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I, Laura L. Saylor, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Educational Studies.

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The Relationship Between Teacher Quality and Reflective Practice

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The Relationship Between Teacher Quality and Reflective Practice

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by

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ABSTRACT

This multiple case study examined the relationships between reflective practice and teacher quality as manifested by six early childhood educators. The researcher adopted the frameworks of the edTPA in considering teacher quality, and *The Survey of Reflective Practice* in considering reflective practice. A strong relationship was found between levels of reflective practice and teacher quality scores from the edTPA instrument. Teachers who were identified as highly reflective practitioners were found to have a high degree of overall teacher quality. For this group of teachers, teachers with more years of teaching experience and higher levels of education were more likely to be identified in the highest level of reflection and in teacher quality. Use of Spradley’s (1979) Universal Semantic Relationships revealed how the typologies of reflective practice and the typologies of teacher quality manifested themselves in the cases of each of the six participants. For all of the participants, that relationship can be described in terms of reflective practice as both a way to practice quality teaching and as an employed activity for doing so. More research is needed given the lack of studies that measure an existing relationship between the constructs. Considering the expanding role that reflective practice is playing in teacher preparation and development, research showing that reflective practice at the highest levels is significantly aligned with the highest levels of teacher quality can confirm this practice. Research into the use of the edTPA in professional development may lead to increases in teacher quality in every classroom.
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Chapter One: Introduction

The need to improve teacher quality and the need to understand the role of reflective practice in promoting teacher quality had been widely discussed in the educational literature. Darling-Hammond (2006) has defined teacher quality, first and foremost, as the understanding and nurturing of every child. Teacher quality is having the ability to design and manage classroom activities efficiently, communicate well, integrate technology, and reflect on one’s practice in order to grow as a professional (Darling-Hammond, 2006). Reflective practice for teachers has been defined in the literature as teachers’ knowledge, character, and abilities that stem from a reflective process of making decisions and solving problems (Larrivee, 2008).

Recommendations regarding teacher quality have included a call for early childhood educators to serve as educational guides who create stimulating, thought provoking, and effective learning environments where children learn in ways consistent with developmentally appropriate practices (National Association for the Education of Young Children, 2009). This guidance occurs before, during, and after active, multimodal, and engaging learning experiences that are designed to promote engagement and higher-level thinking related to learning objectives (Bredekamp & Copple, 2009). These recommendations require teachers to reflect on their practice in order to make appropriate adjustments to their learning environments at all stages of the instructional cycle (Stipek & Byler, 1997).
Teacher Quality and the edTPA

With the high degree of scrutiny regarding teacher evaluation, 34 states have adopted the edTPA, a teacher performance assessment tool, to ensure the pre-service teaching force is well-prepared upon entering the profession (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013). The edTPA is a pre-service assessment process that has been devised to measure teacher preparedness. In many states, this performance assessment is a high-stakes evaluation that leads to the ultimate decision of whether or not the teacher candidate will be granted licensure or certification. In partnership with experienced teachers and teacher educators, experienced Stanford University faculty members and researchers (including Linda Darling Hammond) developed this assessment process. Hammond asserts, “the assessment puts aside the tired arguments about which pathways to teaching are better and, instead, evaluates candidates on whether they can meet a common standard of effective practice” (Hammond, 2012a, p. 1). She further notes that “The Performance Assessment for California Teachers,” an earlier and very similar version of the edTPA, resulted in scores that have been “proven to predict the capacity of candidates to foster student achievement as beginning teachers” (p. 1).

The edTPA was designed to be a part of the determination of a teacher candidate’s readiness to enter the field. It is uniquely focused on the practice of teaching, moving beyond the typical standardized assessments that focus on specific content knowledge, human growth and development, and basic understandings of teaching (AACTE & Stanford Center for Assessment, Learning, and Equity, 2013). The edTPA is aligned with the Interstate Teacher Assessment and Support Consortium standards.
(InTASC) (Council of Chief State School Officers, 2011) and the Council for the Accreditation of Educator preparation standards (CAEP) (The National Council for Accreditation of Teacher Education, 2013). With its focus on practice, affiliation with educational leaders such as Linda Darling-Hammond, alignment with InTASC and CAEP standards, and wide participation, the edTPA could also be useful in evaluating the teaching quality of in-service teachers as their practice develops.

The edTPA contains a total of fifteen rubrics spread across three domains in the edTPA assessment instrument. Five are in the planning domain, five are in the instruction domain, and five are in the assessment domain. Each one of these rubrics contains a title and a guiding question for consideration. Furthermore, each rubric contains five levels of development:

1. Level one indicates that the teaching candidate is struggling and is not yet ready to teach.
2. Level two indicates that the candidate has achieved some skills but needs more practice and study to become a teacher.
3. Level three indicates that the teacher has reached an acceptable level to begin teaching.
4. Level four indicates that the teacher has a strong base of the necessary knowledge and skills to begin their teaching practice.
5. The highest level (level five) indicates the candidate is highly accomplished (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning and Equity, 2013).
The first rubric in the planning domain regards planning for the whole child. This rubric questions if the candidate’s planning supports the active and multimodal nature of young children’s development of language and literacy. The second rubric in this domain regards planning to support the varied learning needs of children and questions if the teaching candidate uses knowledge of the children to support their varied learning needs. The third rubric concerns the candidate’s use of the knowledge of children’s development to inform their teaching. It specifically probes the candidate’s use of the knowledge of children’s development to justify their instructional plans. The fourth rubric, concerning identifying and supporting language development, enquires how the candidate identifies and supports children’s vocabulary development. The fifth and final rubric in the planning domain pertains to the candidate’s planning assessments in monitoring and supporting children’s learning. This rubric questions how assessments are created or selected to monitor children’s active and multimodal development of language and literacy (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013).

The first of the five rubrics within the domain of instruction concerns the learning environment. It asks how the candidate demonstrates a positive learning environment that supports children’s engagement and learning. The second rubric centers on engaging children in learning. It asks how the candidate engages children in the active and multimodal nature of young children’s development of language and literacy. Third in this domain is a rubric that concerns the deepening of children’s learning. This rubric addresses how the candidate can elicit children’s responses to promote the active and multimodal development of their language and literacy. The next rubric concerns
subject-specific pedagogy. It questions the candidate’s use of interdisciplinary learning experiences that promote children’s development of language and literacy. The final rubric in the instructional domain is concerned with analyzing teacher effectiveness. This rubric explores the candidate’s use of evidence to evaluate and change teaching practices in order to meet the varied learning needs of the children (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013).

Assessment is the concluding domain of the edTPA. The first of the five rubrics addresses the analysis of children’s learning. The rubric questions how the candidate analyzes evidence of children’s learning, enquiring, for example, as to whether they use both quantitative and qualitative data. The second rubric in the assessment domain concerns the candidate’s providing of feedback in guiding learning. It questions what kind of feedback the candidate provides children with that is conducive to helping children to understand their own strengths and needs. The next rubric concerns analyzing children’s language development. It enquires as to the candidate’s analysis of children’s use of vocabulary as a means to develop an understanding of content. The final rubric of the assessment domain in the edTPA concerns using assessment to inform instruction. This rubric questions whether the candidate uses the analysis of what children know and are able to do to plan the next steps in their instruction (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013).
Reflective Practice & “The Survey of Reflective Practice”

In recent decades, researchers have sought data and evidence that demonstrate a connection between higher levels of reflection and teaching practices (Buczynski & Hansen, 2010; Craig, 2010). In an effort to develop, validate, and create an assessment tool of a teacher’s level of reflection, Barbara Larrivee (2008) researched meanings and understandings of reflective practice amongst leading scholars and experts. After analyzing the results and further surveying those professionals, she developed “The Survey of Reflective Practice” as a mechanism for determining the degree to which a teacher’s reflective practice is developing.

Statement of the Problem

Due to the clear relationship between teacher quality and student achievement, the improvement of teacher quality has been elevated to a top priority in educational policy at both the federal and state levels (Baker et al., 2010; Johnson, Kahle & Fargo, 2007; Lewis & Young; Marsh & Wohlstetter, 2013). One activity that is often thought of as highly connected to teacher quality is reflection on practice (Del Carlo et al., 2010; Furtado & Anderson, 2012; Hatton & Smith, 1995; Roberts, Crawford, & Hickmann, 2010). However, there is a dearth of research that exhibits a clear connection between the specific constructs of teacher quality and reflective practice. While there are a multitude of studies that indicate a positive impact of a course, experience, or program in which a reflective component is employed, there is a scarcity of studies that specifically examine an existing relationship between teacher quality and reflective practice in the absence of a program treatment. Despite this paucity, reflective practice in the arena of education is commonly and persistently recognized as a key component in promoting teacher quality.
in both teacher preparation programs and in professional development. This lack of studies is especially troubling in consideration of the increasingly significant role that reflective practices are playing in teacher preparation programs and professional development programs for educators. In light of the role they are playing in developing our country’s teaching force, a more in-depth examination of the relationship between these two constructs is needed. Instruments such as the edTPA and “The Survey of Reflective Practice” present valuable means of data acquisition to this end.

**Purpose of the Study and Research Questions**

The purpose of the present study was to examine the relationship between edTPA’s teacher quality levels and Larrivee’s levels of reflective practice. The study utilized the edTPA framework to evaluate teacher quality and the *Survey of Reflective Practice* to determine levels of reflective practice as a means of answering the following research question:

What is the relationship between the edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by the teaching practices of six teachers?

**Conceptual Framework**

Due to the link between teacher quality and reflective practice, several major organizations that are concerned with developing a teaching force of high quality have included reflection as a key component of their recommendations (Council of Chief State School Officers, 2011; National Board of Professional Teaching Standards, 2002; National Staff Development Council, 2011). Furthermore, this link has made practice of reflection as a significant part of teacher evaluation tools in independent teacher

Due to the scarcity of research available that has examined or connected teacher quality and reflective practice in the absence of the implementation of a course, workshop, or program, instruments have been developed to measure these constructs. Accordingly, the focus of this study is to look at the connection between teacher quality and reflective practice using the edTPA and The Survey of Reflective Practice.

The Survey of Reflective Practice operates as a framework for assisting and promoting the development of scaffolded strategies to facilitate meaningful and high-level reflective practices among teachers (Larrivee, 2008). Larrivee’s research led to the identification of four distinct levels of reflective practice (in order from lowest to highest):

1. **Pre-reflection:** interpreting teaching situations without thoughtful association to other contexts,
2. **Surface reflection:** examining teaching methods is limited to how best to achieve scripted objectives,
3. **Pedagogical reflection:** thinking constantly about how to improve teaching practices to make the best possible impact on students’ learning and,
4. **Critical reflection:** engaging in ongoing reflection and critical inquiry concerning teaching actions, as well as thinking processes, in a socially responsible way (Larrivee, 2008).
In the present study, the edTPA framework was used to measure teacher quality, and The Survey of Reflective Practice was used to measure reflective practice. After the data were collected and analyzed on the measurements of these two constructs, an examination of the relationship between two of them, as manifested in the practices of six early childhood teachers, was undertaken.

**Significance of the study**

Much of the research to date in the area of reflection for in-service teachers suggests that there may be evidence supporting the role of reflective practice in improving the quality of teaching. However, the majority of that literature simply reports the more qualitative outcomes of implementations of specific programs or protocols that utilized professional reflection activities with a small group of willing participants. Currently, there is a dearth of research that makes a connection or finds a relationship between routine levels of reflective practice and quality teaching. In consideration of how much reflection can improve practice, the nature and importance of teacher quality, and the complex (multi-level) nature of reflective practice, we need to know if a relationship between teachers’ levels of reflective practice and teacher quality exists and, if so, what this relationship suggests.

**Study Limitations**

The study is limited in its generalizability given the time, location, and selection of data collection. This study took place between August 2013 and November 2013. The study took place at an independent Montessori school in the greater Cincinnati area, and the study sample engaged teachers in early childhood education who were employed at the school and willing to participate in the study.
In addition, the following assumptions will be made in relation to this study:

1. All teachers responded honestly.
2. Observations took place during the instructional time, typical for that classroom.
3. The tools utilized were valid and reliable.
4. The researcher recognized her own biases.

**Definitions of Terms**

*Active nature of young children's learning*: “This refers to teaching practices for young children to promote learning through meaningful, relevant, and authentic experiences with materials and with people by doing and by having relationships following their own interests and curiosity, being able to make mistakes and learn from their mistakes, learning to control impulses and regulate their emotions, and through the model of adults” (Board of Trustees of the Leland Stanford Junior University, Stanford Center for Assessment, Learning and Equity [SCALE], & Pearson, 2012).

