the mentors. For example, Sarah indicated, "When I was videoing, it made me more aware of the questions that I was asking." During interviews, other mentors commented on their ability to ask questions. Grace said, "I felt I did fairly well at asking her questions that were geared towards her own reflection," and Peter noticed he had started with numerous questions. In her documents, Grace wrote:

> I noticed I would ask her questions that would guide her thinking. I tried to ask more inquiry type questions. For example, I asked her, "what do you want to accomplish? and "what is the best way to narrow your focus?"

Talking. During focus group interviews, mentors continued to reveal that they were thoughtful about the way they talked with their mentees. Abbey shared, "I'm looking at myself through video and I'm thinking about the way I sound, or whether I should have said something differently." Other mentor comments included the importance of just sitting and talking with their mentees. During the focus group interview, Sarah shared her observation that when talking with her mentee, she was surprised by what the mentee talked about. Sarah indicated that the mentee was very candid during the mentor and mentee conversations, even while being recorded.

Allison's first video was more than 10 minutes in length and included more talking by the mentor than the mentee. The coding for Allison's first video included time stamps of mentor talk, verbal affirmations, and nonverbal communication (such as head nods). Affirmations and head nodding were the most significant behaviors that this mentor mentioned and demonstrated. The second most observed behavior was giving planning directions for the next time they would meet. Affirming language stems included, "I'm glad you did that" and "That's good, you have

options for students." Grace's video was 17 minutes long and also revealed affirmative language and nonverbal affirmations.

***Listening*.** When mentors initially addressed their listening behaviors, there was, again, a range of behaviors they noticed. Allison stated, "I realized that I bombard people with a lot of information at once." Contrastively, Grace indicated, "My candidates tend to talk a lot. I am a good listener." Abbey's statements deepened the understanding of this behavior. Abbey made sense of the importance of listening; listening was a recurring thread throughout her interview and documents. Abbey stated, "Listening then enables them [mentees] to reflect on their practice rather than automatically tell them how they did." The impact that her listening had on mentee reflection was important to her, so much so that at the conclusion of the mentor training, Abbey set a goal for herself to work on "better listening." Similarly, as part of her implementation plan, Sarah indicated that her next steps included "not trying to solve problems, just listen." During interviews, Sarah also commented, "I realized I listened a lot more than I talked, and I think I have come a long way." During mentor focus group interviews, Allison added to this string of conversation and understanding by adding, "I'm actually picking up a lot from this conversation and thinking about my lack of listening skills."

In summary, although the mentor data present contrastive mentor perspectives on how they felt about their mentor behaviors, the mentors repeatedly discussed what they recognized or noticed in relation to mentor practice. The participants reiterated that it was important to be aware of their specific behaviors, such as listening, talking, and questioning and identified the ways they used this skill when working with their mentee.

Key theme: Feedback (on practice). Hattie and Timperley (2007) stated, "Feedback can be conceptualized as information provided by an agent (e.g., teacher or peer) regarding aspects

of one's performance or understanding" (p. 81). Mentors and mentees had much to say about the type of feedback they wanted to receive. Mentors indicated that they valued feedback. In their interviews, the mentors talked significantly about receiving feedback. An important point to note is that the mentors did not specifically address providing feedback.

Documents and interviews provided data on the degree to which participants valued feedback. In a mentee focus group session, the mentees often connected feedback to the observations conducted by their mentors. The mentees talked about the type of feedback they received and the type they wanted. Pru's mentor (Sarah) had observed in her classroom multiple times. Pru described the following:

> One time she [my mentor] just sat and watched. This [observation] was probably my favorite part, because I really wanted her to focus on the classroom management. She [Sarah] offered a lot of feedback She even got me something from Teacher by Teachers which really helped.

When prompted to consider whether it was the resource or the feedback that was helpful, Pru thought it was a combination, saying "I think the feedback was really helpful." Goldy, a middle school teacher, talked about feedback by stating:

> I had a great experience with observations by my mentor. I said, "If you're going to be here to help me, then I want you to come and observe my most challenging class because that's where I really truly need the help." So, she's been and she's given me a whole bunch of tips.

Greta, also a middle school teacher, discussed her desire for a specific type of mentor feedback. She asked for feedback that was beyond just complimentary. She shared, "My personality prefers more criticism, I suppose more constructive criticism, just because I know there are

things that I need to improve on." Pru's mentor had videotaped her earlier in the school year. Pru described the experience, "I videotaped my mentor and she videotaped me. It was for classroom management. We watched it together and talked about it." Whether the mentee video was for classroom management or other important aspects in developing teacher expertise, Pru was the only mentee who overtly made the connection between video, observation, and mentor feedback.

Key theme: Reflection (on practice). Reflection and the "habitual way of working toward more thoughtful, intelligent action" (Costa & Kallick, 2008, loc. 135) are foundational to the ways that professionals think in action (Schön, 1983). Theory indicates that practitioners may reflect on a range of phenomena and feelings (Costa & Kallick, 2008). When reflecting on their practice, mentors in the study used the empirical evidence before them (their coaching videos) to aid their reflection.

Individual interviews by the researcher provided evidence on mentor reflection. Grace indicated that she reflected on her practice, specifically regarding questions. She quickly connected her questions to her mentee: "I felt I did fairly well at asking questions that were geared toward her own [mentee's] reflection." Abbey also indicated her reflection on practice by connecting her actions to her mentee's reflection. Abbey stated, "I think I did a decent job of trying to get her [mentee] to make suggestions as far as what she could improve on, what she wants to change." Later in the interview Abbey indicated, "I need to take a step back and just let them think about it and let them reflect on their practice." In her concluding response during the interview, Abbey's view of the importance of reflection was made clear in her statement, "Because, ultimately you want them reflecting. So, if I can get them to think about it, and watching those videos helps me."

In her interview, Sarah used the term reflection and provided additional information about what she realized about her practice and reflection. She stated,

> The video served an important purpose for reflecting or as a tool because the video made me realize that I still have more work to do as a coach, but it also made me realize that the conversation was more meaningful when I played it out and thought about the questions.

Allison's comments regarding video-aided reflection were congruent with those of the other mentors. Allison added an interesting step to her mentoring preparation process. She believed she needed to "possibly self-reflect a little more before I have my initial meeting so that I don't overwhelm a teacher."

Key theme: Impact on practice. In my review of the literature, I found a paucity of research that addresses which developmental learning activities impact mentor practice. However, the literature does address stages of expertise development, as do studies in other fields (Persky & Robinson, 2017). In this study, whether mentors used the specific term impact or a more general concept of change, they recognized the impact of video-aided reflection on their practice.

Grace discussed the impact of video reflection saying she used video reflection "to find something to fix and areas to work on." Peter talked about overthinking the making of his videos but believed he does so to be the best mentor he can be. Allison provided a more specific example of impact: "I'll now go into my meetings prepped as I always am, but now I'll go in and we'll talk about how things are going personally." The impact for Allison was that she has changed the way she starts conversations with her mentees.

Abbey also believed that video allows her to "fix" her practice. She indicated that she wants to be the best mentor she can be and therefore wants to improve. In summarizing her thoughts, Abbey said, "I think video has impacted me because it makes me more conscientious about what I'm saying. It makes me think more." During the focus group interview, Abbey also shared, "The next time I met with my mentee, I thought about the video, and I thought about how it went, and I made a more conscious effort to pause."

Research Question 2

How does video-aided peer feedback impact mentor practice?

Key theme: Feedback. Feedback, specifically formative feedback, can be defined as "information communicated to the learner that is intended to modify the learner's thinking" (Shute, 2008, p. 153). The topic of peer feedback provided rich, detailed conversations across this study. Throughout study documents and interviews, the mentors brought up honest feedback. They also labeled feedback as positive; at times, they used the word *complimentary* synonymously. When talking about feedback that was less than positive, participants often labeled it constructive criticism, as did the mentees (as described in the previous section).

As an example of how mentors used the term honest feedback, Peter laughed as he began to share his perspective on peer feedback. He said, "The good thing about teachers is, most of the time, teachers will be kind, but they'll also be honest." He went on to say that when he met with his peers to provide feedback to each other, they discussed this honest feedback. Peter indicated that other mentors in the group were interested in discussing issues and challenges with providing honest feedback.

During individual interviews, Abbey shared her peer feedback experience. Abbey recounted, "The mentor was really hard on herself. So, I, in turn, had to find the positive things

that were in there [the video], and give her positive feedback on that, because we're hard on ourselves." In the same interview, Abbey recounted the feedback that she received from another mentor. She indicated that her peer was "just really positive." When Abbey continued to talk about the encounter, she compared it to compliments a teacher might make in class. She claimed there were no specifics coming out of this feedback exchange. Abbey felt that the "good job" comments should be followed by a specific feedback identifier of what was good. Abbey then suggested, "I think that's one thing that we have to be better about, is finding those specifics."

Grace's interview comments supported Abbey's perspective that much of the mentor feedback was positive. Grace said, "Most of the discussion afterwards was really kind of positive, just reflecting and giving each other positive feedback. There really wasn't a lot of negative feedback." Grace provided perspective on several points. First, in the written mentor documents, her peer [Allison] said that Grace was "natural in her approach towards her candidate, but that she should probably focus on making sure that from the time she walked into the class that she give the mentee her full attention." Grace's mentee, Greta, was also the mentee who indicated she wanted more constructive criticism.

During the mentor focus group session, Sarah talked about honest feedback in much the same manner as the other mentors. Sarah emphasized the importance of feedback she received and her "interest to see and hear other people coaching, especially their questioning strategies and what they talk about." Grace also shared the difficulty of being completely honest with a peer:

> I think that the challenge is that it's really hard to give somebody corrective criticism when they're a peer of yours and we're on an equal playing field. If I'm trying to tell my

friend that I'm sitting next to, I find myself just saying positive things even if there's something that I think they could fix. It's not always super comfortable.

During the same group interview, Abbey added, "I think the most difficult thing is finding the right words to say that won't hurt their [peer's] feelings. I don't want to offend them or create negativity in our relationship. I want to be supportive."

During the interviews, mentors were candid with their desires for more honest, substantive feedback. Mentors appreciated supportive and positive comments, but they also desired challenges and something to fix. While mentors confirmed that they received feedback, the mentors wanted even more specific or targeted feedback. Some mentor documents provided examples of specific comments to one another. In her documents, Abbey wrote, "I believe my feedback was positive and answered their questions." Sarah provided additional clarification when she wrote "my peer noticed that I clarified and paraphrased."