*Artifact*: “A document used or produced by a teacher candidate in planning instruction, during instruction, or as part of an assessment that will help edTPA assessors better understand the activity featured in an observation or written about in a response. This might include, but is not limited to, student work, a lesson plan(s), a unit plan, an assessment instrument, a rubric, task directions, assessment directions, etc.” (Board of Trustees of the Leland Stanford Junior University et al., 2012).

*Assessment (formal and informal)*: “Refers to all those activities undertaken by teachers and by their students that provide information to be used as feedback to modify teaching and learning activities” (Black & William, 1998). “Assessments provide evidence of children's prior knowledge, thinking, or learning in order to evaluate what
children understand and how they are thinking. Informal assessments may include, for example, student questions and responses during construction and teacher observations of children as they work. Formal assessments may include, for example, quizzes, homework assignments, journals, and projects” (Board of Trustees of the Leland Stanford Junior University et al., 2012).

**EdTPA.** The EdTPA is a pre-service assessment process designed by educators to determine if a teacher is ready to enter the field. “The edTPA includes a review of a teacher candidate's authentic teaching materials as the culmination of a teaching and learning process that documents and demonstrates each candidate's ability to effectively teach his/her subject matter to all students” (Board of Trustees of the Leland Stanford Junior University et al., 2012).

**Learning environment:** “The designed physical and emotional context established and maintained to support a positive and productive learning experience for young children” (Board of Trustees of the Leland Stanford Junior University et al., 2012).

**Learning experience:** “Includes activities, discussions, or other modes of participation that engage children to develop, practice, and apply skills and knowledge related to a specific learning goal.” (Board of Trustees of the Leland Stanford Junior University et al., 2012).

**Multimodal nature of young children's learning:** “Refers to teaching practices for young children that promote learning through the engagement of all their senses, utilizing varied approaches to learning and to demonstrating that learning” (Board of Trustees of the Leland Stanford Junior University et al., 2012).
Performance-based teacher evaluation: “An evaluation system that includes multiple measures of teacher performance and provides a range of evidence, demonstrating teacher knowledge and skills, related particularly to student achievement” (Shakman, Riordan, Sanchez, Cook, Fournier, Brett, & Regional Educational Laboratory Northeast & Islands (ED), 2012).

Reflective practice: “Practice refers to one’s repertoire of knowledge, dispositions, skills, and behaviors. The term reflective practice refers to the on-the-job performance resulting from using a reflective process for daily decision-making and problem-solving” (Larrivee, 2008).

Value Added: “A statistical method that helps educators measure the impact schools and teachers have on students’ academic progress rates from year to year” (Ohio Department of Education, 2013).

Organization of the Study

The document is organized into five chapters, as well as references and appendixes. Chapter 2 presents a review of associated literature regarding teacher quality and reflective practice. The literature for the two constructs is reviewed separately for two reasons: to frame the constructs as separately researched findings in the literature, and because combining the search terms would have resulted in too few studies, thus providing very little background for the study. Chapter 3 presents the research design and methodology of this study. This chapter also includes instruments utilized to gather qualitative and quantitative data, procedures, and information on setting and participants. Chapter 4 exhibits an analysis and merging of the data. Chapter 5 is comprised of a
summary, conclusions, and recommendations of this study. This study culminates with a list of references used and appendixes containing instruments and protocols.

**Concluding Remarks**

The impacts of reflective practice have been discussed as being essential in promoting teacher quality in both the preparation and the professional development of early childhood educators. More than two-thirds of the states have adopted the edTPA to determine if pre-service teachers at all teaching levels have the necessary practices to be effective teachers and to gain licensure. As a research based instrument, “The Survey of Reflective Practice”, serves as an aid in determining a teacher’s relative level of reflective practice. The conceptual frame of this study considered the use of these two instruments in order to find any possible relationships between the two constructs. The purpose of the study was to examine existing relationships between scores of teacher quality and levels of reflective practice, as manifested by six teachers. The research question was: What is the relationship between edTPA's teacher quality levels and Larrivee's level of reflective practice, as manifested by six teachers' practice? In thinking about how much reflection can improve practice, the significance of teacher quality, and the intricacies of reflective practice, there exists a need to understand the relationship between teachers’ levels of reflective practice and teacher quality. This study was conducted in the fall of 2013, with all willing early childhood teachers at an independent Montessori school in the greater Cincinnati area.
Chapter Two: Literature Review

This literature review is comprised of three sections. The first considers teacher quality and the evolution of performance-based assessments, with a specific focus on the edTPA. The second considers reflective practice in reference to effective teaching and prescribed levels of reflective practice. The third section considers the connections between the literature reviews on teacher quality and reflective practice.

A review of the literature: Teacher Quality and the edTPA

Due to the most significant predictor of student achievement being teacher quality (Darling Hammond, 2000; Seidel & Shavelson, 2007; Strong, Gargani, & Hacifazlioglu, 2011), there has been increased pressure to accurately evaluate teaching performance. This has resulted in the development of evaluation protocols that help to identify performance-based indicators and determination of quality (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning and Equity, 2013; Danielson, 2007; Ohio, 2007; Responsive Classroom, 2012). With this increased focus, more than two-thirds of the states have adopted the edTPA, a pre-service performance-based assessment process devised to determine teachers’ readiness (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013) that aligns with the Interstate Teacher Assessment and Support Consortium standards (InTASC) (Council of Chief State School Officers, 2011) and the National Council for Accreditation of Teacher Education standards (NCATE) (The National Council for Accreditation of Teacher Education, 2013). Linda Darling-Hammond led the development of the edTPA, with cooperation from experienced teachers, teacher educators and Stanford University faculty and
researchers. The edTPA has the potential to be useful in evaluating and developing teaching quality.

**Purpose**

This literature review seeks to explore need for a performance-based assessment, a similar and older performance-based assessment for practicing teachers, and the early research and variable implications regarding the edTPA and its earlier versions as the newest teacher performance assessments. Assumptions made in this review include accepting quality teaching as a multi-dimensional and socially constructed reality and outside of the circumstances of pure positivism. Teaching quality in this review is thought of in consideration of Linda Darling-Hammond’s (2006) description of what good teachers do:

> Teachers also need to understand the person, the spirit, of every child and find a way to nurture that spirit. And they need the skills to construct and manage classroom activities efficiently, communicate well, use technology, and reflect on their practice to learn from and improve it continually (p. 300).

**Search Strategy**

The theme of performance-based assessments for teachers was the focus of this literature review. Studies found in peer-reviewed, scholarly journals in the past two decades were the primary basis of this review. This span of years is repeated in the literature review on reflective practice. Included studies and articles were written in the English language and published in the United States.

For the initial search, numerous electronic search engines were used. These include: Academic Research Complete, Education Research Complete, ERIC, JStor,
OhioLINK Electronic Journal Center, Professional Development Collection, and ProQuest Research Library. Additional searches were conducted on Google Scholar. Terms used in the search included: edTPA, TPA, PACT, performance-based assessments, preservice teachers, and Linda Darling Hammond. Terms were used singularly and in combinations appropriate to the search. Furthermore, the author is subscribed to a journal in which a significant portion of its summer 2013 issue was dedicated to articles concerning the edTPA. This volume of the journal is not yet available through electronic search engines, but was included in the review due to its relevance and timeliness. Lastly, the references cited in each of the suitable articles were further investigated to identify other literature important to this review. Conditions for inclusion in the review were that the studies contained research or meaningful contributions regarding one of the following: edTPA, PACT, teacher performance assessments, performance-based assessments, value added, or pre-service teachers. These criteria were applied to the abstracts of each article and, if needed, to the entire article. In total, 23 studies were found to meet inclusion requirements. Although search criteria were inclusive of publications from the last two decades, the earliest scholarly literature that met the criteria was published in 2000. These articles were methodically analyzed to determine their relative significance to the review of the literature. Exploring and examining the literature concerning the need for performance-based assessments in education, an existing and similar performance-based assessment for practicing teachers, and the early research and variable implications regarding the edTPA and its earlier versions as the newest teacher performance assessments, may support the work of in-service teachers, teacher educators, researchers, and professional developers. For the purposes of this
study, this review will provide an understanding of the research on teacher quality and the edTPA. This understanding, when juxtaposed with reflective practice, will provide an understating of the degree and manner to which the two constructs are related. Those in teacher education programs and in the development of in-service teachers might use this information to promote the habit of reflection. Researchers might use this review as a launching point for further and, more specifically, guided research. Following the review of the literature; the importance and implications of the findings will be discussed.

**Discussion**

**The Need for Performance-Based Assessments.** Over the past few years, there has been recognition that existing measures of teacher quality were seriously flawed and that more accurate and valid measures were needed in order to ensure that each classroom has a well-prepared teacher (Baker et al., 2010; Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2012; Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, National Academy of Education, & American Educational Research Association (AERA), 2011).

One such existing measure is the use of value-added data as a measure of teacher quality. Experts on this data agree that student test scores and value added measures alone are not reliable or valid indicators of teacher quality (Baker et al., 2010; Darling-Hammond et al., 2011). These measures are not sufficient due to superficiality, breadth of coverage, and overall design of standardized tests, as well as the diversity of classroom populations and unequal assignment of students in those classroom populations (Baker et al., 2010). Further issues with using the value added measure for determining an
individual teacher’s quality are that they do not consider influences outside of teacher quality. Such influences include:

- “class sizes, curriculum materials, instructional time, availability of specialists and tutors, and resources for learning;
- home and community supports or challenges;
- individual student needs and abilities, health, and attendance; peer culture and achievement; prior teachers and schooling, as well as other current teachers;
- differential summer learning loss, which especially affects low-income children;
- and the specific tests used, which emphasize some kinds of learning and not others, and which rarely measure achievement that is well above or below grade level” (Darling-Hammond et al., 2011).

In her 2008 study regarding concerns about the methodology of value-added assessments, Amrein-Beardsley explored and found significant issues with the inadequacy of validity studies, the difficulties with practitioner use and application of the value added model, the scarcity of external reviews, and further methodological concerns with missing data, regression to the mean, and variables regarding student demographical data.

Perhaps most telling in considering the lack of validity in these studies is that teachers’ ratings vary significantly from year to year, even when they reported no substantive changes in their practice. One teacher said:

‘I do what I do every year. I teach the way I teach every year. [My] first year got me pats on the back. [My] second year got me kicked in the backside. And for
year three my scores were off the charts. I got a huge bonus, and now I am in the top quartile of all the English teachers. What did I do differently? I have no clue’ (Amrein-Beardsley & Collins, 2012).

Researchers have also found that gains in value added scores for teachers are unlikely in newly transitioned English language learner (ELL) or special education classrooms, and that teachers of gifted programs tend to show very small gains in value added scores due to a ceiling effect, which results in students having little room to advance in test scores (Darling-Hammond, Amrein--Beardsley, Haertel, & Rothstein, 2012). A teacher who moved to an ELL transition classroom reported:

‘I went to a transition classroom, and now there’s a red flag next to my name. I guess now I’m an ineffective teacher? I keep getting letters from the district, saying “You’ve been recognized as an outstanding teacher” . . .this, this, and that. But now because I teach English language learners who “transition in,” my scores drop? And I get a flag next to my name for not teaching them well?’ (Amrein-Beardsley & Collins, 2012).

In fact, these value added measures were not designed to measure the quality of an individual’s teaching. Instead, they were designed to study relative gains in student achievement through the use of statistical methods that would identify changes in larger populations of student scores as a whole from year to year, while accounting for student characteristics and other influences on achievement not attributed to teacher quality (Darling-Hammond et al., 2011). Further, these assessments are valuable for considering groups of teachers and how their practices impact a larger number of students. These more holistic considerations are made in larger scales and, therefore, reduce the errors
that come from non-teacher influenced variables, making them more valuable in considering effective teaching strategies and practices on a larger scale (Darling-Hammond et al., 2011).

The National Board for Professional Teaching Standards pioneered the development of professional standards, which are essential to proficient teaching, in order to conduct evaluations for in-service, veteran teachers (Darling-Hammond et al., 2011). These standards were then translated into rubrics and ratings for performance-based assessments. Due to the fact they are performance-based assessments, they often include samples and evidence of student work and of teacher practices derived from observations, video, artifacts, and written teacher reflection (Darling-Hammond et al., 2011). Existing and well-utilized performance-based assessments of teachers included in the Performance Assessment for California Teachers and The National Board Certification process have been identified as predictors of teacher quality, as measured by the proper and valid use of value-added measures (Baker et al., 2010).

A Decade-Old Performance-Based Assessment for Practicing Teachers. As mentioned above, the national board certification process has been found to be a predictor of teacher quality (Baker et al., 2010). As early as 2001, The National Board For Professional Teaching Standards surveyed participants and found that “they considered the National Board certification processes an excellent professional development experience” (p. 3). Further, participants believed the activities of the process that encouraged reflection and innovative strategies positively affected the quality of their teaching. They also reported that the certification process positively affected students, with nearly 70 percent of participants reporting “positive changes in their students'
engagement, achievement, and motivation” (National Board for Professional Teaching Standards, 2001, p. 4). In a 2004 study in Arizona, researchers found that supervisors considered board certified elementary teachers as superior and that their students’ achievement scores showed significantly more gains over the course of a year than their colleagues without national board certification (Vandevoort, Amrein-Beardsley, & Berliner, 2004).

The Early Research and Variable Implications Regarding Teacher Performance Assessments. One of the earliest teacher performance assessments related to the development of the edTPA is The Performance Assessment for California Teachers (PACT). It was developed in response to a state mandate that required teacher preparation programs to use performance assessments as one of the measures in making determinations regarding licensure. Pecheone and Chung (2006) explored the results from the first two pilot years of this assessment’s implementation. The data from the study suggested that the PACT performance assessment is a valid measure of individual teacher quality for the purpose of recommending teacher certification and, further, that teacher education programs should use this powerful instrument to guide learning and advance programs.

By 2013, this assessment came to be viewed as an authentic evaluation instrument for determining a preservice teacher’s ability in planning, instruction, assessment, and reflection. A study that same year found that PACT scores of preservice teaching candidates are “significant predictors of their later teaching effectiveness as measured by their students’ achievement gains in both English language arts (ELA) and mathematics” (Darling-Hammond, Newton, & Wei, 2013). As in other performance-based
assessments, teachers who completed this assessment reported that the process extended their teaching knowledge and skills. This feeling of accomplishment was strengthened when teachers were embedded in supportive teacher education programs (Darling-Hammond et al., 2013).

With the focus on performance assessment, one might wonder: How do university supervisors’ observations compare with performance assessments of preservice teachers? Interestingly, a 2011 study found that the two types of assessment did not correspond with each other due to the differences in responsibilities of the university supervisors and the assessment scorers (Sandholtz & Shea, 2011). While the researchers indicated that summative assessments of university supervisors showed less discrimination among preservice teacher candidates than the performance-based ones, they also asserted that the assessments of university supervisors should be only be lessened and certainly not eliminated entirely (Sandholtz & Shea, 2011).

Additionally, there are concerns that the use of these types of high stakes assessments (i.e., required to gain entry into the field) have resulted in preservice teachers focusing on jumping through the proverbial hoops of licensure attainment rather than engaging in “authentic intellectual engagement” (Rennert-Ariev, 2008). Many of those closest to the lived experiences of preservice teachers report that the high stakes nature of the assessment takes away from its inherent value, as the practical goal of passing the test trumps the goal of being immersed in scholarly understanding of the assessment’s content (Rennert-Ariev, 2008).

The edTPA, while having been adopted by 34 states, is still in its infancy; according to some policy makers, it will be years until we can realistically consider its
validity and reliability (Lewis & Young, 2013). However, this has not stopped higher-
education professionals, policymakers, or other experts from espousing important
thoughts, questions, experiences, and theories about this evaluative instrument of teacher
performance.

Some of the early research indicates that caution is warranted in considering
edTPA as definitive means of determining teacher quality. As an informant in Lewis
and Young’s (2013) study explains,

We have not seen any correlation between performance on the edTPA and student
achievement. You want to have teachers who perform well on the Ed-TPA, they
are also teachers who you could show later down the road have by and large
greater gains for students. . . . We haven’t seen exactly how various states are
going to set cut scores for this assessment. . . . Like any other kind of assessment,
it ultimately depends on what is defined as passing. Just like any other licensure
test, those are decisions left to states, but there is certainly the question of what do
various cut scores mean in terms of relationship to student achievement? . . . If on
a four-point scale you need a 1 on the edTPA, and 99% of teachers who go
through teacher preparation in a state get a 1, then you say why are we imposing
this assessment if we are going to set it at such a point that everyone passes
anyway? (pp. 205–206).

This informant echoes long-standing concerns with high-stakes performance-based
assessments and speaks to the concerns of many in the field.

These concerns are echoed in another early qualitative study reporting on the
experiences of student teachers, university supervisors, and mentor teachers during a pilot
study in Washington State. Findings in the study revealed that there are benefits to the piloted TPA, such as increases in reflective practices for preservice teachers, and improved student responsibility in analyzing instruction (Margolis & Doring, 2013). Nevertheless, the study also found indications that the “TPA is trying to do too much too soon—with several aspects of the TPA being developmentally inappropriate and implausible within the context of student teaching. With too many requirements and not enough supports, student teachers are in danger of being positioned beyond ‘the tipping point’” (Margolis & Doring, 2013, p. 272). This concern has been repeated in other studies and pieces that give a voice to student teachers (Hanby et al., 2011; Pecheone & Chung, 2006; Okhremtchouk, Seiki, Gilliland, Ateh, Wallace, & Kato, 2009). An additional consideration is that, at a time when our schools are becoming increasingly diverse, our teaching force is unchanging. This mismatch, which has brought forth the need for more teachers to learn culturally-relevant pedagogies, is left unattended by the edTPA (Madeloni & Gorlewski, 2013).

This reported mismatch in culturally relevant pedagogy is not consistently reported in the literature. In fact, in a 2009 study of the Performance Assessment of California Teachers (PACT), findings indicated quite the opposite. Preservice teacher candidates have been found to be able to clearly articulate a wide variety of understandings and instructional supports in consideration of English language learners in their dialogues surrounding the domains of planning, instruction, and assessment (Bunch, Aguirre, & Tellez, 2009). As these researchers analyzed the responses of their sample of eight preservice teaching candidates, they found that requiring candidates to participate in the state’s comprehensive preservice teacher assessment did not result in any sacrifice of
authentic reflection regarding their own developing instruction or understanding of the needs of English-language learners (Bunch, et al., 2009).

In addition to complementing teacher candidates’ ability to articulate and reflection on their developing practice and the needs of English language learners, researchers have found that performance assessments for preservice teachers can be used as a formative assessment instrument to record and examine the progress of preservice candidates and to pinpoint their individual areas of needed growth (Bunch, et al., 2009; Kornfeld, Grady, Marker, & Ruddell, 2007). Faculties in teacher education programs have already altered their practice and increased their use of academic language, which reflects a degree of compliance with performance assessment goals and criteria (Kornfeld et al., 2007).

Informed by years of research, Linda Darling-Hammond asserts that in order to achieve real reform in our schools, we will need highly skilled teachers in every classroom as the expectations for schools rise along with the diversity of our students (Darling-Hammond, 2012b). Darling-Hammond reports that the field-tests of the edTPA in some Ohio and Tennessee universities have resulted in overwhelmingly positive responses, including that the assessment has led to improved conversations about instructional practices. At Vanderbilt University, for example:

. . . early work with the TPA revealed that candidates were having difficulty analyzing student work and giving students usable feedback. In response, [the] Vanderbilt teacher education faculty revised coursework and field assignments to provide more opportunities for such practice (Darling-Hammond, 2012b, p. 12).
She argues that these positive experiences may greatly improve teacher quality by affording candidates the opportunity to experience truly formative assessments that will aid them in their growth. She considers the edTPA as “rigorous and authentic” and representative of “a responsible professionalization of teacher preparation” (Darling-Hammond, 2012a, p.12). She considers this move critical in thoroughly preparing candidate teachers for the challenges of teaching. She posits that if we can greatly improve teacher education in the United States of America, then our country may be able to parallel the success of the Finnish education system, that being a system that has fared extremely well in international rankings due to its establishment of comprehensively rigorous and robust teacher education (Darling-Hammond, 2012b).

Implications for Future Research

The subject of performance assessment for teachers in regard to its need and to an existing and similar performance-based assessment for practicing teachers, as well as the early research and variable implications regarding the edTPA, is widely found in the literature. However, there are yet to be any studies that quantifiably explore the effects of the edTPA on teacher quality, mainly as a result of the instrument’s relative newness to the field. As the instrument becomes more widely used and data is acquired, it is likely that studies exploring the instrument’s impact on teaching quality and resulting student achievement will become available.

Additionally, the current literature includes several qualitative studies with data on the lived experiences of those closest to teacher performance assessments: pre-service teachers and higher education faculties involved with teacher preparation. Those studies reveal mixed results, with data that espouses an appreciation for what the assessment has
done in positively influencing an increase in rigor in teacher preparation, and those that express frustration with the high-stakes standardized measure that detracts from scholarly discussions and authentic inquiry in teacher preparation.

As more and more states – and, thus, more and more teacher education programs – adopt the edTPA, future research will need to ask questions that may resolve the conflicting results of these early qualitative findings. Additional qualitative questions will soon have an opportunity to be posed to practicing teachers who can reflect back on their experience with the edTPA and what effect it had on their preparation for teaching and their pursuant professional growth. Further, as large-scale quantitative data on student achievement becomes available, researchers will be able to explore the effects of teacher preparation guided by the edTPA on student achievement. It is from the future research in this field that the impacts of the edTPA on teacher quality and student achievement will be clarified.

Further, as we look to use the edTPA to prepare our future force of educators, it may be useful to research the application of this tool on currently-practicing educators as a non-high-stakes formative assessment tool that will drive improvements in their developing practice. This may ensure many teachers who entered the field prior to the adoption of the edTPA, as well as the novice teachers joining them, are equipped and empowered to meet the challenges of their profession and meet the needs of their future learners.

Conclusion

A literature review was conducted in an effort to discover more about the need for performance assessment, its predecessors, and the most current literature. Through this
review, a consistent need for standardized teacher performance–based assessment was found. This need stemmed from standardized evaluation practices that considered only student test scores and related value added measures. Experts and researchers have agreed that the value-added measure was never intended for individual teacher evaluation, and that when used for these purposes it is not an instrument that yields valid results. A teacher performance assessment that has been around for over a decade, the National Board Certification, has had some reported success. The relative success of The National Board Certification is reported in both qualitative and quantitative studies, with research findings that reveal that educators have improved their practices and that student achievement has increased due to the resulting improved practices.

Given its recent emergence, existing literature consists only of early research findings of the edTPA and its earlier versions. These research studies and discussions revealed conflicting qualitative data and an array of discussions and viewpoints on the high-stakes edTPA. As the data is revealed, future research will be forthcoming regarding teacher quality and student achievement as impacted by the widespread implementation of the edTPA.
A Review of the Literature: Reflective Practice

Since the early twentieth century, the topic of reflection in education has commanded the attention of many educators and theorists, who have discussed the practices and outcomes of professional reflection among teachers and their students (Craig, 2010; Darling-Hammond, 2006; Dewey, 1910; Del Carlo, Hinkhouse & Isbell, 2010; Rodgers, 2002; Schussler, Stooksberry, & Bercaw, 2010). Dewey was a pioneer in understanding and describing the concept of reflection. Over a century ago, he developed a definition of reflection as the “active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends” (Dewey, 1910, p. 6). He went on to say that reflection, “involves (1) a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and (2) an act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity” (Dewey, 1910, p. 9). In 1983, Donald A. Schön in his book, The Reflective Practitioner, aided professionals in many fields, including the field of education, to understand that professional knowledge and proficiency manifest as action. His concept of "knowledge-in-action" in conjunction with the concept of reflection illustrated a new picture for reflective practice:

Clearly, then, when we reject the traditional view of professional knowledge, recognizing that practitioners may become reflective practitioners in situations of uncertainty, instability, uniqueness, and conflict, we have recast the relationship between research and practice. For on this perspective, research is an activity of practitioners. It is triggered by features of the practice situation, undertaken on the spot, and immediately linked to action (Schön, 1983, pp. 308-309).
**Degrees of Reflective Practice**

Even after years of study on the topic of reflective practices, there is still no consensus on the nature and categorization of the levels of the development of professional reflection (Larrivee, 2008, p. 342). In Larrivee’s work to develop a tool to better understand degrees of reflection, she identified four specific levels of reflection: 1. pre-reflection, 2. surface reflection, 3. pedagogical reflection, and 4. critical reflection (Larrivee, 2008). Mansvelder-Longayroux, Beijaard, and Verloop (2006) operationalized the concept of “reflection” according to emerging learning activities for teacher portfolios, including recollection, evaluation, analysis, critical processing, diagnosis, and reflection (p. 60). These are just two examples and illustrate the lack of consistency in the language surrounding levels of reflective practice. Considering the degree of reflective practice in definition and in understanding the relationship between it and effective teaching is an important aspect of this review.