Key theme: Impact (on practice). The literature on mentor practice has focused largely on the importance of relationship building and the dialogue between mentors and their mentees. Dialogue exchanges include the content of mentor suggestions, direct and indirect suggestions, and conversation styles. Gardiner (2012) studied prevalent mentor behaviors such as cothinking and problem solving; work by Gordon and Brobeck (2010) explored mentors who worked with established teachers when the participants discussed topics such as student behavior and problems of practice. In this section I provide data about the ways the mentors explained the impact on their practice. Discussion of the changes in practice are presented in Chapter 5.

Mentors also indicated they valued the time to analyze their mentoring with a peer. Table 6 represents the mentors' rating of video-aided feedback and their implementation plan for change in practice. These data were retrieved from the Partner Feedback and Implementation

Plan Phase 2 instrument (see Appendix I). After engaging in video-aided peer feedback, the mentors responded to the item: “I found the time to reflect and analyze my mentoring with a peer to be valuable.” Mentors then indicated the next steps they planned to implement in their practice. These documents were collected during their coach training.

Table 6

Mentors’ Rating of Video-Aided Peer Feedback

Mentor	Rating*	Implementation plan
Abbey	5	• Talk more with Grace about how to integrate some strategies • Learn to use wait time so teachers can process what I’m saying
Allison	5	• Allow more time • Better listening
Grace	5	• Ask specific questions • Come prepared with targeted questions
Peter	5	• I want to nurture and foster understanding • Use questioning as an engagement technique
Sarah	4	• Keep working on guiding questions • Try to not solve problems—just listen

Note. * 5 = Strongly agree, 4 = Agree.

Mentors expressed their perspectives regarding the impact of video on their practice. For example, during her individual mentor interview, Grace stated “It [video] has greatly improved my practice.” In her documents Grace wrote, “It’s good to see other styles. Let’s do [a video] before and after to see growth.” Grace’s videos demonstrated a change in her practice between her first and second recording. Notes from Grace’s first observation indicated that during her exchanges with her mentee she most often demonstrated affirming behaviors (verbal and nonverbal) and offered suggestions or solutions. During her second video, Grace affirmed her mentee but also rephrased, prompted, and clarified. She used the stem “I’ve been thinking.”

When extending the mentee's thinking, Grace started with the statement, "You could do that . . . or what might [happen] if you . . . ?" In her summative mentor observation document (see Appendix Q), when asked about the extent of implementation, Grace wrote, "I feel I was able to moderately implement my implementation plan. I came prepared with stems available and used strategies with purpose."

During his interview, Peter laughed about coming to the process of video-aided feedback. He stated, "As I've been going through it [video feedback], . . . it reminds me that I need to get back to reflecting on my practice. It has made me more cognizant about the process [of mentoring]."

Allison's thoughts about impact on practice diverged a bit from Peter's and Grace's. Allison thought about how the experience of video feedback could be replicated with her mentees. Allison imagined that she would like to use video feedback for her own teaching and have her mentee record her "so that we can watch back together." Even though Allison's comments suggested she was focused on future impact, notes from her videos suggested observable changes in mentoring behavior. Evidence of better listening included, "I thought that was a great idea, what other plans do you have for using thinking maps?"

Sarah indicated that she had a breakthrough with her coaching this year. She felt that she was more aware; therefore, "the meeting [with the mentee] was more meaningful and had a purpose and flowed better. It [video-aided feedback] made me better, even the self-critique. It's better when you can see yourself and see other people." Of the five mentors, Sarah rated the experience lower than the other four mentors. She agreed that the experience was valuable, but she did not strongly agree.

Mentor comments collected for the study (evidenced by their statements and in their videos) suggested they recognized that video-aided feedback had an impact on their practice. The mentors varied in how they rated the value of the experience, yet they all indicated that there had been a change in their practice. While overwhelmingly positive, the participants expressed a range of ideas in relation to video-aided reflection and peer feedback.

Summary of Findings

Using the full range of data collection methods, the presented case study findings are based on analysis of data from all participants. At the foundation level, or at the beginning of the experience, video provided a vehicle for noticing behaviors. Evidence of video as a vehicle for noticing was present in the cases when mentors watched their own videos and when they watched videos from other mentors. The act of watching the video encouraged awareness and multiple opportunities to discern mentor behaviors. Video also provided opportunities for reflection for the mentors. From the resultant feedback and reflection, mentors implemented a change in professional practice. In summary, video-aided reflection made an impact on mentor practice by providing empirical evidence for reflection and feedback. A more in-depth discussion of the impacts made are discussed further in Chapter 5.

The study data provided insights on how participants discussed their growth and implementation goals. The mentors crafted their implementation plans during their collaborative training sessions. These implementation plans flowed from conversations with peers and continued across the phases of data collection during the study. Participants' implementation plans strongly substantiated the impact that this experience had on mentor practice. Video observation further indicated that mentor practice had changed over the time of the study (e.g.,

more listening, less talking). This leads to the finding that mentors had a change in practice when engaging in video-aided reflection and peer feedback.

Patterns from study data suggest that mentors who participated in the study not only reflected on their practice but also recognized the importance of new teacher reflection within the induction program. For the mentors, reflection on their practice was more closely tied to the changes they planned to make in mentoring practice. However, mentors were not in complete agreement about which was more valuable to them, video-aided self-reflection or video-aided peer feedback. Several mentors indicated that they would like to increase the use of video for their own reflection.; several mentioned that their goal was to help the new teacher learn to reflect on practice. The mentors described mentee reflection as establishing habits of thought. Regardless of which type of reflection they thought was more valuable, the mentors' reflection guided their subsequent interactions with their mentees, suggesting that the change(s) that the mentors enacted varied based on their own self-reflection, and therefore their self-reflection skills were important.

Mentors reported that during training sessions, they received and provided feedback on practice. Mentors felt that during training, they came together as colleagues, forming a collaborative community. Some mentors acknowledged that they provided more affirmations than suggestions. Other mentors discussed the challenges they experienced when trying to provide feedback and maintain professional friendships. Mentors wanted to help one another but more often chose to maintain the peer relationship at the expense of specific constructive feedback, suggesting that mentors were challenged by providing feedback, potentially affecting the quality of mentors' reflections.

Chapter Summary

The purpose of this qualitative case study was to understand the experience and impact of video-aided reflection by induction mentors. This understanding was accomplished through the analysis of data from mentor documents, observations, and individual and focus group interviews. As a result of the data analysis, four themes and two subthemes emerged. The themes are awareness, feedback, reflection, and impact; the subthemes are self-consciousness and cognitive awareness of mentor behaviors. Analysis and interpretation of these themes along with recommendations are discussed in Chapter 5.

Chapter 5: Discussion and Conclusions

While Chapter 4 presented the findings from this qualitative case study, Chapter 5 presents a discussion of the findings as they relate to the research area of video as an instructional tool for mentor development. In this chapter, I share my determinations of what the results mean, including a summary of the results, highlighting new literature in the field, and then evaluating the results with supporting citations from the literature on educative mentoring and in particular my conceptual framework for this study. Chapter 5 then concludes with implications, recommendations, future directions, and the conclusion of the study.

Summary of Results

This qualitative, nonexperimental study used a case study approach to understand how video-aided reflection impacts mentor practice. In designing the study, I relied on both a conceptual framework (concept of mentor impact, Figure 2) and a theoretical framework of mentor development (Figure 3) as presented in Chapters 1 and 2, respectively. The related research questions that guided the study were

1. How does video-aided self-reflection impact mentor practice?
2. How does video-aided peer feedback impact mentor practice?

Methods of data collection included documents, observations, and interviews (individual and focus groups), which provided insights into mentor experiences and perspectives. The five individual interviews and two focus group interviews included mentors who were engaged in mentoring within an induction program in Southern California. These mentor interviews were conducted to gather mentors' first-hand accounts of "generative collegial exchanges" (Horn & Little, 2010, p. 186) to better understand the mentors' perspectives. The mentee focus group

interviews were conducted to gain wider perspective of the impact on mentor practice. The results provided insights into the impact of video-aided reflection on mentor practice.

In summary, the three key findings from this study, explained below, are

1. Mentors had a change in practice when engaging in video-aided reflection and video-aided peer feedback.
2. Providing feedback to their peers was a challenge to the mentors.
3. The changes that mentors enacted varied based on their self-reflection.

Discussion of the Results

From the outset of data collection, mentors appeared to be actively engaged in mentoring via the induction program, collaborating with other mentors, and also collaborating with the mentees (induction teachers). These collaborative mentor interactions seemed to create a professional context for mentor exchange and are depicted at both the top and bottom of Figure 6. The circle, square, and triangles in the center depict what occurred during these mentor collaborations. For example, during professional development and networking, the mentors engaged in peer interactions. These interactions included video as an instructional tool (triangle) and mentor reflection. Figure 6 also highlights the iterative exchanges within the peer interaction circle (feedback, support, challenge, and video as instructional tool). The figure also assists in extending thinking about the topic of mentor reflection. Specifically, it extends the thinking about the importance of mentors' experience and propensity toward reflection, which is depicted within the circle of peer interaction.