**Purpose**

This review of the literature seeks to discover more about the concept, definitions, types, and degrees of reflection in educational practice at both the level of the pre-service teacher and of the teacher embedded in educational practice. Additionally, it seeks to find out what research has revealed about levels of reflection and how reflective practices might be assessed. Assumptions made in this review include understanding effective teaching as being multi-dimensional and socially constructed, and, therefore, outside of the contexts of pure positivism. As in the review of the literature on teaching quality and the edTPA, effective teaching is thought of in terms of Linda Darling-Hammond’s (2006) description of what good teachers do:
Teachers also need to understand the person, the spirit, of every child and find a way to nurture that spirit. And they need the skills to construct and manage classroom activities efficiently, communicate well, use technology, and reflect on their practice to learn from and improve it continually (p. 300).

While, Confucius did say, “Study without reflection is a waste of time” he also said, “Reflection without study is dangerous.” In considering these wise words, this review will first study the literature and then, in its conclusion, reflect upon it.

**Search Strategy**

The aim of my study was to examine the research over the past two decades that surveyed the concept, types, and degrees of reflection in educational practice for both in-service and preservice teachers. This twenty-year timeframe was mirrored in the literature review conducted on teacher quality and the edTPA. Studies found in peer-reviewed, scholarly journals between 1990 and 2012 were the basis of my review. I did not include studies in languages other than English, nor did I include any meta-analyses or previous reviews of the literature.

For my initial search, I again used numerous electronic search engines including Academic Research Complete, Education Research Complete, ERIC, JStor, OhioLINK Electronic Journal Center, Professional Development Collection, and ProQuest Research Library, along with additional searches with Google Scholar. My search for studies included terms such as: reflective practice in education, teacher reflection, reflection in teacher education, reflection types, and degrees of reflective practice. Finally, I searched through the reference list of each of the studies seeking additional relevant material.
Conditions for inclusion in my review were that the studies contained qualitative and/or quantitative data on reflective practices for pre-service and practicing educators. Purposely, my review excluded opinion pieces and theoretical articles. These criteria were applied to the abstracts of each article, and the entire article if required. In total, 23 studies were located that met the inclusion standards.

The 23 identified articles were methodically analyzed by the following research questions regarding reflective practices among pre-service, newly inducted, and experienced teachers:

1. What are the prevailing definitions and concepts of reflective practices in education?
2. What are the currently-understood types and degrees of reflective practice?
3. How can reflective practice be assessed?
4. What is the relationship between reflective practice and teacher effectiveness?

Investigating the concept, types, and degrees of reflective educational practices at all teaching levels, combined with a synthesis of the resultant findings, may be of assistance to practicing teachers, teacher educators, researchers, and those who guide the professional development of teachers. Educators may use this review to determine if reflection is a powerful tool that they can incorporate into their growth as professionals. Those in teacher education programs might consider this information in the development of reflective practices in pre-service teachers. Researchers might use this review as a launching point for further studies on the relationship between teacher reflection levels
and teacher quality. Additionally, it is my hope that this review will prove to be useful to those guiding the professional development of in-service teachers. Furthermore, and for the purpose of this study, this review will provide an understanding of the research on reflective practice. This understanding, when compared with teacher quality and the edTPA, will provide an understating of the degree to and manner in which these two constructs are related. Those in teacher education programs and those who are charged with the professional development of practicing teachers might use this information to promote the habit of reflection. Researchers might use this review as a launching point for further and more contextual research. Following the review of the literature, the significance and implications of which will be discussed.

Discussion

Pre-Service Teachers. The literature on reflective practice in education spans pre-service to veteran educators. There is a considerable amount of literature focused on reflection as a tool for pre-service teachers. The literature on pre-service teachers ranges from those focused on the roles of teacher educators, arguments for reflection, ways to develop reflection, levels of reflective practices, and the use of reflection to link theory and practice. This literature is foundational in understanding the literature on in-service educators. Furthermore, many in-service teachers may not have been exposed to reflective practices as, until recently, it has not been a staple of pre-service teacher education, at least, not to its current degree.

While some university programs promote reflection among teacher candidates, others do not at all. This is also reported as occurring in student teaching experiences. In fact, in one study, when asked, many supervising teachers at placement sites for
teaching interns did not even mention reflection as an important professional tool. In their case study, O'Donoghue and Brooker (1996) found that “No supervisor indicated possession of a clearly formulated and comprehensive position on reflectivity . . . This is somewhat surprising given the importance reflection has in teaching and teacher education literature and in the University’s practice teaching documents” (p. 105). The authors suggested that it was possible that the supervising teachers were doing reflective practices but not naming or teaching them implicitly to pre-service teachers assigned to their classrooms. It was also suggested that supervising teachers were so busy with their teaching day and in imparting practical and technical knowledge to pre-service teachers that there was simply not room for reflection in their discussions (O'Donoghue & Brooker, 1996, p. 105; Ovens & Tinning, 2009, p. 1130).

In many teacher education programs, pre-service teachers are asked to reflect in journals, portfolios, and other assignments. It is hoped that reflective activity might aide the development of teachers’ moral dispositions. When pre-service teachers are asked to reflect and to develop questions, they may be becoming more aware of how their principles and views of early exposure to teaching might translate into improved future classroom practice (Schussler, Stooksberry, & Bercaw, 2010, p. 360). In a 2010 analysis of teacher disposition domains, these researchers found that the reflections of pre-service teaching candidates who had the highest awareness of their dispositions, “demonstrated three characteristics: (a) a propensity for questioning the how and why of their thinking and actions, (b) a balance between focusing on students and the self across all domains, and (c) adoption of multiple perspectives” (Schussler, Stooksberry, & Bercaw, 2010, p. 361). This deeper and more profound level of reflection, which includes the social,
cultural, moral, and even ethical perspective of teaching, is often referred to as “critical reflection.”

Critical reflection has never been so imperative in developing new teachers. In today’s multicultural society, the majority of teachers will be placed in schools that have some percentage of the student body that is very different from their own cultural background. Teachers must develop cultural relevancy through the practice of honest critical reflection that “challenges them to see how their positionality influences their students in either positive or negative ways. Critical reflection should include an examination of how race, culture, and social class shape students' thinking, learning, and various understandings of the world” (Howard, 2003, p. 197).

While many teacher educators agree that critical reflection should be taught to pre-service teachers, many do not know where to start. Del Carlo, Hinkhouse, and Isbell, (2010) argued that these skills could be taught through teaching pre-service educators to conduct their own qualitative research outside of classroom placements. Drawing on their experience, the authors illustrated how specific components of reflective practice were taught in this manner. They drew a parallel with the educational culture built for science majors in which a developing sense of identity is ingrained through individually-chosen authentic research activities. According to Seymour, Hunter, Laursen, and Deantoni (2004), science students “define undergraduate research as a powerful affective, behavioral, and personal-discovery experience whose dimensions have profound significance for their emergent adult identity and sense of direction” (pp. 530–531).

Another suggested method for teaching reflection to pre-service teachers is to use scaffolding in online discussions about field experiences that contain individualized and
general questions, “about sociopolitical and moral issues raised by field experiences and use of critical readings to analyze experiences” (Whipp, 2003, p. 331). Based on her analysis, Whipp (2003) puts forth some ideas regarding the use of electronic communication in developing reflective teachers that include: making critical reflection and its purpose explicit; offering specific formats for critical reflection that guide future teachers to higher levels of discussions; and designating higher cognitive roles and activities for students in online discussion (Whipp, 2003, p. 331).

Preparing tomorrow’s teachers to be thoughtfully and critically reflective practitioners will certainly require dedicated attention to specific strategies and guided practice in related activities (Darling-Hammond, 2006; Schussler, 2010; Spilkova, 2001; Whipp, 2003). Spilkova (2001) asserts that it begins with two specific awareness tools, “childhood memory activities and various forms of reflective writing” (p. 59). The connection between theory and practice is also made through guided reflection activities for pre-service teachers (Darling-Hammond, 2006; Spilkova, 2001). It is asserted that in order for this bridge between worlds to be made, professionals must recognize that, “Long-term cooperation between supervisors and mentors, permanent movement of the student between the faculty and the school and systematic theoretical reflection on practical experience creates a space for communication between the world of theory and the world of practice” (Spilkova, 2001). Not only do strong teacher education programs establish and maintain strong links between theory and practice, they also have a:

... clinical curriculum as well as a didactic curriculum. They teach candidates to turn analysis into action by applying what they are learning in curriculum plans, teaching applications, and other performance assessments that are organized on
professional teaching standards. These attempts are especially educative when they are followed by systematic reflection on student learning in relation to teaching and receive detailed feedback, with opportunities to retry and improve (Darling-Hammond, 2006).

Additionally, teacher education programs must take into account that pre-service teachers learn as a community; “a sociocultural view of learning suggests that prospective teachers can best learn how to critically reflect on practice in social contexts where they have the opportunity to discuss practical problems with other teachers of greater and lesser expertise” (Whipp, 2010, p. 322). Following their analysis of group memory work, researchers asserted that reflection is not a simple technical skill or piece of knowledge that can be taught in a vacuum. Rather, reflection is “enacted as part of the discursive contexts in which student teachers find themselves. That is, the nature of the discourse community in which the individual is situated enables different forms of reflection” (Ovens & Tinning, 209, p. 1130) and “The participants appear to be critically reflective within those contexts constructed around the discourses of social justice and emancipation such as those in the sociocultural course” (Ovens & Tinning, 209, p. 1130). These assertions point to the need for teacher educators to develop a better understanding of discursive communities in education and to view reflection as a situated and contextual activity facilitated by the participation of pre-service teachers (Ovens and Tinning, 209, p. 1130).

**In-service Educators.** Professional reflection for practicing teachers is not a linear practice. Rather, it involves the cyclical and increasingly complex nature of consideration of one’s experiences in the context of educational theories followed by the
purposive and methodical consideration of educational theories in the context of one’s experience (Furtado & Anderson, 2012). It moves beyond an educator’s typically undisciplined thoughts about a particular teaching day as they drive home. Much deeper, professional reflection involves taking those thoughts and, intentionally and systematically, describing them in order to find a path to better practice (Rodgers, 2002). In this sense, professional reflective practice for teachers becomes the teachers’ thorough and somewhat painstaking study of themselves in the arena of their practice (Meier & Henderson, 2007).

Professional reflection for in-service teachers is frequently practiced in conjunction with professional development efforts (Moss et al., 2008). When considered in light of Guskey’s (2002) definition of professional development programs as “systematic efforts to bring about change in the classroom practices of teachers, in their attitudes and beliefs, and in the learning outcomes of students” (p. 381), the relationship between the two is clear. Additionally, for in-service teachers, professional reflection can be practiced as a launching point for them to conduct their own research as a means to their own evolving professional development (Roberts et al., 2010).

Professional reflection has been a key component of the recommendations of major national organizations that have missions focused on defining professional standards for educators (Council of Chief State School Officers, 2011; National Board of Professional Teaching Standards, 2002; National Staff Development Council, 2011). Additionally, the use of reflective evaluative tools in the development and assessment of teachers is found in independent teacher evaluation systems and in state standards for

While schools have been created to be places where communities of students learn, they are also, hopefully, places where communities of teachers can learn. Teacher learning can take place in many arenas of school communities. It might take place in more formal contexts, such as specific training in their building or guided development in their classroom (Borko, 2004, p. 4). Teacher learning might also happen in less formal spaces, social encounters, and unexpected places, “To understand teacher learning, we must study it within these multiple contexts, taking into account both the individual teacher-learners and the social systems in which they are participants” (Borko, 2004, p. 4). Killeavy and Moloney (2010) found that the roles of professional communities might start with a shared sense of purpose, “as it affects levels of participation, commitment to the group, and peer support within the group” (p. 1075).