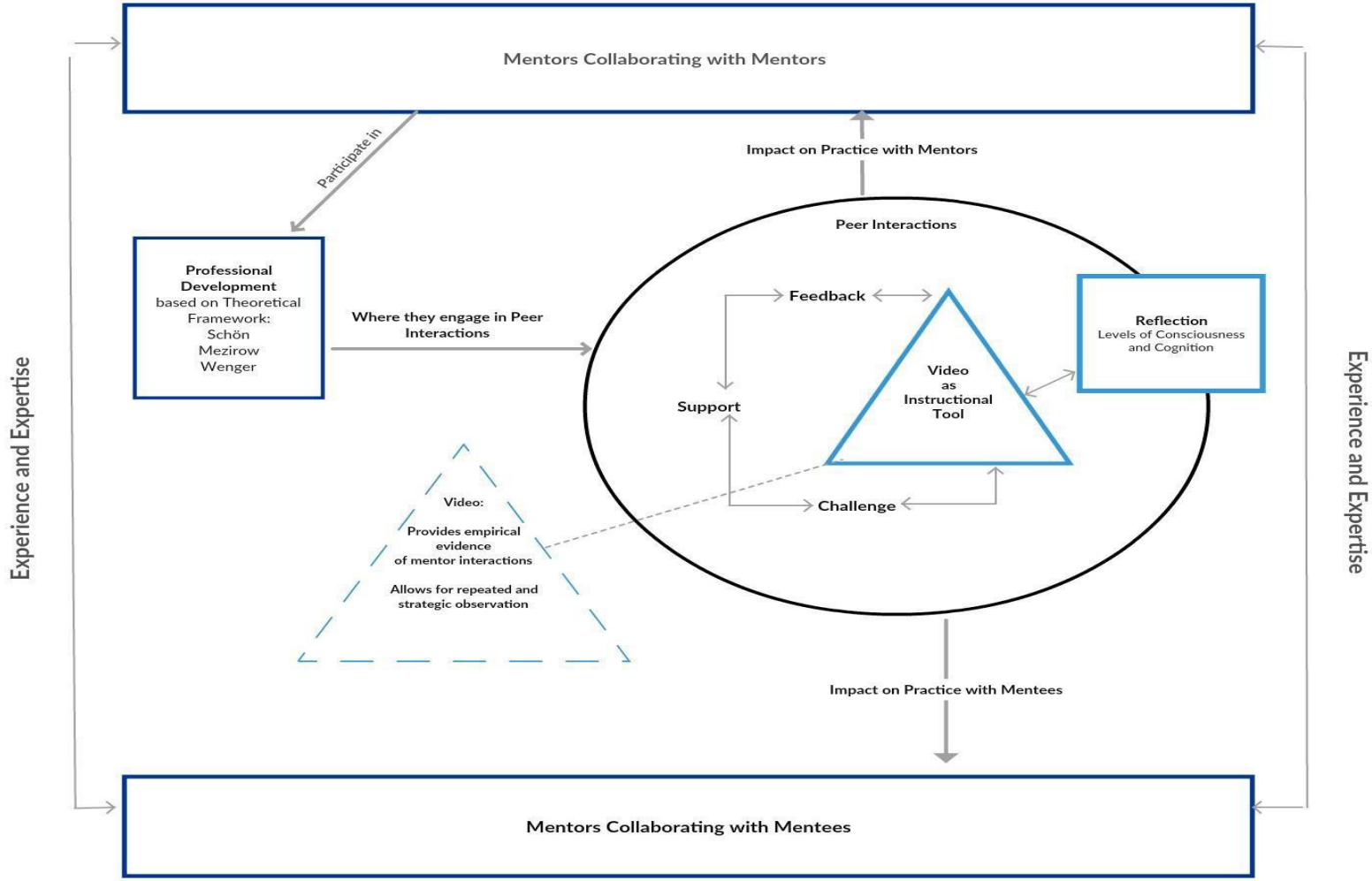

Figure 6. Synthesis of mentor video experience. Peer interaction in this diagram (represented by the circle on the right) highlights what takes place during professional development and networking sessions. This includes video, feedback, and reflection. Created by author using Creately©

The findings of this study are derived from analysis of relevant data and the four overarching themes and two subthemes that emerged from data analysis (as described in Chapter 4). The themes of awareness, feedback, reflection, and impact were found interwoven across much of the relevant study data. The subthemes of self-awareness and cognitive awareness of mentor behavior were evident when mentors discussed their own videos. At the broadest level of study findings, the results provide evidence that mentors had a change in practice when engaging in video-aided reflection and video-aided peer feedback. At the same time, mentors were challenged to provide feedback to their peers. Concurrently, the findings indicate that mentors' progression in their practice and development of expertise varied based on their own self-reflection. The discussion is organized under three subheadings: change in mentor practice, peer feedback, and mentor self-reflection.

Change in Mentor Practice

As I uncovered evidence that mentors had a change in their practice, I looked for a link to how the video-aided experiences influenced this change in practice. To synthesize and discuss the meaning of these experiences, it was also necessary to identify what the mentor was aware of and what prompted the mentor's awareness. Based on the work of Kleinknecht and Schneider (2013), I organized awareness, prompting evidence, change in mentor practice, and data sources in a tabular format to better present these ideas for discussion. Therefore, Table 7 provides a summary of the changes in mentor practice organized by the two research questions of this study. This section presents a discussion of substantive examples of mentor changes.

Decrease in mentor talk. Video impacted mentor practice by providing an awareness of the decrease of mentor-to-mentee talking. For example, during the individual interviews, Peter talked about student-centered conversations with his mentee. Peter indicated that he now allowed his mentee to talk more. Peter asserted that by doing so his mentee (Zoe) was "coming

Table 7

Changes in Mentor Practice and Prompting Actions

Research question	Awareness of	Prompted by	Change in practice	Data source
Mentor self-reflection	Mentor and mentee behaviors	Own video	Creation of implementation plan	• Interviews • Video observation
	Mentor behavior	Own video	Mentor language use; nonverbal communication (e.g., eye contact)	• Interviews • Focus group • Video observation
	Mentor and mentee behavior	Own video and other's video	Ratio of mentor/mentee talk time	• Video observation • Interviews • Mentor documents
	Mentor behavior	Own video	Planning practices	• Interviews • Video observation
Peer feedback	Mentor behavior	Other's video and peer feedback	Strategic paraphrasing	• Interviews • Video observation • Mentor documents
	Mentor behavior	Own video and other's video	Request for specific, targeted feedback	• Interviews
	Mentor behavior	Other's video and peer feedback	Inquiry questions	• Mentor documents
	Mentor and Mentee behavior		Own video Connection to classroom practice	• Mentor documents • Video observation
	Other mentors' practice	Other's video	Increased self-reflection on purpose of actions	• Mentor documents • Interviews

Note. The terms *own video* and *other's video* is based on terminology used in the study by Kleinknecht and Schneider (2013).

up with her solutions instead of me giving them to her." This change in Peter's mentoring practice is inspiring considering it is unlikely Zoe will be working with a mentor beyond her induction years. Peter's change in speech patterns seems well positioned to impact this new teacher's problem-solving practices into her future teaching career.

More strategic, focused planning practices. Video also impacted mentor practice by affording the ability to slow down the reflection and provide repeated opportunities for strategic observation. Strategic observation, or focused observation, was accomplished as mentors rewatched their videos several times. With each viewing, the mentors were able to watch themselves with a focus on an upcoming mentee meeting. As an example, after watching her mentoring video and taking notes on their previous discussion, Grace engaged her mentee (Greta) in helping students apply previous learning to new situations. By doing so, this mentor appeared to position herself to be able to redirect conversations and thereby better assist the mentee's progress toward becoming an effective teacher.

In addition, video reflection impacted the participants' planning practices by helping them think about the focus of the session with their mentees. As an example, in her first video, Allison and her mentee discussed tasks and schedules, which are important topics for running a classroom (Leatham & Peterson, 2010). After watching her first video and recognizing that their conversation was focused only on running a classroom, Allison then planned to engage her mentee, Goldy, in extended conversation about student learning. This strategic shift from running a classroom to student learning could then move Goldy's instructional practice. In subsequent meetings, Allison and Goldy focused on students' prior knowledge, which is an important teaching practice in order to meet the diverse learning needs of students.

Changes in practice leading to changes in teaching. Ultimately, perhaps without specifying the term *impact*, mentors spoke positively about the change that watching video had

on their planning practice. Throughout the study data, there were examples of changes in practice such as mentor language use, nonverbal communication, and use of strategic paraphrasing. Based on the change in mentor practice and the extended conversation between mentor and mentee, it may be suggested that mentors should continue to engage in these activities that deepen their practice. As in the example of Allison's change of planning practice, the increased focus on student learning may lead to improved teaching practices and support the mentee as she plans appropriate adjustments based on assessment of student learning.

Peer Feedback

Feedback is a critical component of adult learning theory (Costa & Garmston, 2002; Hall & Simeral, 2008; Hattie & Timperley, 2007; Shute, 2008). All of the data collection methods utilized in this study provided details on how video-aided peer feedback led to a change in mentor practice. Concurrently, there is evidence that the mentors and mentees were still eager for more feedback. Literature in the field of education has classified feedback in five categories: (a) corrective, (b) noncorrective, (c) general, (d) specific, and (e) positive (Van Diggelen et al., 2013). However, the mentors used the terms *honest* and *targeted* when requesting additional feedback.

Facilitating mentor professional development. Mentors indicated that peer feedback helped them to see their practice differently. Following peer feedback, Grace asked her mentee two facilitative learning questions (Leatham & Peterson, 2010) about goal setting and narrowing instructional focus. When mentors and mentees engage in conversations about these pedagogical decisions, the mentee can learn from the mentor's experiential knowledge. This particular change of practice is compelling for both the mentor and mentee in that the communication of rationale and professional reflection may contribute to a change in perspective or belief, leading

to further exploration. The development of inquiry-based reflection (Richter et al., 2013) has the potential to facilitate further development of high-impact teacher practice into the future.

Peer video and peer feedback also developed mentor perspective. For example, Sarah indicated that other people see things and focus on behaviors that she did not realize she was doing. One example of mentor behavior highlighted by the mentors was the use of strategic paraphrasing. This skill, presented during mentor training sessions in the fall, takes time and practice in order to implement effectively. During initial training, the mentors are exposed to the concept of paraphrasing and instructed on the use of various mediational stems. During the initial training session, the mentors practice with one another to begin developing this skill. Peer feedback facilitated mentor learning and supported expertise development by bringing varying mentor behaviors and perspectives to light during peer interactions.

Difficulty with honesty. The mentors indicated challenges as well as benefits with providing peer feedback. Mentors spoke at length of the positive comments they received from one another. At the same time, it was not always easy for the mentors to provide completely honest feedback to one another, even when they had the use of videos as a tool. Abbey admitted, "The most difficult thing is finding the rights words to say that won't hurt their feelings." Grace also discussed the challenge in giving someone corrective criticism. This challenge seems to be about maintaining relationships and protecting people's feelings. These mentor comments regarding the difficulty to provide feedback leads me to conclude that mentors were both challenged to provide honest feedback and challenged to improve when provided honest feedback by their peers.

The shortcoming of the mentor video experience was that the mentors were challenged in providing clear, honest feedback to other mentors. The challenge in providing honest feedback is important because it kept the mentors from either gaining increased perspective or influencing

greater skill development. Additional perspectives on their practice were limited to the extent that peers were either comfortable or not comfortable with providing feedback. Because all the mentors struggled to provide honest feedback, there continued to be an uneven experience forthe mentors. More should be done in relation to developing peer feedback knowledge and skills.

Given that both challenge and support are central to growth-focused relationships (Lipton & Wellman, 2009), there could be even greater change in mentor practice with improved feedback skills. Therefore, for mentors to improve their ability, mentors need to receive training in feedback and be provided opportunities to put honest yet caring feedback skills into practice.

Mentor Self-Reflection

When viewing their videos, mentors were initially self-aware and largely critical of their physical attributes. One observation of note from this study was how consistently the mentors indicated either embarrassment or discomfort with watching and listening to themselves. As I placed each mentor's experience in chronological order based on the phases of data collection, it became evident that despite their initial negative self-consciousness, the mentors were able to shift to increased awareness of their mentor behaviors.

Noticing mentor behaviors that contribute to learning-focused relationships. Very quickly, it seems, the mentors shifted awareness away from their physical selves and noticed their mentoring behaviors such as the questions they asked their mentees and the impact their behaviors had on their mentees. This self-observation (when the mentors were aware of their mentor behaviors) facilitated reflection on practice, and this reflection effected a change in mentor practice. One such change was that mentors engaged in strategic paraphrasing after viewing their own videos and receiving peer feedback. Other important elements of learning-focused relationships included the use of pausing, paraphrasing, and mediational questions. Strategic paraphrasing such as "so, you are concerned about your students' success"

communicates positive beliefs (Lipton & Wellman, 2003) and can lead to improved teaching practices such as analysis of student work.

Video reflection contributed to mentor awareness of discrete mentor behaviors such as questioning, listening, talking, and using wait time. While engaging in their work with mentees, physical mannerisms, such as head nodding, eye accessing, and body shifts, were important indicators of cognitive shifts. Attending to physical mannerisms is important in mentor development because as much as 65% of meaning is inferred from nonverbal components (Costa & Garmston, 2002). Video appears to impact mentor practice by providing empirical evidence on their "voices, body language, and interactions" (Koc, Peker, & Osmanoglu, 2009, p. 1159). Although the mentors had indicated previous experience with video for reflection, they approached the recording and watching of their video with some hesitation. Moving beyond their initial hesitation, awareness of nonverbal expressions sent positive signals to the mentee.

Summation of Results

The results of this study suggest that video can be an impactful tool for educative mentors in gaining perspective on their mentoring practices. Results of this study further indicate that peer feedback influenced a change in mentor practice. However, what seemed to matter most was the sense the mentors made of their experiences and the resultant actions they chose to take. Mentors developed this sense during reflection. For example, peer feedback about questioning did not directly affect mentor practice. Rather, peer feedback provided stimulus for the mentors to consider during reflection. From their peer observations and discussions and after reflection on their practice, the mentors changed their practice as they prepared to engage with their induction mentees.

As the findings of the study came together, I was struck by the importance of perspective and the analogy of a simple balance. The results of the current study indicate that video impacts

mentor practice through evidence-based reflection. The mentor's self-reflection is the fulcrum with mentor or peer video evidence placed on either side of the balance. If mentors avoid watching themselves or their peers are challenged to provide feedback, the balance of evidence is skewed, potentially limiting actionable evidence. While peer interaction and training support are important elements of mentor development, based on the importance of mentor self-reflection, it seems that mentors must bring with them some experience, propensity, or willingness to reflect. Otherwise, the balance is likely to be perpetually skewed, resulting in a disservice to new teachers and the students they teach.

Discussion of the Results in Relation to the Literature

Feiman-Nemser (1998) presented seminal work on the work of educative mentors and how teachers can be an important part of teacher education. Feiman-Nemser (2012) later suggested the use of careful processes to select and prepare mentor teachers. However, Feiman-Nemser's (2012) work has not yet addressed this level of detail on how mentors are selected and developed. Based on results from my study, it would be important to move forward with this line of investigation especially when considering that as Aspfors and Fransson (2015) stated, "While much is known about mentoring, relatively little is known about mentors' professional knowledge and needs and how their skills, and knowledge develop during mentor education" (p. 75). Deepening this understanding would support greater understanding of mentor self-reflection as a skill.

New professional development literature published since my study have continued to highlight the importance of active learning, coaching, feedback, and reflection. Darling-Hammond, Hyler, and Gardner (2017) stated, "Feedback and reflection both help teachers to thoughtfully move toward the expert visions of practice" (p. vi). The author's statement supports my findings that mentors enacted changes based on their own reflection without pressure from a

peer or supervisor. Based on the impact that self-reflection plays in mentor practice, it can be concluded that the teachers who are hired as mentors should be hired based, in some part, on their willingness to engage in self-reflection. When asked how we might determine mentor skill and depth of engagement in self-reflection, key California educators (personal communication, June 15, 2018) suggested surveys and observation notes as initial indicators.

Recent research on teacher noticing has been presented by Kleinknecht and Gröschner (2016) wherein their study findings showed that observing one's own videos is compelling for in-service teachers. The conclusion by Kleinknecht and Gröschner reflects my findings that video and feedback provide alternative perspectives to the mentors. Kleinknecht and Gröschner's evaluation of common language stems and exploration of the balance of positive comments is outside the scope of my study but may be considered when conducting future research. In the recommendation section I suggest the use of sentence frames as a tool for deepening mentors' ability to provide peer feedback.

In this study, I found that mentors had a change in practice when engaging in video-aided peer feedback, which is similar to research by Sherin and Russ (2014), Tripp and Rich (2012a), and Van Es (2012). These studies reported that video can be an important resource for teacher development. The researchers concluded that because video can be viewed repeatedly, it promotes different perspectives or "different lenses" (Sherin & Russ, 2014, p. 3) that can be applied while viewing. Although the setting of these previous studies is different from the setting for my case study of induction mentors, my findings point toward similar uses and suggest that mentors should continue to engage in video-aided peer feedback.

From this study, I learned that induction mentors made a change in practice when engaging in collaborative sessions that included peer feedback. Similarly, Bower-Phipps et al.

(2016) analyzed shared mentoring, wherein the mentors were mentoring preservice teachers; the mentors viewed reflection on mentoring as an important strategy in developing into more effective mentors. The findings from my study are congruent with the findings of this shared mentoring study. As Abbey shared during the focus group interview, "My favorite part of any of our trainings or meetings is always the collaboration; I want ideas from peers. I really look forward. I always walk away inspired." This suggests that mentors should continue to engage in video-aided peer feedback as an important strategy to develop mentor knowledge and expertise.

Limitations

As presented in Chapter 1, I considered several possible limitations at the outset of this study. In this section, I identify the details of the limitations. Along with such limitations, I also identify possible differences that could have strengthened the study.

At the outset, the primary limitation that I anticipated was the impact that I, as the researcher, would have on the study. As an active member of the educator preparation community with nearly 30 years of experience, I brought certain beliefs and philosophical assumptions to the research (Creswell, 2013). I had to first acknowledge that my consciousness would play a role in the interpretation of the interview data (Seidman, 2013). Employing self-reflexivity in the use of journals and analytic memos helped reduce my experiential bias. Subsequent researchers would likely need to engage in similar self-reflexive processes, although noting their experiences and biases would not be the same as mine.

An additional limitation of this study may have come from the mentors. The participants may have had concerns about how they would be judged during focus group interviews. While I was not the mentors' supervisor, there may have been a perception on their part of being judged or evaluated for ongoing consideration as a mentor. While no participants voiced such a

concern, this perception could have caused the participants to exaggerate or provide less than authentic responses. To mitigate effects, I attended carefully to the affect of the groups as mentors responded to my interview questions. I watched for visual and verbal clues of potential hesitance as they responded. While attending carefully to the cues, I saw an eagerness on the part of the mentors; they laughed and engaged with one another, seeming to enjoy time to talk with other mentors, to the point that the focus group interviews ran longer than the anticipated time. These behaviors led me to determine that their responses were authentic.

Another limitation may have been a result of study design, wherein I selected a manageable group of participants for inclusion in the study. Given the large geographic region of Southern California and the fact that all mentors were drawn from within one induction program, the participant numbers represented a small percentage of total mentoring, andteaching staff and may have represented limited experiences. However, this limitation was required to make the study feasible. When replicating this study, consideration may be given to expanding to other induction programs, which may reduce any impact resulting from limited teacher experience beyond the program's geographic boundaries.

Implications of the Results for Policy, Practice, and Theory

Mentoring during the induction phase for new teachers (in their first two years) is widely recognized as important for developing and retaining teachers in the field (American Institutes for Research, 2015). The findings of the study can provide the educational community with insights on how best to select mentors and facilitate the development of mentor expertise. Based upon the findings, several implications for practice and policy in the educator preparation community are presented. Within teacher induction, policy and practice are closely aligned to

licensure standards. Therefore, implications for policy are closely connected with implications for practice.

Policy

The California Commission on Teacher Credentialing (CCTC) should consider providing detailed policy suggestions to induction program sponsors. Currently, the induction standards require an induction program to provide "ongoing training and support for mentors that includes, but is not limited to: coaching and mentoring, support for individual mentoring challenges, reflection on mentoring practice, and opportunities to engage with mentoring peers in professional learning networks" (CCTC, 2015, p. 3). While the components of the standard are evident in the existing induction program, the CCTC and induction community should include more targeted suggestions on how best to develop mentor skills such as the use of video as instructional tool and video-aided reflection.

Second, the CCTC does not currently provide, either in common or program standards, guidance on the importance of reflection in selecting qualified persons to support the induction candidates' clinical experience. Common standards currently state, "Site-based supervisors are trained in supervision, oriented to the supervisory role, evaluated and recognized in a systematic manner" (CCTC, 2015, p. 3). The commission should highlight the importance of modeling self-reflection. The standards call for research-based practices but do not currently suggest best practices. This is where the link between policy and practice would be crucial to implementation of the standards.

Practice

Throughout this research study, participating mentors engaged in video-aided reflection. The results indicated the benefits of ongoing and participative training processes. Based on the

findings that mentors made a change in practice and the argument that induction mentors should continue to engage in these activities, it is suggested that induction programs consider prioritizing mentor self-reflection when budgeting and designing training activities. These considerations may include the resources and timing for such activities.