More often than not, training programs are delivered fragmentally and isolated from the realities of day-to-day practice. While these programs can be helpful, they can also take away from opportunities for teachers to examine more personal learning connections found in the stories of daily practice (Wildman, Hable, Preston, & Magliaro, 2000, p.248). Those researchers found that for many of their participants, “reflection and sharing became habits,” and that several participants “indicated that they were writing up activities done in class, then reflecting on how they worked” (Wildman, Hable, Preston, & Magliaro, 2000, p. 261). The sharing of stories among teachers in a professional community was also recently explored by Moss, Springer, and Dehr (2008). The researchers found that when teachers wrote down their stories, analyzed them, and
discussed them with their fellow educators, the teachers gained a mindfulness of the possible ways in which they could improve their practices (Moss et al., 2008, p. 507).

While the literature shows that teacher learning is socially situated, it is also an experience held by individuals. According to Wenger (2000), “Learning so defined is an interplay between social competence and personal experience. It is a dynamic, two-way relationship between people and the social learning systems in which they participate. It combines personal transformation with the evolution of social structures” (p.227). In another case study, researchers found that following a teacher education project featured in their study and after a group oriented reflection process, each of the teacher participants “came to personal conclusions regarding the potential and the preferred setting of classroom discussions on socio-scientific issues” (Wolfensberger, Piniel, Canella, & Kyburz-Graber, 2010, p.720). The authors concluded that exchanges among those guiding teacher growth and teachers need to happen more often and more consistently so that coaching could be more personal and practical (Wolfensberger, et al, 2010, p. 721). Likewise, Lebak and Tinsley (2010) found that all three of the teachers in their case studies of teachers who had conducted action research had changed their teaching practices towards more student-centered and inquiry-based approaches (p. 953). The authors assert that each of their case studies “provides evidence of how expanding the action research process to include peer reflection and student feedback can have a profound effect on transforming practice” (Lebak & Tinsley, 2010, p. 967). Runhaar, Sanders, and Yang (2010) found in their study of 456 teachers that an individual’s efficacy and focus on learning goals was positively linked to reflection (p. 1154).
Interestingly, another researcher observed that there can be a profound effect on others when an individual had experienced significant professional growth:

In the end result, Daryl Wilson, having participated in 10 years of school reform at T.P. Yaeger Middle School, came upon an approach to professional development that worked exceedingly well for him at the same time as it advanced his students’ and his colleagues’ learning. That approach preserved Daryl’s identity and agency as a teacher and allowed him to simultaneously teach and learn. Most of all, Daryl was released from the clutches of a staff developer and principal who were determined to dictate his practice and control his teaching. Having reclaimed the centrality of his teaching, Daryl was then free to help others (Craig, 2010, p. 433).

Reflective communities of practice can be foundational to continual learning and ongoing development. Educators who are able to participate in reflective communities benefit by acquiring a higher sense of identity and developing continually evolving practices (McArdle & Coutts, 2010, p. 212). The authors link the domains of self and community together in their study of shared sense-making as follows:

This individual sense of professional self and the shared social sense of professional community may be held in tension with each other. Each professional seeks ways of accommodating ideas in individual practice and values with ideas shared in the community of practice. It is through addressing the challenge of this creative tension between the individual and the social that professionals, through negotiation of ideas and actions for change with others, can
be assisted to make sense of their own practice and attempts at professional renewal (p. 213).

**Evaluation and Levels of Reflection.** The better we understand levels of reflection and are able to assess where we (or those we are working with) are in the process or cycle of reflective practice, the better chance we have to move through the levels, to push ourselves out of our comfort zones, and to become better teachers who create learning environments of inquiry (Rogers, 2002, p. 244). Mansvelder-Longayroux, Beijaard, and Verloop (2006) found that six unique teacher’s reflective learning activities could stimulate their teacher participants to become more mindful of their teaching practices and developing practice in different ways and to different ends (p. 60).

A limited amount of literature exists on specific levels of reflection in the development of teachers. Carol Rodgers (2002) explains a reflective cycle of presence, description, analysis, and experimentation in supporting teachers to consider student learning (pp. 231–232). She argues that by having such roles, teachers become encouraged to be “fully present” in their teaching and to be fully attentive to the reality of student learning in specific classroom contexts: “Teachers’ classroom practice must be seen as an integrated, focused response to student learning rather than as a checklist of teaching behaviors[. . .] Teaching is therefore implicated by learning. That is, in order to know what students know and how they know it, teachers have to create activities, a curriculum, and a learning environment that reveal learning” (p. 233).
While Rogers’ levels of reflection are more about a process and the nature of reflection, Sparks-Langer (1990) has developed a framework that describes specific, hierarchal levels of reflective thinking. Those levels are as follows:

1. No descriptive language; 2. Simple, layperson description; 3. Events labeled with appropriate terms; 4. Explanation with traditional or personal preference given as the rationale; 5. Explanation with principal or theory given as rationale; 6. Explanation with principal or theory and consideration of context factors; and 7. Explanation with consideration of ethical, moral, and political issues (p. 27).

Hatton and Smith (1995) defined levels of reflection in yet another way; in their work considering the nature of reflection, they came up with five different types of reflection. The first and most basic type of reflection, according to them, is technical reflection. This might be defined as decision-making about immediate behaviors or skills that are drawn from a knowledge base but thought about in consideration of personal apprehensions. At the next level, they defined three further types of reflection. First, in this subgroup is a descriptive reflection in which one begins a search for best practice; second, a dialogic reflection in which one weighs competing viewpoints and then explores alternative solutions; and third, a critical reflection in which one considers best practice while taking ethical considerations into account. At the highest level is the contextualization of multiple viewpoints in which the practitioner pulls from any of the previously mention types and applies them to practice in real life (Hatton & Smith, 1995, p. 45).

While exposition of levels of reflection are relatively limited in the research, the actual tools for measuring teacher reflection are even more limited. Only one piece of
literature was found in which a tool had been fully developed for measuring practicing teacher’s reflection. Larrivee (2008), developed an assessment tool “that could be used to establish the level of reflection engaged in by a teacher candidate or a practicing teacher [and to] “develop intervention strategies to facilitate movement towards higher levels of reflection” (p.358). Through her research, she developed “The Survey of Reflective Practice” as “A tool for assessing development as a reflective practitioner.” The survey identifies four distinct levels of reflective practice: pre-reflection (interpreting teaching situations without thoughtful association to other contexts), surface reflection (examining teaching methods is limited to how best to achieve scripted objectives), pedagogical reflection (thinking constantly about how to improve teaching practices to make the best possible impact on students’ learning) and critical reflection (engaging in ongoing reflection and critical inquiry concerning teaching actions as well as thinking processes) (Larrivee, 2008, p. 348). The tool developed by Larrivee, through her research, carries with it recommendations from the author containing a suggestion that the tool, “could be in a collaborative dialogue format to jointly set goals that would facilitate movement towards becoming a reflective practitioner” (Larrivee, 2008, p. 358).

**Implications for Future Research**

This review of the literature shows that there is in existence a wide breadth of literature and research on the topic of professional reflection in pre-service teacher education and educational practice. Although the literature sometimes defines reflection in different ways, it seems to agree with itself when considering the bigger picture of reflective practice being a salient part of successful teaching. There is significant literature that demonstrates the need for levels of and for categorizing types of reflection
and reflective practices. One researcher, Larrivee, used her studies to develop a tool to measure and guide teachers’ reflective practices. The primary gap in the literature is in exploring how the use of this tool, or other possible tools, can impact teacher effectiveness and the educational experiences of students. Future research might implement the tool developed by Larrivee and study its effectiveness. From those future studies, the tool might be refined or a new tool might be created. In doing so, educators might continue growing towards highly reflective practices with the ultimate goal of enhancing student learning and the educational experiences of students (Borko, 2004, p. 12; Rogers, 2002, p. 234).

**Conclusion**

This review of the literature sought to learn more about reflection in pre-service and currently practicing teachers. Additionally, it hoped to discover what the levels of reflection are understood to be and how reflection can be evaluated. In considering that the practice of teaching is socially situated, this review was conducted with the understanding that empirical studies would not be the norm and that qualitative studies and constructivist frameworks would predominate the research found. In reviewing the literature on reflection in educational practice, it appeared that this was indeed the case.

The review revealed that the majority of literature concerned pre-service teachers in a university and/or practicum setting. In these studies, authors and researchers wrote about efforts to begin the reflective process with novices. Much of the research in this domain could be carried out with practicing teachers and even veterans. However, less research has been conducted in the arena of experienced teachers’ reflection. The research that has been conducted points to a need for more emphasis to be placed on
reflective practices among teachers throughout their careers. Additionally, reflection is understood as a more complex skill than a natural way of being:

We do learn from experience. However, it is the reflective mode of cognition that results in the formation of new concepts—the creation of increasingly powerful frameworks for interpreting practice and for solving problems that require new ways of thinking. The difficulty with reflection, though, is that humans tend to be attracted to the experiential mode, which is relatively easy and sometimes entertaining, but discouraged from the reflective mode, which is difficult and laborious, but vitally necessary in modern life (Wildman, Hable, Preston, & Magliaro, 2000, p.249).

In contemplating the research found and reviewed on levels and type of reflection, there seems to be different interpretations of how reflective activities can be categorized. However, they all seem to reveal that there is a type of evolution that is desired as one gains experience in reflective activities. One researcher reported that, “Not all forms of reflection were equally useful. For example, reflections that occur spontaneously during classroom activities tend to be momentary, fleeting, intuitive and tacit” (Yaffee, 2010, p. 386). Interestingly, the levels and types of reflection that were reported in the research all started at a basic level and ultimately led to a higher level of reflection that usually incorporated critical reflection. The differences in the studies usually occurred somewhere in the middle of those two ends. One study defined the types of reflection in terms of a cycle of ongoing practice. Finally, the review considered “The Survey of reflective practice: A tool for assessing development as a reflective practitioner” developed by Larrivee. This tool was developed in order to assess and develop the
reflective practices of teachers. In so doing, this instrument might help educators in reaching our most significant goal: to provide students with more impactful learning and richer educational experiences.

Two separate literature reviews were conducted in order to gain a greater comprehension of what is understood by the two constructs of teacher quality and reflective practice in isolation. By better understanding what has been reported on each of these, I was best able to frame a study considering the relationship between them. Respectively, the first literature review revealed an evolving need for a standardized teacher performance–based assessment in response to the failure of value added scores to measure teacher performance. Most recently, the newest teacher performance assessment (The edTPA) has been explored in the literature. Due to the relative newness of this instrument, the current literature is primarily theoretical. It does, however, contain some smaller reports on the lived experiences of those who have begun working with the edTPA.

The second review of the literature, on reflective practice, revealed a larger number of studies concerning the reflective practices of pre-service teachers and was less concerned with developing this type of practice among in-service teachers. Diverse interpretations of how reflective practices might be classified were found; however, many started with a lower, almost non-existent, level and revealed a level that focused on ethics and morality at the top of the classification systems. Only one specific and well-researched instrument for measuring a teacher’s level of reflective practice was found, Larrivee’s (2008) Survey of Reflective Practice. Both of the literature reviews led to a better understanding of what is known about each of the constructs reviewed and to the
use of specific instruments that have been designed to measure the constructs of teacher quality and reflective practice, respectively.
Chapter 3: Methodology

Restatement of Purpose and Research Question

The purpose of this study is to examine the existing relationships between teacher quality using the edTPA as a framework and levels of reflective practice using “The Survey of Reflective Practice” as a framework as manifested in the practices of six early childhood teachers.

Accordingly, the research question for this study is:

What is the relationship between edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by teaching practices of six teachers?

In consideration of this research question, concerning gaining an in-depth understanding of the relationships between teacher quality and reflective practice, a qualitative, multiple case study approach was used.

Research Design

As qualitative research this study can be considered as research conducted in the lived reality of its participants, thus placing the researcher in a real-world setting (Denzin & Lincoln, 2005). In this study, and in this research methodology, the researcher collects data such as notes, interviews, and memos that represent the world of their participants. It is interpretive by nature as the researcher considers phenomena through the experiences of the participants and through the researcher’s unique lens (Denzin & Lincoln, 2005). Qualitative research is a process that is highly emergent in nature (Creswell, J. W., 2013). While planning is important, I recognize that as a qualitative researcher I must be open to changes as I enter the world of my participants and begin to collect data regarding the lived experiences of those participants. Considering the goal of qualitative research is to
consider phenomena through the experiences of the participants, it is important to be open to the best practices when considering the contextual conditions of the study (Creswell, 2013).