An important implication for programs is the need to continue refining the practice of mentor video reflection. This should include further support for mentor video reflection and expanded resources to analyze both program and participant outcomes. Based on the finding that changes in mentor practice varied based on video-aided self-reflection and the conclusion that mentors need a variety of opportunities to engage in reflection, it is recommended that induction program policy and practice expand the use of video as an instructional tool for educative mentors and provide multiple opportunities for mentors to engage in video-aided reflection.

States and induction programs could also provide technology-facilitated resources for professional learning and coaching. Given the expanded use of technology in education, one approach to improving the consistency of application of video-aided reflection might include establishing an induction resource portal. For example, programs could contribute to a free, curated online space. This space would contain direct mentoring strategies (e.g., noticing and wondering language) and/or brief overviews of research (Wang, Odell, & Schwille, 2008) and examples of different forms of mentoring to induct novice mentors into educative mentoring roles. Additionally, the needs of induction programs could then be supported with links to research and practice, something akin to Research Gate for induction. The induction community could then use these resources to provide ongoing access to mentors and program sponsors.

Based on the finding that mentors were challenged to provide feedback and that mentors need to improve their ability to provide feedback, it is recommended that induction programs

present mentors with initial training and materials on providing feedback and offer subsequent networking sessions. These sessions might include presentation of feedback frames and planned opportunities to practice with the frames. To strengthen the tie between reflection and feedback, coaches could record themselves during the training sessions and then use the video to reflect on and guide their planning.

Theory

At present, practitioners and policymakers engaged in the work of teacher induction cannot draw on a body of research for developing mentor reflection and feedback. While there may be parallels between mentor and teacher use of video for reflection and feedback, there might also be practices that diverge for new mentors and still other differences for experienced mentors. A differentiated professional development structure, based on mentor experience and needs, may be considered wherein collaborators develop and extend knowledge. Toward theory development, this study may contribute to the theories of expertise development and the relationship between cognition and a mentor's actions (Berliner, 1990; D. Clarke & Hollingsworth, 2002).

An apparent gap in theory is the importance of mentors' willingness or disposition to self-reflect. The results of the recent study by Beutel et al. (2017) highlighted the importance of a mentor's self-awareness. The Australian study indicated a dependency on quality mentors who were expected to model self-awareness and reflection. An implication from my study is the importance of reflective practices and how mentors should be expected to model reflection to their mentee.

Recommendations for Further Research

Exploration of video as a tool for mentor preparation holds significant potential for mentor development and induction programs that rely on educative mentors to support new in-

service teachers. Although the educational literature confirms video as a teaching tool, the literature on mentors using video for their own professional development remains underdeveloped. The present study adds to the body of research on the use of video and begins to develop the understanding of how video-aided reflection impacts mentor practice. The results of this study can contribute to the literature by providing a new conceptual framework for reflection and video use by educative mentors.

Future research in this area should be centered on the two key areas found to be impactful: reflection and feedback. This study yielded three areas the researcher believes would prove worthwhile for continued research: (a) duplication of the study, (b) considering mentor expertise, and (c) training protocols for feedback.

Duplication of This Study

This case study of five induction mentors explored the nature of video-aided reflection. Overall, the study affirmed that for these five mentors, video-aided reflection impacted mentor practice. The study findings also suggest that mentors were challenged when providing feedback. Future research in duplicating this study should expand the range of study participants to include a broader representation of teachers in California. One suggestion to expand the study design would be to create a targeted enrollment table with goals for inclusion of an even greater number of mentors and greater numbers of participants across all grade levels.

Different Levels of Mentor Expertise

There was variance in mentor expertise at the beginning of this study. Although all the mentors were experienced, with a minimum of at least four to five years of mentoring experience, their abilities and expertise were not the same. Because there are several characteristics that differentiate experts from novices (Persky & Robinson, 2017), further research may include a greater focus on the range of mentor expertise and range of self-

reflection experiences and include additional opportunities to analyze mentor behaviors. This future study might include more refined measures of initial and summative mentor practice and initial and summative measures of propensity to self-reflect. By establishing a more precise mentor assessment instrument, researchers would be able to capture reflections and observe mentor practice more accurately and disaggregate these data based on mentor expertise.

Differentiate Processes for Mentor Feedback

In developing future mentoring studies, researchers should delineate both the tools and training protocols for developing peer feedback, which is closely tied to the policy and practice recommendations I make. Creating studies that focus on this change in practice could be productive avenues for informing the development of mentor expertise. On the basis of the existing literature and the results of this study, I recommend that work in the field and research pay closer attention to the exchanges between mentors. I further recommend that future studies be aligned to any changes that the program enacts. Making the distinction explicit between the dual goals of support and collaborative self-development (Kemmis, Heikkinen, Fransson, Aspfors, & Edwards-Groves, 2014) could help inform practice and policy within the greater educator preparation community.

Conclusion

Teacher educators realize it takes many years to develop "sophisticated expertise" (Darling-Hammond & Bransford, 2005). In contrast to the studies on teacher development and the resultant understanding that teacher expertise takes years to develop, research on mentor professional development is still nascent. Although the educational literature confirms the importance of self-reflection for teachers, the research on the importance of self-reflection for mentors remains incomplete. The results of this study indicate a positive potential for implementing video-aided mentor reflection and video-aided peer feedback. From this study, it

appears that both video-aided reflection and video-aided peer feedback had a positive impact on mentor practice. However, because the change in mentor practice varied based on their self-reflection, experience and willingness to engage in self-reflection should be considered when hiring mentors. Once hired, mentors need a variety of opportunities to engage in video-aided reflection and peer feedback.

The results of this study indicate the promising nature of video-aided reflection and video-aided peer feedback for mentors, which work together to help mentors develop expertise. The complex and evolving environment of teaching presents a multiplicity of demands on teachers, which calls for continual professional growth for all educators (Darling-Hammond & Bransford, 2005). I am optimistic that collectively the education community can apply the implications of my study to enact video and self-reflection practices that create expanded professional development opportunities to improve mentor expertise and programming on behalf of induction mentees. In doing so, the teacher education community can create opportunities for mentor growth, thereby improving consistent mentor development to positively impact both mentor practice and improved mentee teaching practice.

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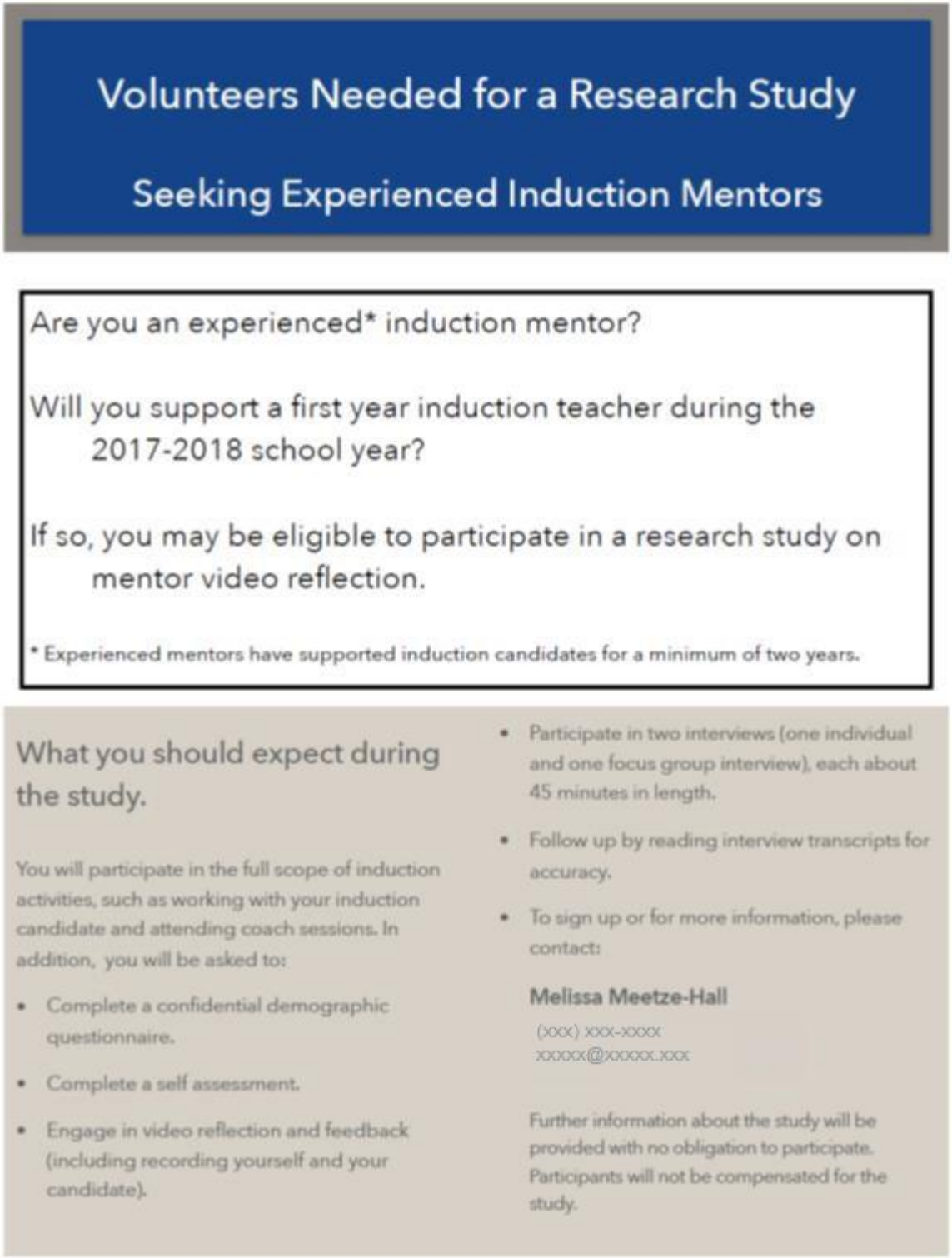
Appendix A: Mentor Recruitment Flyer



Volunteers Needed for a Research Study

Seeking Experienced Induction Mentors

Are you an experienced* induction mentor?

Will you support a first year induction teacher during the 2017-2018 school year?

If so, you may be eligible to participate in a research study on mentor video reflection.

* Experienced mentors have supported induction candidates for a minimum of two years.

What you should expect during the study.