Qualitative researchers recognize their participants as constructors of their own social realities. This recognition informs their humanistic role as a part of the research process. Qualitative researchers are, “interested in understanding the meaning people have constructed, that is, how they make sense of their world and experiences they have in the world” (Merriam, 1998, p. 6). The purpose of this study was to gain an understanding of the relationship between edTPA’s teacher quality levels and Larrivee’s level of reflective practice as manifested by teachers’ practices. In order to gain an understanding of this relationship is manifested by the experiences of my participants, a qualitative approach was necessary. Through qualitative data collection, such as observations and interviews, and my analysis, I was able to view their worlds and their socially constructed realities. Work in qualitative research is based on the assumption that social realities are unique and dynamic, and that these realities must be considered in their wholeness and complexity (Hatch, 2002). This assumption is advantageous for research conducted in educational environments where a complexity of communications and behaviors can be observed in great abundance. In this study, six early childhood teachers were interviewed and observed in order to gain a richer a more complex understanding of how their teacher quality levels related to their reflective practice levels.

A multiple case study was utilized for this research study. Case studies afford the researcher the opportunity to gain a thorough understanding about the participants and participants’ experiences and lived realities (Merriam, 1998). Research processes and
discoveries, over products and validation, are valued, as the researcher enters the social contexts of their participants in an effort to in-depth insight into the phenomenon of interest (Merriam, 1998; Yin, 2009). Accordingly, the purposes of this study are consistent with aims of case study research.

Having multiple cases allowed me to consider variations in experiences and behaviors among my participants (Merriam, 1998), which in turn made the comparison of data sets possible (Yin, 2009). Further, and as defined by Merriam (1998), a multiple case study both describes the lived experience of the participants and interprets those experiences as interpreted through the conceptual frameworks of the edTPA and The Survey of Reflective Practice.

Participants and Access

The present study used a purposive convenience sampling (Bernard & Ryan, 2010) of six teachers of children from Kindergarten to the third grade within a particular independent school of the greater Cincinnati area. The independent Montessori school has an enrollment of ~125 students from preschool through to grade six. It has six core classrooms divided by three-year age ranges: two rooms with students in preschool to kindergarten, two rooms with students in the first to third grades and two rooms with students in the fourth to sixth grades. The four classrooms that made up the preschool-to-kindergarten classes and the first-to-third grade classes were those observed in this study. The preschool-to-kindergarten classrooms utilized a co-teaching model. Two of the participants in the study were co-teachers practicing in the same room. The school’s highest and most prestigious accreditations are with The Independent Schools Association of the Central States (ISACS) and The American Montessori Society.
The school has nearly half a century of history in the greater Cincinnati area as a Montessori school with strong academics and an emphasis on arts and nature education. It offers some financial aid packages to families who qualify. Further, the school has a long history of enrolling students from a wide variety of international backgrounds. Nine possible participants were identified and invited to participate in the research study. Eight participants accepted the invitation and signed forms granting their consent. Due to scheduling and availability, six of the eight were ultimately represented in this research study.

**Data collection**

The data collection process was guided by the University of Cincinnati Institutional Review Board (UC IRB) approved protocol. Further, the data collection in this research has several components consistent with the data collection requirements salient for the edTPA.

**Instruments.**

*Survey. The Survey of Reflective Practice* indicates four distinct levels of a teacher’s reflective practice. Each of the four levels contains a series of indicators that are considered in relation to how often the indicator statements are true. The survey instrument does not have options for “never” or “always.” For example, in level one, the pre-reflection level, one indicator is “attributes of ownership of problems to students or others” (Larrivee, 2008). The participant would consider whether this statement would be true frequently, sometimes, or infrequently. The same would be completed for the other indicators in this level as well as for the additional three levels of reflective practice. Some examples of indicators from the other levels are: Level two (surface
reflection), “provides limited accommodations for students’ different learning styles”; level three (pedagogical reflection), “seeks ways to connect new concepts to students’ prior knowledge”; and level four (critical reflection), “calls commonly held beliefs into question” Larrivee (2008).

**edTPA.** The edTPA scores teachers according to a scale of one to five throughout three domains of teaching practice: planning, construction, and assessment. Each domain contains five rubrics to be used as tools for determining teachers’ level of quality in each of the domains. The edTPA, focused on teacher behaviors and practices, is affiliated with education leaders like Linda Darling-Hammond, and aligned with the CAEP teaching standards. It is now being used in 34 states to determine a teacher candidates’ readiness for practice.

**Observations.** The observation instrument contains a section intended to allow me to write out the narrative of the observation period. A second section contains four of the five rubrics for instructional practices as outlined by the edTPA (See Appendix B). The fifth instructional rubric as well as the rubrics from the planning domain and the assessment domain of the edTPA were not used during observations due to their nature of not being typically observable during instruction. The fifth instructional rubric deals with reflecting on one's practice, the rubrics from the planning domain transpire before instruction and the rubrics from assessment are document driven and not based on observed instruction. The observations provided data about teacher quality in the second domain of the edTPA regarding instructional practices. I observed each teacher twice, with each observation lasting at least 40 minutes. Table 3.1 displays the dates and duration of the observations of teachers.
I had planned a third observation in the case that the two observations of any individual teacher yielded conflicting data; however, this was unnecessary. Again, five rubrics were used in the observations for the domain of instruction. The rubrics considering the following: the learning environment, engaging children and learning, the deepening of children’s learning, and subject-specific pedagogy.

Table 3.1

Dates and duration of observations of teachers.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Observation Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theresa</td>
<td>October 2, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td></td>
<td>October 18, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Bridget</td>
<td>October 2, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td></td>
<td>October 18, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Heidi</td>
<td>October 9, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>October 25, 2013</td>
<td>40 minutes</td>
</tr>
<tr>
<td>Annette</td>
<td>October 2, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>October 18, 2013</td>
<td>40 minutes</td>
</tr>
<tr>
<td>Abby</td>
<td>October 9, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>October 25, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Rebecca</td>
<td>October 9, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td></td>
<td>October 25, 2013</td>
<td>45 minutes</td>
</tr>
</tbody>
</table>

Interviews. The semi-structured interview instrument includes major interview questions and allows for follow up questions as needed (See Appendix C). The interviews will provide data on the quality of the teachers in reference to the planning and assessment domains of the edTPA, as well as the fifth rubric of the instructional domain. The interview questions stemming from the rubrics for planning consider: planning for
the whole child; planning to support varied learning needs; using knowledge of children to inform teaching; identifying and supporting language development; and planning assessments to monitor and support children’s learning. The rubrics for assessment consider: analysis of the children’s learning; providing feedback to guide learning; children’s use of feedback; analyzing children’s language development; and using assessments to inform instruction (American Association of Colleges for Teacher Education & Stanford Center for Assessment, Learning, and Equity, 2013).

Additionally, the interviews provided data regarding the levels of the reflective practice of the participants. Interviews were conducted in person and took approximately 45–55 minutes depending on the participants’ responses. Table 3.2 displays the dates and duration of interviews of the teachers.

Table 3.2

<table>
<thead>
<tr>
<th>Participants</th>
<th>Observation Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theresa</td>
<td>October 30, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Bridget</td>
<td>November 1, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Heidi</td>
<td>November 5, 2013</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Annette</td>
<td>November 5, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Abby</td>
<td>November 1, 2013</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Rebecca</td>
<td>October 30, 2013</td>
<td>55 minutes</td>
</tr>
</tbody>
</table>

*Artifacts.* The viewing of collected artifacts largely informed the scoring of the edTPA rubrics of planning and assessment and supplemented the observational data collected for the first four instructional rubrics. Reviewing a teacher’s lesson plans with
lists of instructional materials provided information about the level at which their plan supported the active and multimodal nature of young children’s development of language and literacy. Furthermore, it informed an evaluation of the teacher’s knowledge regarding the varied learning needs of children and how they used this knowledge to justify their instructional plans. The review of blank (teacher-designed) assessment materials informed an understanding of teacher-selected or designed assessments in relation to how they consider children’s active and multimodal development of language and literacy. Artifacts related to evaluation criteria informed consideration of the teacher’s ability to analyze evidence of children’s learning and children’s language development and content understanding. Additionally, evaluation criteria may illuminate an understanding of how a teacher uses their analysis of what the children know and are able to do in order to plan the next steps in their instruction.

Lastly, viewing children’s work samples revealed the types of feedback teachers used to provide focus to the children’s understanding of their own strengths and needs, as well as to provide children with opportunities to use that feedback to guide their future learning.

**Researcher Training.** I have received significant training in scoring the edTPA using the rubrics from each of the three domains: planning, instruction, and assessment. I received this training as part of my position at The College of Mount St. Joseph in August of 2013. The training was required as the college decided to score edTPA submissions in-house instead of sending them to the state of Ohio and the Pearson Corporation in order for its faculty to better understand the demands and requirements of
the edTPA. To date, I have scored five edTPA submissions in my practice, independent of this research study.

**Timeline.** Observations were conducted throughout the month of October, 2013. Following the completion of the observations, interviews were conducted during the last week of October and into the first week of November. Data collection was completed by the end of 2013. There are no time constraints or deadlines for this study to be completed. As originally planned in the research proposal, data collection was completed by the fall of 2013. The Primary Investigator will inform the UC IRB if an extension should become necessary.

**Data Management**

Prior to the start of observations and interviews, participants were given information about who to contact if they had any questions or concerns about the observations, interviews or the overall study. Interviews took place in the school setting. Transcription and analysis took place at the home and college offices of the study’s primary Investigator, Laura Saylor, where data is being kept through the end of the 2018 calendar year. Paper copies of data will be shredded and electronic files will be deleted at that time. Anonymity will be assured by replacing names and other identifying information with pseudonyms and encrypted identifiers. Legends to the identification of pseudonyms and encrypted identifiers will be stored separately from all other study materials.

**Data Organization**

The organization of data is salient to the process of considering it systematically and exploring it analytically (Miles & Huberman, 1994). As each new piece of data was
collected and developed, it was organized in sets according to its relative type and sequence in the study. Furthermore, data was catalogued on a spreadsheet and indexed on each file folder for the purposes of quick identification and reference. Transcribed documents were noted with a heading matched to the hand-written notes with researcher-made memos. Additionally, the files and the headers of both electronic and hard copy documents were uniquely color coded for each participant. This systematic organization made it possible for me to consider and analyze the data in multiple ways (Miles & Huberman, 1994).

Data Analysis

Typological analysis was the major data analysis strategy. This strategy was followed according to the steps in typological analysis as described and explained by Hatch (2002). Accordingly, the first step in the analysis process was to identify the typologies to be analyzed. The two major typologies were the constructs of teacher quality and reflective practice. Sub-typologies for teacher quality were: planning, instruction, and assessment. Sub-typologies for reflective practice were: pre-reflection, surface reflection, pedagogical reflection, and critical reflection. The data was then read, and the entries associated to the chosen typologies were marked and noted accordingly. Additionally, I made notes and recorded memos as I analyzed data sets. By doing so, I tracked my own thoughts and hunches that, in turn, led to the improvement of the employed strategies (Miles & Huberman, 1994). Table 3.3 displays the typological codes used in analysis.
Table 3.3

*Typological Codes used in Analysis*

<table>
<thead>
<tr>
<th>Major Codes</th>
<th>Sub-Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective Practice</td>
<td>Pre-reflection</td>
</tr>
<tr>
<td></td>
<td>Surface reflection</td>
</tr>
<tr>
<td></td>
<td>Pedagogical Reflection</td>
</tr>
<tr>
<td></td>
<td>Critical Reflection</td>
</tr>
<tr>
<td>Teacher Quality</td>
<td>Planning</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
</tr>
<tr>
<td></td>
<td>Assessment</td>
</tr>
</tbody>
</table>

Once all data sets were searched and marked according to the typologies of the study, main ideas were recorded on summary sheets for each participant, which allowed me to look for relationships between the typologies of each participant. Relationships were coded using Spradley’s (1979) Universal Semantic Relationships to consider the way the typologies were linked. The relationships coded were: strict inclusion (X is a kind of Y), rationale (X is a reason for doing Y), function (X is used for Y), means–end (X is a way to do Y), and attribution (X is a characteristic of Y) (Spradley, 1979). Table 3.4 displays the relationship codes used in analysis. Once coding was completed, the data was read in an effort to determine whether the relationships were supported by the data when considered as a whole. The relationships from each case were then considered and compared to each other to discern any emergent patterns; and if one was found, the manner and degree to which it existed were determined (Hatch, 2002). The results of this study have provided an additional understanding of the relationship between teacher quality and levels of reflective practice.
Table 3.4

*Relationship Codes used in Analysis*

<table>
<thead>
<tr>
<th>Code Word</th>
<th>Description of Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strict inclusion</td>
<td>X is a kind of Y</td>
</tr>
<tr>
<td>Rationale</td>
<td>X is a reason for doing Y</td>
</tr>
<tr>
<td>Function</td>
<td>X is used for Y</td>
</tr>
<tr>
<td>Means–end</td>
<td>X is a way to do Y</td>
</tr>
<tr>
<td>Attribution</td>
<td>X is a characteristic of Y</td>
</tr>
</tbody>
</table>

(Spradley, 1979)

**Research Perspective**

In my research, I hoped to develop an understanding of the relationship between teacher quality (as determined by the edTPA) and the level of reflective practice (as revealed through teachers’ responses to questions in semi-structured interviews in a specific independent Montessori school). Considering my own constructivist worldview and the adoption of the frameworks of the edTPA and The Survey of Reflective Practice, my research afforded me the opportunity to further the process of my goal-setting and question-asking, as well as contemplation of the best-suited methodologies to employ in the research study.