You will participate in the full scope of induction activities, such as working with your induction candidate and attending coach sessions. In addition, you will be asked to:

- Complete a confidential demographic questionnaire.
- Complete a self assessment.
- Engage in video reflection and feedback (including recording yourself and your candidate).
- Participate in two interviews (one individual and one focus group interview), each about 45 minutes in length.
- Follow up by reading interview transcripts for accuracy.
- To sign up or for more information, please contact:

Melissa Meetze-Hall

(xxx) xxx-xxxx
xxxxx@xxxxx.xxx

Further information about the study will be provided with no obligation to participate. Participants will not be compensated for the study.

Appendix B: Introductory Letter to Mentors

October 11, 2017

Re: Potential Study Participation

Dear

Thank you for responding to the recruitment flyer and considering participating in a research study on mentors.

The first step of this study requires confirmation that I have permission to contact you. Following your agreement, I will send a link for the mentor demographic questionnaire. If you meet the study requirements (an experienced mentor working with a first-year teacher), you will be asked to sign a consent form.

The consent form will include the study purpose, risks, and your right to withdraw from the study at any time without penalty. The consent form also includes a list of the activities as part of the study and the estimated time to complete the study activities.

Your participation is greatly appreciated.

Melissa Meetze-Hall

Please email your response to: xxxxxxxx@xxxxx.xxx

____Yes, you may contact me.

My phone and email are:_____

____No, please take me off the list of potential participants

Appendix C: Mentor Demographic Questionnaire

Mentor Demographic Questionnaire August 2017

Your responses will remain confidential.

This first questions ask about you and your teaching and mentoring. The last questions ask about your use of video reflection.

1. What is your name?

2. What is your gender?

- ◯ Female
- ◯ Male
- ◯ Decline to state

3. What is your age?

4. What is your ethnicity? (Please select all that apply.)

- ☐ African American/Black
- ☐ Caucasian/White
- ☐ Hispanic or Latino
- ☐ Prefer not to answer

Other (please specify)

5. What is your teaching assignment for this year?

6. Including this year, how many years have you been teaching?

- ◯ 1-3
- ◯ 4
- ◯ 5 - 7
- ◯ 8 or more

1

7. Including this year, how many years have you been an induction mentor?

- ◯ 1-2
- ◯ 3
- ◯ 4 -5
- ◯ 6 or more

8. Please indicate your experience with video for teacher reflection.

- ◯ I have not used video of my teaching
- ◯ I have used video of my teaching

Comments:

9. Please indicate your experience with video for mentor reflection.

- ◯ I have not used video of myself mentoring
- ◯ I have used video of myself mentoring

Comments:

10. Would you be willing to be contacted for enrollment in the study?
*Please note, by indicating 'yes or 'not sure', you are giving the researcher permission to contact you

- ◯ Yes*
- ◯ Not sure*
- ◯ No

My phone and email address are:

2

Appendix D: Mentor Consent Form

Concordia University – Portland Institutional Review Board
Approved: October 10, 2017; will Expire: October 3, 2018

MENTOR CONSENT FORM

Research Study Title: Educating educative mentors: Video as instructional tool
Principal Investigator: Melissa Meetze-Hall
Research Institution: Concordia University-Portland
Faculty Advisor: James Therrell, PhD

Purpose:
The purpose of this study is to understand video-based reflection by induction mentors. I expect approximately seven mentor and mentee volunteers. Enrollment will begin on October 10, 2017 and will end on or before November 3, 2017. To be in the study, you will be asked to: complete a demographic questionnaire; complete a mentor self-assessment; video-record yourself while mentoring your mentee; provide feedback to a peer; and participate in an individual interview and group interview. Each interview will take approximately 45 minutes, and completing all of the activities should take less than 10 hours of your time. No one will be paid to be in the study.

Benefits:
There may be no direct benefits to you for participating in the study. The information you provide may help induction programs to support mentors in developing their practice. You could benefit this by providing your insights into mentor video reflection.

Risks:
There are no risks to participating in this study other than providing your information. However, I will protect your information by coding any identifying information you provide. I will record interviews. The recording will be transcribed by the investigator, and the recording will be deleted when the transcription is complete. In the transcription, we will use a code and not your name or any other personally identifiable information. The recording will be deleted as soon as possible; all other study documents will be kept secure for 3 years and then be destroyed.

Confidentiality:
The information that you provide in the study will be handled confidentially. Your information will be coded, and the list connecting your name to the code will be kept secure in a locked file in my office. When I look at the data none of the data will have your name or identifying information; only the code will be used to analyze the data. I will not identify you, your mentee, or your district in any publication or report. Your information will be kept private at all times and all study documents, including recordings, will be destroyed three years after the study concludes.
The only exception to this is if you tell me about abuse or neglect that makes me seriously concerned for your immediate health and safety.

Right to Withdraw:

This study is not required and there is no penalty for not participating or withdrawing. However, your participation is greatly appreciated. You may skip any interview or focus group questions you do not wish to answer. If you withdraw from the study you need to contact me if you want to retract your data.

Contact Information:

You will receive a copy of this consent form for your records. If you have questions you can talk to or write the principal investigator, Melissa Meetze-Hall, via email at xxxxx@xxxxx.xxx or phone (xxx) xxx-xxxx If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch

Your Statement of Consent:

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

Participant Name	Date
Participant Signature	Date
Melissa Meetze-Hall Investigator Name	Date
Investigator Signature	Date

Investigator: Melissa Meetze-Hall email: xxxxx@xxxxx.xxx
c/o: Professor James Therrell, PhD
Concordia University – Portland
2811 NE Holman Street
Portland, Oregon 97221

Appendix E: Introductory Letter to Mentees

Date

Re: Potential Study Participation

Dear

Thank you for considering participating in a research study on mentors.

The first step of this study includes providing you with a consent form and confirming that I have permission to contact you.

The consent form is attached and includes the purpose, risks, and your right to withdraw from the study at any time without penalty. The consent form also includes a list of the activities as part of the study and the estimated time to complete the study activities.

As a mentee, your first activity will include a video reflection with your mentor. This video activity will be followed by a focus group session. During the focus group session, I will ask you for some basic demographic information and we'll discuss your induction experience.

Your participation is greatly appreciated.

Melissa Meetze-Hall

Please e-mail your response to: xxxxx@xxxxx.xxx

____Yes, you may contact me.

My phone and e-mail are:_____

____No, please take me off the list of participants

Appendix F: Mentee Consent Form

Concordia University – Portland Institutional Review Board
Approved: October 10, 2017; will Expire: October 3, 2018

MENTEE CONSENT FORM

Research Study Title: Educating educative mentors: Video as instructional tool
Principal Investigator: Melissa Meetze-Hall
Research Institution: Concordia University-Portland
Faculty Advisor: James Therrell, PhD

Purpose:
The purpose of this study is to understand video-based reflection by induction mentors. I expect approximately seven mentor and mentee volunteers. Enrollment will begin on October 10, 2017 and will end on or before November 3, 2017. To be a participant in the study, you will be asked to: be video-recorded while being mentored, and participate in a focus group interview. The interview will take approximately 45 minutes, and completing all of the activities should take less than three hours of your time. No one will be paid to be in the study.

Benefits:
There may be no direct benefits to you for participating in the study. The information you provide may help induction programs to support mentors in developing their practice. You could contribute to the field of knowledge by providing your insights into mentor video reflection.

Risks:
There are no risks to participating in this study other than providing your information. However, I will protect your information by coding any identifying information you provide. I will record interviews. The recording will be transcribed by the investigator, and the recording will be deleted when the transcription is complete. In the transcription, we will use a code and not your name or any other personally identifiable information. The recording will be deleted as soon as possible; all other study documents will be kept secure for 3 years and then be destroyed.

Confidentiality:
The information that you provide in the study will be handled confidentially. Your information will be coded, and the list connecting your name to the code will be kept secure in a locked file in my office. When I look at the data none of the data will have your name or identifying information; only the code will be used to analyze the data. I will not identify you, your mentor, or your district in any publication or report. Your information will be kept private at all times and all study documents, including recordings, will be destroyed three years after the study concludes.
The only exception to this is if you tell me about abuse or neglect that makes me seriously concerned for your immediate health and safety.

Concordia University – Portland Institutional Review Board
Approved: October 10, 2017; will Expire: October 3, 2018

Right to Withdraw:
This study is not required and there is no penalty for not participating or withdrawing. However, your participation is greatly appreciated. You may skip any interview or focus group questions you do not wish to answer. If you withdraw from the study you need to contact me to retract your data.

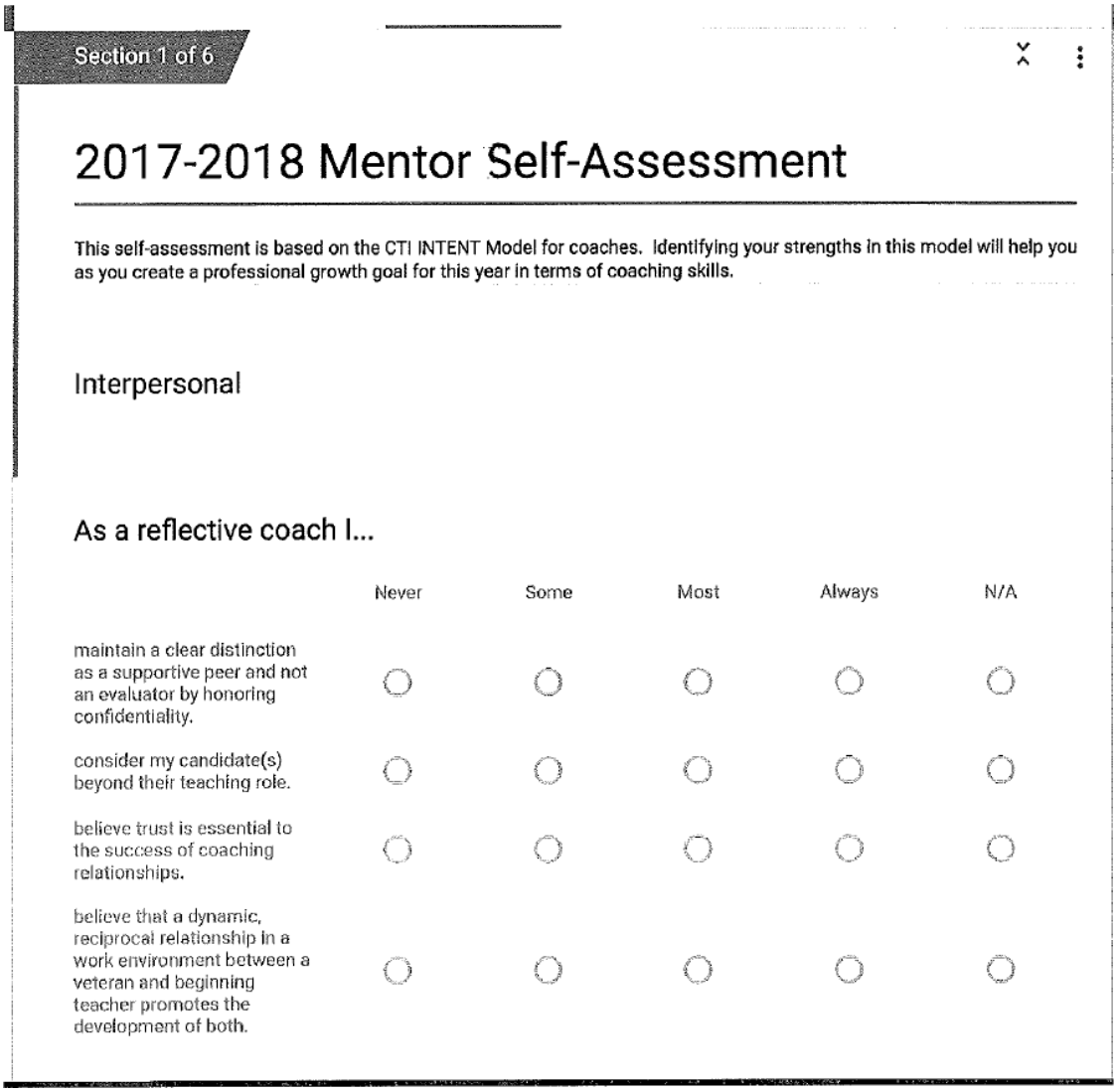
Contact Information:
You will receive a copy of this consent form for your records. If you have questions you can talk to or write the principal investigator, Melissa Meetze-Hall, via email at xxxxx@xxxxx.xxx or phone(xxx) xxx-xxxx If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. OraLee Branch

Your Statement of Consent:
I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

Participant Name	Date
Participant Signature	Date
Melissa Meetze-Hall Investigator Name	Date
Investigator Signature	Date

Investigator: Melissa Meetze-Hall email: xxxxx@xxxxx.xxx
c/o: Professor James Therrell, PhD
Concordia University – Portland
2811 NE Holman Street
Portland, Oregon 97221

Appendix G: 2017-2018 Mentor Self-Assessment



Section 1 of 6

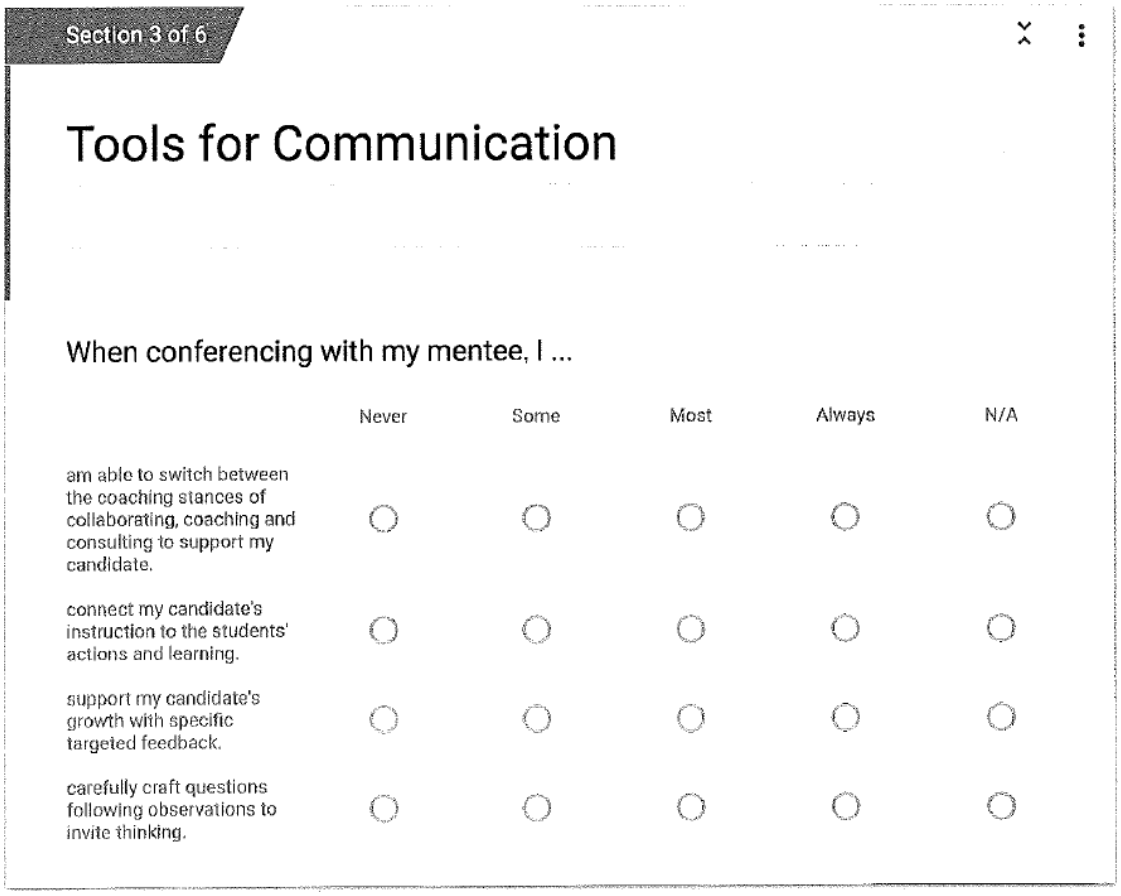
2017-2018 Mentor Self-Assessment

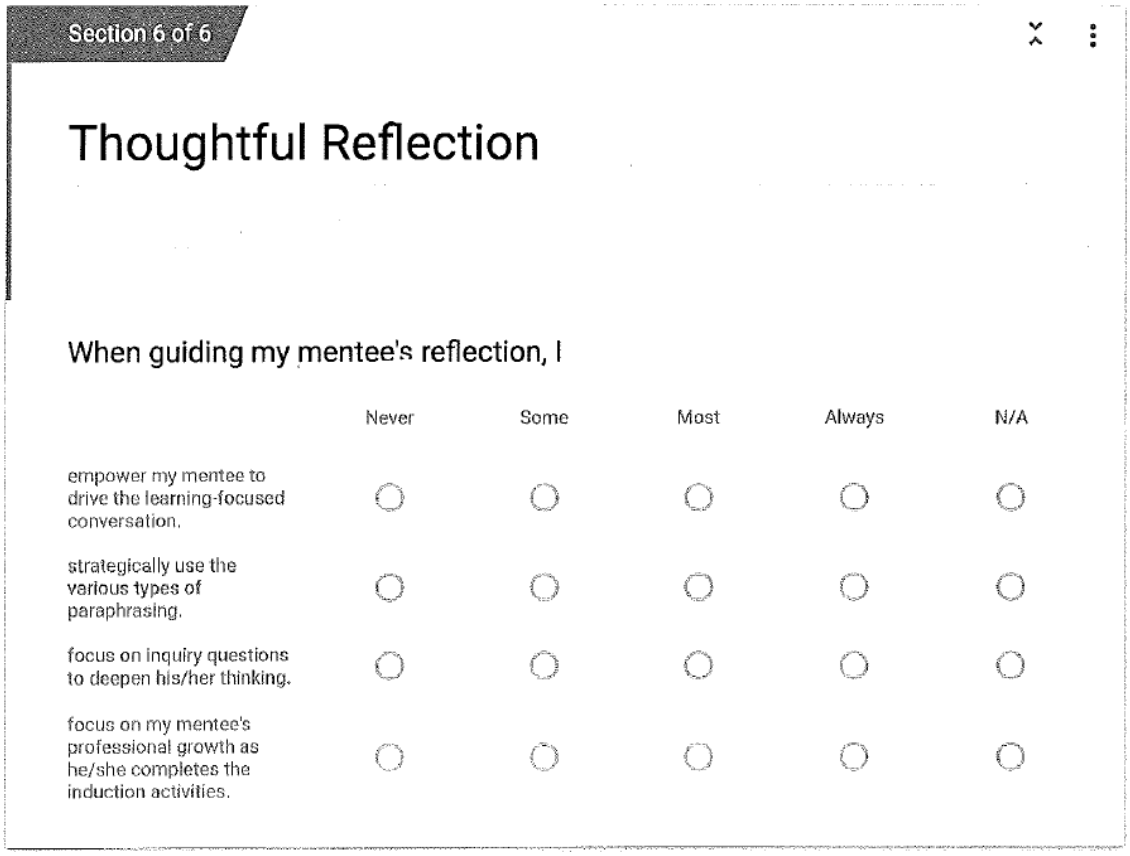
This self-assessment is based on the CTI INTENT Model for coaches. Identifying your strengths in this model will help you as you create a professional growth goal for this year in terms of coaching skills.

Interpersonal

As a reflective coach I...

	Never	Some	Most	Always	N/A
maintain a clear distinction as a supportive peer and not an evaluator by honoring confidentiality.	○	○	○	○	○
consider my candidate(s) beyond their teaching role.	○	○	○	○	○
believe trust is essential to the success of coaching relationships.	○	○	○	○	○
believe that a dynamic, reciprocal relationship in a work environment between a veteran and beginning teacher promotes the development of both.	○	○	○	○	○


Section 3 of 6
Tools for Communication
When conferencing with my mentee, I ...
Never
Some
Most
Always
N/A
am able to switch between the coaching stances of collaborating, coaching and consulting to support my candidate.
connect my candidate's instruction to the students' actions and learning.
support my candidate's growth with specific targeted feedback.
carefully craft questions following observations to invite thinking.


Section 6 of 6
Thoughtful Reflection
When guiding my mentee's reflection, I
Never
Some
Most
Always
N/A
empower my mentee to drive the learning-focused conversation.
strategically use the various types of paraphrasing.
focus on inquiry questions to deepen his/her thinking.
focus on my mentee's professional growth as he/she completes the induction activities.