The very nature of wanting to uncover the complexities of the instructional and reflective practices (a specific lived experience) of teachers entailed a constructivist paradigm and the beliefs and values aligned with it. My questions and interests related to the relationship between teacher quality and teacher reflective practices contained a
multiplicity of diverse and socially constructed realities, which aligned my research study with the ontological beliefs of constructivism.

Not unlike the nature of reality as understood in the constructivist paradigm, the nature of knowledge (epistemology) and sense-making, as understood by this paradigm, also consider the social human experience; in that the researcher and the participants are connected in their search for what knowledge can be constructed (Mertens, 2004). In considering teacher quality and the associated levels of reflective practice, an undeniable link between the participants and myself was created. In an effort to fully understand their unique experiences, I was compelled to observe their instructional practices and to hear, first-hand, their viewpoints and perspectives on what effective planning, instruction, and assessment are, and how they experienced professional reflection in their work. In order to gather this type of data, I needed to personally interact with my participants (Rubin & Rubin, 2002). Additionally, I recognized my participants as authentic and high-level experts.

My research question and methods were informed by my goals, worldview, and my review of the literature.

**Assumptions.** The following assumptions were made in relation to this study:

1. All teachers responded honestly.
2. Observations took place during instructional time that is typical for that classroom.
3. The instruments utilized were valid and reliable.
4. As a researcher, I carry bias based on my experiences as an educator, and specifically as Montessori teacher.
Implications

This study is intended to be a stimulus for researchers and a spark for those charged with the professional development of in-service teachers. Researchers might further inquire into the relationship between teacher quality and the levels of reflective practice. Those charged with the professional development of in-service teachers might consider establishing programs that include reflective practice as key to improving teacher quality. It is hoped that the results of this study will provide meaningful information regarding the relationship between teacher quality and the levels of reflective practice.

Despite what is known about the positive benefits of professional reflection, we have yet to fully harness the power of reflective practice in our work developing practicing early childhood service teachers. Most problematic is that any available resources in professional development funding are often spent on one-size-fits-all, prepackaged professional development programs (Lieberman & Pointer Mace, 2008). However, with reallocated resources and further investment in professional reflection, a significant and efficient positive (compared to conventional courses) impact on teacher quality is likely. A larger gain in teaching quality is very possible if investment is made towards developing the professional reflection of our teaching force, providing these professionals with relevant, real-time, meaningful, and ongoing professional development that empowers them to be great educators. This gain may represent a more efficient use of professional development funding when compared to other professional development strategies.
Investments of time and energy in resources that support reflective practices for educators are valuable and result in highly effective and competent teaching (Roberts et al., 2010). That investment, which ideally occurs with a dedicated professional development facilitator or coach, is, nevertheless, possible without those personnel (Peterson et al., 2009). Professional reflection can still be supported by commitments to the reflective process by educators who work together. With either live or videotaped observations, teachers can encourage one another to evolve in their instructional strategies in these types of work groups, using research-based procedures to guide them (Peterson et al., 2009). The findings of this study have the possibility of providing meaningful contributions to the body of data available to state and national policy makers in the area of the professional development and growth of our educators, as well as of informing practical improvements at the local level in professional development programming and framing evaluations of the increasingly influential edTPA.

**Limitations.** As a qualitative researcher, I fully acknowledge that this study is exploratory in nature, and accordingly cannot be generalized outside the classroom observations, teachers’ interviews, and the specific school setting. Additionally, with the small size and non-random selection of participants from a single school, this study represents an understanding of the research question with in this specific limited context. Lastly, as a researcher, I fully recognized that I bring my own bias to this research study. My constructivist worldview and my years of experiences as a Montessori teacher and school administrator shaped the lenses through which I saw and understood the data.

**Trustworthiness.** As a qualitative multiple case study, the focus of this study was not concerned with external validity. The study is, however, concerned with its
trustworthiness and internal validity and the extent to which the “research findings match reality” (Merriam, 1998, p. 201). In order for this study’s findings to be trusted, they must be transferable, dependable, confirmable, and credible (Lincoln & Guba, 1985). In order to assure the trustworthiness of my findings, I used extensive note taking for classroom observations and a recording device to accurately capture the responses of interviewees. Additionally, I shared their interview responses back with the participants as a check on the raw data (Hatch, 2002). Furthermore, by employing multiple sources of information this study increased its trustworthiness via the triangulation of these multiple data sets to confirm the evidence. The use of multiple cases and the depth of the data will enhance the study’s transferability to other similar contexts. Through rich documentation, this study is also highly dependable when making a claim that similar findings would be found were it to be repeated (Suter, 2005). In order for the study to be confirmable and objective, I kept a watchful eye on possible biases by keeping a continuous reflexive journal. From the member checks on data, triangulation of multiple data sources, and researcher checks on biases, this research methodology enhanced the credibility and believability of its findings.
Chapter 4: Findings

Introduction

This chapter reports on the study’s findings regarding the relationship between the edTPA’s teacher quality levels and Larrivee's level of reflective practice. Data for this study was collected by conducting classroom observations and semi-structured interviews. Additionally, artifacts related to planning and assessments were observed. The findings presented in this chapter report on and speak to the study’s research question: What is the relationship between the edTPA’s teacher quality levels and Larrivee's level of reflective practice as manifested by teaching practices of six teachers?

As outlined and justified in Chapter Three, this study utilized a multiple case study approach as a means to best understand the participants and their experiences (Merriam, 1998). Accordingly, the research process was valued over a particular research product, and the participants and observation periods shape the narrative of the data to a large degree. Thus, the findings reported in this chapter are consistent with the maintenance of focus on participants and processes. This chapter begins with demographic data of the study’s participants. This is followed by a presentation of each of the cases then a summary of key findings across the cases studies.

At the time of this research study, the participants were employed as early childhood teachers (pre-kindergarten to 3rd grade) at a well-established and highly-accredited independent Montessori school that has an approximate enrollment of 125 students from preschool through grade six.

As shown in Table 4.1, the participants were all females. Five of the six participants identified their ethnicity as Caucasian, with the remaining participant
identifying her ethnicity as Hispanic. The participants’ ages varied widely across the four identified age groups, each of ten years. There was also a wide range in terms of participants’ years of teaching experience and degrees attained. The span of participants’ teaching experience was, for the most part, evenly spread. One of the participants was in her first year of teaching practice. Two of the participants had been teaching for more than ten years. The participants were evenly split in terms of the highest degree attained, with three participants reporting a Bachelor’s degree as the highest degree attained and three reporting a Masters’ degree as the highest degree attained. Additionally, while all of the participants are classified as early childhood educators, they were even split by the age groups that they were currently teaching in. The research study was conducted in a Montessori school that utilized multi-age groupings as aligned with Montessori philosophy. Half of the participants were teaching in pre-kindergarten to Kindergarten classrooms, while the other half was teaching in grade 1 to grade 3 classrooms.
Table 4.1

*Demographics of Research Participants*

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
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<tr>
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</tr>
<tr>
<td>Male</td>
<td>0</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
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<tr>
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</tr>
<tr>
<td>Asian</td>
<td>0</td>
</tr>
<tr>
<td>Caucasian</td>
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<tr>
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<tr>
<td>30–39</td>
<td>2</td>
</tr>
<tr>
<td>40–49</td>
<td>1</td>
</tr>
<tr>
<td>50–59</td>
<td>1</td>
</tr>
<tr>
<td><strong>Teaching Experience</strong></td>
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<td>Less than 1 year</td>
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<tr>
<td>1–3 years</td>
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</tr>
<tr>
<td>4–7 years</td>
<td>2</td>
</tr>
<tr>
<td>8–10 years</td>
<td>1</td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>2</td>
</tr>
<tr>
<td><strong>Highest Degree Attained</strong></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>3</td>
</tr>
<tr>
<td>Master’s</td>
<td>3</td>
</tr>
<tr>
<td><strong>Currently Teaching</strong></td>
<td></td>
</tr>
<tr>
<td>Pre-k to Kindergarten</td>
<td>3</td>
</tr>
<tr>
<td>Grades 1–3</td>
<td>3</td>
</tr>
</tbody>
</table>
Description of the Cases

The findings of this study will begin with a presentation of individual case studies of each participant according to their assigned pseudonym. Each case will include a description of each teacher’s quality in the domains of planning, instruction and assessment; as well as an account of their reflective practices. Each case’s description and account will be followed by an identification of the Universal Semantic Relationship (Spradley, 1979) between the teacher quality and reflective practice for that participant. Once all case studies have been presented, the findings section will continue with a report of crosscutting themes in regards to the constructs of reflection and teacher quality as reported on in the cases.

Case Study of Theresa

Theresa was a teacher in one of the preschool-to-kindergarten classrooms at the school. She was one of the veteran teachers in the study, with more than 10 years of teaching and a Master’s degree in Early Childhood Education. Being of Hispanic origin, she was the only non-Caucasian participant in the study. She reported valuing love, integrity, and honesty in her work. She described her work as a teacher as being “on a journey” with children, coworkers, and parents.

Theresa’s Teaching Quality – edTPA.

Planning Domain. As she responded to interview prompts regarding planning, Theresa shared that her first responsibility was to recognize the uniqueness of each child and to respect their differences. Theresa’s practices in planning were consistently in the top ranges of the planning domain. Theresa used her knowledge of children to justify her
instructional plans. She also provided justification based on developmental considerations and principles from educational theory:

Well, I know their developmental level, so I know how to create an age-appropriate lesson. I know when to stop if something is not working. I consider the Montessori philosophy. I also know my students well enough to know when I can push them and challenge them. (Interview, Theresa, 2013)

Additionally, Theresa’s planning records showed consideration of the active and multimodal nature of young children’s development. Her plans included an activity that would allow students the opportunity for movement as they would be asked to walk ten times from one side of the room to the other as they collected the items needed for a mathematics exercise. The plans called for the student to bring the smallest rod (representing one) to the work rug, then to go back to the shelf and retrieve the second rod (representing two), and so on up to 10.

**Instructional Domain.** This example of planning for children’s active and multimodal learning was consistent with her instructional practices as she engaged children in active and multimodal behavior that deepened and extended their language and literacy development. This engagement was observed during the first visit with Theresa as she worked with a student on the function of the silent e:

Theresa sat next to the child on the floor in front of a work mat. There was a box of alphabet letters at the top of the mat. She then whispered something into the student’s ear and the student reached for the alphabet box, getting letters out of the box one at a time, spelling “bit.” This continued until the student had four more words: rid, pin, kit, and fin. Theresa then got out a box of letters with
transparent letter e’s in it. The child excitedly said. “The silent e box!” Theresa said, “Oh do you remember?” A conversation ensued about a previous activity using the silent e that child had completed with “a” words. (Observation Notes, Theresa, visit 1, 2013)

This interaction between Theresa and the student here showcases her ability to provide an experience that would support the child’s active and multi-modal learning as he pulled letters from the box and arranged them on the work mat. Additionally, the way the Theresa brought out the box of transparent letter e’s prompted the child to connect a prior learning experience to their new learning activity. In reviewing teacher archival records on this particular student, I found an entry from the previous week that indicated the student had mastered the silent e with “long a” words. The notes she had written included a quantitative measure of 5/5 as well as a qualitative description of the student’s enthusiasm for the lesson, reporting that the child “did not want to stop and kept asking for more ‘long a’ words” (Artifacts, Theresa, 2013).