Appendix H: Mentor Video Observation Phase 1—Before Training

Name: Date:

Step 1: Watch your video of yourself mentoring.
Consider the following:

- Attending fully
- Reflective conversation skills
- Invitation to thinking
- Questioning to focus thinking

Observation Notes:

Step 2: Reflect on your practice.
What do you notice in the video about your mentoring practice?

Which questioning strategies did you use most effectively?

What are some ways you focused your mentees' thinking?

Step 3: Bring your video and this completed reflection to mentor training.

Appendix I: Partner Feedback and Implementation Plan Phase 2

Name: Date:

Step 1: Trade videos and watch your partner's mentoring video. Provide feedback in the comment box below.
Consider the following:

- Attending fully
- Reflective conversation skills
- Invitation to thinking
- Questioning to focus thinking

Comments:

Step 2: Receive feedback from your peer.
What did your partner notice about your mentoring practice?

Step 3: Reflect on this partner experience.
How did the collaboration help you?

Step 4: Please respond to the following question by using the rating scale below.
I found the time to reflect and analyze my mentoring with a peer to be valuable.

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
(5)	(4)	(3)	(2)	(1)

Step 5: Based on video-aided reflection, move on to the next phase by writing your implementation plan.

Implementation Plan:
Based on my observation and discussion with a colleague, my next step(s) will be:
1. _____

2. _____

3. _____

Step 6: Now plan and engage in another video mentoring session.

Appendix J: Mentor Video Observation and Reflection Phase 3—After Training

Name: Date:

Step 1: Watch your second video of yourself mentoring.

Consider the following:

- Attending fully
- Reflective conversation skills
- Invitation to thinking
- Questioning to focus thinking

Observation Notes:

Step 2: Reflect on your practice.

What do you notice about the feedback you provide to your mentee?

What are some examples of your questioning techniques?

To what extent were you able to enact your implementation plan?

Step 3: Finish this cycle by completing the mentor self-assessment form within eConnect system (this is the same form as you completed earlier in the school year).

Appendix K: Mentor Semistructured Interview

As of August 2017

I. Welcome and Assurances

Thank you for agreeing to be part of this study and for making the time for this interview. As indicated in the appointment request, this should take about 30 minutes. Please be assured that your answers will remain confidential. My role is to capture your responses thoroughly and accurately; therefore, I will be taking notes as you respond and may ask you to pause or repeat. As the researcher I alone will read and analyze the notes and all personal identifiers will be removed in the final report. Even though we may have engaged in conversations on the topics of video and mentoring, this semistructured format is in place so that there is a degree of consistency across all of the interviews.

The purpose of this interview is to gain understanding about your experience with video-aided reflection as a mentor. I am going to ask you a series of questions grouped around three areas: self-reflection, peer reflection, and your experience overall. Following the questions in these areas you will have an opportunity to provide any additional comments or ask questions. As we move along through the questions you may certainly ask for clarification of any questions and you may decline to answer a question.

Do you have any questions before we begin?

A. Self-Reflection

1. Tell me about the experience of viewing your video of yourself mentoring.
    - What did you notice about your practice?
    - What did you notice about your mentee's responses and actions?

B. Peer Reflection

2. Let's change the focus and explore the use of video with a peer.

- What did your partner notice about your mentor practice?
- What did you notice about your partner's mentor practice?
- What discussion followed after this feedback during the coach session?

C. Making Sense of the Experience

3. I am interested in your thoughts about the experience.

- How do you believe the sequence of using video has impacted your practice?
- Why might that be?
- How might the experience inform future practice for yourself or others?

II. Concluding Remarks

4. I want to thank you again for your time. Is there anything that you wish I hadasked about or something else you would like to add?

Appendix L: Member-Checking E-Mail to Interviewees

Date:

Re: Interview feedback

Dear

Thank you for your recent participation in a mentor interview. Attached is my analysis of the interview. As you review this analysis I ask that you look for topics that resonate with your experience and correct any errors. Your review of this analysis will help to increase the reliability of the study. Please use the form below to provide your feedback.

I am asking that your feedback be returned to me via email by **January 10, 2018**.

Response(s): Yes or No

_____ 1. Does this match your experience?

_____ 2. Do you want to change anything?

_____

_____

_____ 3. Do you want to add anything?

_____

_____

Thank you again for your participation and feedback.

Please email your responses to: xxxxxxxx@xxxxx.xxx

If I do not hear from you by **January 10, 2018** I will call to follow up.

Appendix M: Educative Mentor Focus Group Interview Questions

As of August 17, 2017

Interview Date: _____

1. Introductory remarks: purpose, confidentiality, expectations, opting out of questions
2. During your experience with video reflection how did the processes and steps work for you as mentors?
    a) What challenges did you encounter when trying to record yourselves?
    b) What was most helpful from watching your video?
    c) What were the challenges when providing feedback to a peer during a training session?
    d) What were your least helpful steps of video reflection?
3. What effect has this process had on your mentoring practice?
    a) What did you notice about your practice when you viewed your video?
    b) What did you notice about your partner's practice during the coach training session?
    c) How did the collaboration impact your practice?
    d) If you observed a change in your mentoring practice, what would support you further?
4. What effect or impact have you had on your mentee's practice as a result of your video use?
5. Based on the use of video, what facet of your mentor skill would you like to focus on in the future?

Appendix N: Mentee Focus Group Interview Questions

As of August 14, 2017

Interview Date:_____

1. Introductory remarks: purpose, confidentiality, expectations, opting out of questions
2. Please tell me about your school context.
    a) What is your classroom assignment like?
    b) What opportunities are available for collaboration (formal, informal, frequency)?
    c) When do you have opportunities to work on induction?
3. Please tell me about the observation by your mentor.
    a) How did your mentor help you with this process?
    b) What type of feedback did your mentor provide?
4. Tell me about your engagement in the inquiry cycles.
    a) In what ways has your mentor supported you?
    b) What do you wish you could have spent more time doing with your mentor?
5. Thinking about working with your mentor:
    a) What was most helpful?
    b) What was the least helpful?

Appendix O: Mentee Demographic Response Card

Date_____ Record #_____

Name_____

Age_____

Gender_____

Ethnicity_____

Grade/Subject_____

In case I need to clarify the interview transcript may I call or e-mail you?

_____Yes

My phone and email are: _____

_____

_____No

Appendix P: Mentor Language and Initial Codes

Initial Codes and resulting **themes** in bold	**Examples of Mentor Language** From documents, video observations, and interviews (including focus group sessions)
Notice/Noticing Recognize	• Try more consciously • Like practicing in front of a mirror • Recognize when I wasn't asking the types of questions that I needed to ask • I hate seeing myself of listening to myself, but once I… • I noticed I would ask her questions that would guide her thinking • I look scared • I was not prepared, digging through my bag • I noticed that I interrupted her • I look rushed
Aware/**Awareness** Conscientious	• I was hyper cognizant… • I sound like an idiot • It just made me more aware of what I was doing and think about it more • I was also very aware that I should let her have her piece… • I do think that when I video-tape myself, it makes me more aware. And when I don't tape myself… • I think it made me more aware of the types of questions • Made me more aware of the questions…
Listening/Active Listening	• I realized I listened a lot more than I talked • Like, right now, I'm listening, trying to be more intent • Conscientious of my questioning and listening strategies • The balance of talking and listening; I really need to work on • Listening to my mentee then enabled them to reflect on their practice rather than automatically telling them • I paraphrase something the candidate says, it gives us a chance to focus the discussion…
Talking	• My peer did a lot of talking • I didn't realize that because we were talking, I felt like it was five minutes long. It ended up being ten minutes

Questions	• Felt I did fairy well asking her questions… • She asked me if she… • Not to ask too many questions as opposed to giving advice • I was asking her pointed questions • So, I started with some questions… • I worked on questioning strategies (Sarah)
Wait time	• I didn't really have to worry about the pacing… • I was thinking that wait time would be…but there wasn't any wait time • I honestly think that my pace was fine, but I did…
Feedback	• Most of the discussion afterward was really kind of positive • I need honest feedback • One thing we said to one another was just give me some honest feedback • We got feedback from three people. It was informative to see things • The video gave me feedback • I believe my feedback was positive and answered their questions • My partner assured me that I was knowledgeable • My partner noticed that I clarified and paraphrased what was said
Challenges with **Feedback**	• It's really hard to give somebody corrective criticism when they are a peer • It's not always super comfortable • The most difficult thing is finding the right words to say that won't hurt their feelings
Perspective	• It's nice to get a different perspective • I'm realizing that other people felt the way I felt, I didn't realize that before • I like looking at what another coach is doing is beneficial
Reflection	• Find something to fix and areas to work on • I want to improve, be the best coach I can be • I realized a lot about myself • I realized that I probably should have had something written down • I've come a long way • I think it would be more productive to have us sit with somebody else, just to mix us up and get different perspective • I'm connecting everything to my own experience as opposed to listening and guiding • I completely agree with the two of you, it's something I personally need to work on

Impact	• Forcing myself to watch the video reminds me of what I need to do as a coach • It's interesting to get tips and to see what I like and what I don't like and apply those • It forces me to revisit where we need to go for the next time. • For planning purposes, I can decide how I could provide support • Going back forces you to think about the things you didn't get a chance to address • The next time I met with her I thought about the video and I made more of a conscious effort to reinforce what she was saying • Impacting mentee indirectly. Because my questions or listening strategies, I'm hearing more of what they aresaying • It makes me think about the questions I will ask, and where we are going to go in the conversation • It was good to see other styles – Let's do before and after to see growth (Grace) • I feel I was moderately able to implement my original plan. I came prepared with question stems

Appendix Q: Observation Form

Mentor_____Date_____Page___of ___

Time stamp	Who	Activity/Words/Actions	Code or theme

Appendix R: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

> **Statement of academic integrity.**
>
> As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.
>
> **Explanations:**
>
> ***What does "fraudulent" mean?***
>
> "Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.
>
> ***What is "unauthorized" assistance?***
>
> "Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:
>
> - Use of unauthorized notes or another's work during an online test
> - Use of unauthorized notes or personal assistance in an online exam setting
> - Inappropriate collaboration in preparation and/or completion of a project
> - Unauthorized solicitation of professional resources for the completion of the work.

Appendix R: Statement of Original Work (continued)

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University-Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*

Melissa Meetze-Hall

Digital Signature

Melissa Meetze-Hall

Name (Typed)

July 30, 2018

Date