Assessment Domain. Theresa considered data to be important in analyzing children’s learning but also shared that she felt she knew her students well enough to know when she could use that data to push and challenge them. Theresa used informal and formal observation, as well as work samples, as evidence of what her students had learned. She felt that it was important to provide feedback to young children with great care and love, saying that sometimes a smile or hug could go a long way. Theresa said that she likes children to really think about the quality of their own work. She said she liked to use prompts like, “Do you like your work?” and “Are you proud of you?” because they aided children in the process of understanding their own strengths and
needs. Further, Theresa used evidence of what her children knew to plan her next instructional steps. She said that when she recognizes a situation in which a student is having a difficult time, she “takes a step back” and then tries another teaching strategy that might better support the child in their learning. Sometimes, she said that she recognizes she has to improve her “sales pitch” or study the child in more depth to determine issues and track development.

**Theresa’s Reflective Practices.** Theresa was a teacher who engaged in reflection at pedagogical and critical levels on a regular basis. Theresa’s responses to interview questions regarding reflective practices were most often consistent with pedagogical reflection followed by several responses consistent with critical reflection. She considered professional reflection to be essential to her work, further asserting that a teacher’s job is to be grounded in reflective practices in order to teach in a way that best supports students’ growth and development. She followed this up with, “It is through reflection that we can think about what we do to reach each child in a way that motivates them to make responsible choices.” These responses are best aligned with pedagogical reflection. However, Theresa took these statements and elaborated on them, extending them into the reflective practice level of critical reflection. She responded consistently with indicators of this including an ability to observe herself in the process of thinking about her teaching practices, and suspending her judgment to consider all options. One of her responses, while addressing these indicators, also brought in a spiritual component:

> It is through the practice of reflection that I can separate myself from my daily work, take my emotions out of it, and mediate about it in a spiritual way. I try to
balance life and work so that I can see the many parts and then make a harmony from them. (Interview, Theresa, 2013)

Theresa also considered the ethical ramifications of her classroom policies and practices. This is also an indicator of reflecting at a critical level. Theresa shared an example of a time that professional reflection helped her in her practice. At one point, she was finding that the reports she was sharing with families about the children’s progress were not effective in more difficult circumstances. She was struggling to find a reporting system that was both very honest with families but also came across as non-judgmental and caring. She reported that upon reflection she found that it was not so much the reporting system as it was her own delivery. It was through reflection that Theresa realized that she was the one who had to use the reporting system as is, and to make sure she communicated to families in a way that was both forthright and truthful while embodying a high degree of respect for the hard work that parents do. Not only does this experience indicate that she was aware of ethical considerations in her work, but it also shows that she was able to be an active inquirer about her work and, further, that she could generate a new hypothesis of how she could improve her practice.

**Summary of Theresa.** Theresa’s case represents a high-level of teacher quality and high level of reflective practice. Further, I found that her case revealed specific relationships between the two constructs of teacher quality (Y) and reflective practice (X). These relationships, from Spradley’s (1979) Universal Semantic Relationships, included function (X is used for Y), means–end (X is a way to do Y) and attribution (X is a characteristic of Y). In Theresa’s case, professional reflection was used both for teacher quality and as a way to be a quality teacher. However, the most significant relationship
was determined to be that being a reflective practitioner is a characteristic of her teacher quality. This relationship of attribution best describes the relationship between teacher quality and reflective practice in her case.

**Case Study of Annette**

Annette was the most seasoned veteran among the participants. She had had fifteen years of teaching experience and held a Master’s degree in elementary education. Annette came to the teaching field after her own children were of school age. She taught in a classroom with students ranging from grade one to grade three.

**Annette’s Teaching Quality – edTPA.**

**Planning Domain.** Annette shared that she felt blessed to be in a school that allowed her to be flexible in her lesson planning so that she could consider current events and make changes as she saw necessary. She expressed the importance of responding to children’s needs and cultural assets by carefully designing her lessons and creating extensions and activities for the children to complete. She cited examples, such as a student who was enthusiastic about researching why people settled in the New World. Further, Annette used her knowledge of children to support their varied learning needs; she discussed how some children struggle with their initial experiences in determining if a sentence is a statement or question. She shared examples of activities that she had planned and created that would support young children in better understanding the fundamental differences between a statement and a question. Annette also discussed how a large proportion of children did better with this when they were afforded the opportunity to work in groups of two or three students.
Annette felt grateful to be in a school setting where she was with her students for three consecutive years. She shared that knowing students and working with them for this many years helped her know them better and that this knowledge supported her planning. Annette further shared that she gets emotional after knowing a “kiddo” for three years and that she sheds many tears when she has to let them move up to the next level.

**Instructional Domain.** Observations of her instructional practices revealed that the Annette had provided opportunities for the expression of varied perspectives of students:

The teacher is discussing unseen disabilities with a group of older students, as they will be seeing a play at the school later that day dealing with that topic. She shares with them that sometimes we can see disabilities, like when a person is in a wheelchair. She explains to the children that sometimes there are disabilities we cannot see and that one of them is called autism . . . during the discussion one of students raises their hand and shares that he has dyslexia and has trouble reading, which is a kind of disability people cannot see. (Observation Notes, Annette: visit 1)

Most striking about this observation was the reaction of the other students in the group, who quietly listened to the young speaker without any giggles or apparent judgment. The teacher thanked him for sharing that and asked him if he wanted to share anything else. The child responded with matter-of-fact type of “nope,” and the discussion continued. The respectfulness of the students’ responses to a student who shared something so personal was specifically noted.
During another visit, Annette elicited children’s responses to deepen their learning. One example was heard as she worked with a group of five students at a meeting table. She gave complex prompts that facilitated interactions among the children so that they could evaluate their own abilities and actively develop their language and literacy:

They have just finished reading a story and Annette asks one student, “How did they feel at the end of the story?” The child responds, “really good.” Annette says, “Oh, I think you are onto something. Really good, yes I would agree, but I am going to challenge you to come up with another adjective that is more specific.” The student is quiet. Annette prompts him further, “How do you feel when you have finished a really hard work?” The student says, “Proud!” Annette replies, “So, how would you say they felt at the end of the story?” The student replies, “Good and proud.” (Observation Notes, Annette, visit 2)

This exchange highlights Annette’s ability to not only elicit responses, but also to build on them in a way that promoted the student’s understanding of language.

**Assessment Domain.** The assessment domain of the edTPA begins with questioning how teachers gather evidence of children’s learning. On this particular rubric, Annette’s response was consistent with the highest score in that she analyzed both qualitative and quantitative evidence to demonstrate patterns of learning:

For assessment, I take lots of observation notes. I also have checklists for the different content areas and for the children’s personal growth. I use work samples and portfolios with lots of sampling and in different settings. I sort of have a salad
bar of assessment and pull from it the most appropriate ones for each child (Interview, Annette, 2013).

**Annette’s Reflective Practices.** Annette shared that her ability to reflect came from her personality. She said that she could see “multiple sides of things.” Further, she indicated that she used her ability to see the many sides of things in her work with young children. Annette shared that seeing many perspectives made her careful in choosing her words and in putting ideas forward to stimulate children’s thinking and engagement. This is consistent with indicators of critical reflection in that she was deliberately exercising judgment to consider all options. She further discussed feeling that as a teacher she had to do a lot of “acting” and convincing. She said she “had to consider her audience” and then teach in a way that was going to really stimulate and excite them, even if it meant teaching something a way she had never taught it before. This willingness to consider her students’ learning and to teach in a new way is consistent with reflection at the critical level in that she challenged assumptions about students and her expectations for them.

Annette also brought forth the idea that being a reflective practitioner required one to be less controlling and highly compassionate. This willingness to challenge the status quo practices that are found in many classrooms, with respect to power and control, also is indicative of critical reflection. Additionally, Annette recognized that professional reflection is what slows teachers down to take a moment and pause, and to, “make us think and to be mindful about what we are doing” (Annette Interview, 2013). This response is also consistent with critical reflection.

Annette had more statements that were found to be consistent with the sub-typology of critical reflection than any other participant. However, she did also have
several responses that contained the sub-typologies of pedagogical reflection. Throughout the interviews, she exhibited a genuine curiosity about the effectiveness of teaching practices along with a willingness to experiment with those practices and with new ones. Additionally, she recognized the complexity of classroom dynamics, saying that one of the best aspects of teaching is that every group is different, and that what works with one group may not work with the next.

**Summary of Annette.** Annette’s case also represents a high-level of teacher quality and high level of reflective practice. In her case, the relationships between typologies were those of function, means–end, and attribution (Spradley, 1979). Annette’s case demonstrates use of reflection for the purposes of teacher quality. Her case also shows how she used her reflective practice as a way to be a quality teacher. Further, her case highlights that her reflective practice was a characteristic of her teaching quality. In Annette’s case, not one of these three relationships was found to be dominant above the others.

**Case Study of Bridget**

Bridget was in her fourth year of teaching. She held a Master’s degree in early childhood education and was teaching in a classroom with children from preschool to kindergarten. Bridget and Margaret were co-teachers in the same classroom. During observations, both were present and working in the same learning environment. However, the learning environment was partitioned into two sections due to the structure of the building. Bridget and Theresa spent the majority of the time separated by the two sections and crossed into alternate sections to access learning materials or to follow the movements of a child they were working with.
Bridget’s Teaching Quality – edTPA.

Planning Domain. In discussing her students, Bridget shared that her age group was learning so much. She shared that her students were learning color names, letters, and numbers. She discussed her students’ developing social and motor skills. She laughed out loud when she said, “they are learning everything.” Bridget reported wanting children to learn various academic concepts depending on their age group but that she also wanted them to learn to be more dependent, to use their words effectively, and to learn how to care for themselves. In responding to questions about how her plans supported the active and multimodal nature of young children, Bridget shared developmental approximations that she planned for, including their attention span, ability to sit and attend, and need for clear and simple language. Artifacts from her lesson plans showed that she accounted for this with the introduction of new manipulatives and learning games. However, in her planning for the whole child, she did not provide specific and clear examples of interdisciplinary contexts. Bridget was able to justify why certain instructional strategies were developmentally appropriate using examples of children's prior learning and personal assets. And while Bridget made some connections to developmental theory citing Montessori, she did not fully develop the principles behind it. Neither example was consistent with the highest level of teacher quality, but both were in the average-to-high range.

Instructional Domain. Bridget’s learning environment demonstrated a positive learning experience that supported children’s engagement and learning. Not only did she demonstrate respect for the children, she also provided a challenging learning environment that promoted mutual respect among them:
There are 17 children in the classroom: some as young as three, others are kindergarteners. Every one of the children is engaged with some type of learning activity. There is a quiet buzz in the room as the children go about their business working in pairs, alone or with the teacher. The teacher watches the children and offers support as she deems it necessary. She carries a clipboard with her as she slowly moves about the room. (Observation Notes, Bridget: visit 2)

During the first observation visit, Bridget began reading a story to three children. The book was about gravity, and as she read she elicited the children’s responses about how objects fall. They would excitedly say, “Down! They fall down!” By the third page of the book, her group had grown to seven children all gathered around her and listening to the story. As the story continued, she asked students “Why do things always fall down and not fall up?” When they got to the page that explains that it is because of a force on our planet called gravity, she had the students repeat the word “gravity” with her. As the story continued (and about nine minutes later), it became more about experiments to try, and a few of the students lost interest. Recognizing this, Bridget offered students the opportunity to go choose other work if they wanted to. Two of the students immediately took this opportunity and left the story to find other activities to do. A couple of pages later, another student also took this opportunity. When Bridget finished reading the book, she thanked one of the remaining students for bringing it to her to read. Both the story and the way that Bridget engaged them in it are demonstrative of how she engaged her young and very active students in their development of language and literacy.

Assessment Domain. Bridget discussed using observation as her primary method of gathering evidence about her students’ learning. She said she would take careful notes
on what activities they were doing and how they were doing them. She also shared that she would have meetings with her co-teacher so that they could understand each other’s insights on the individual children and how they could be on the same page to teach and support them. Bridget shared that, in addition to observation, she had checklists that she would refer to and she would consider the students’ work samples. Bridget said that she used the checklist so that she would know which materials to move the children on to in the prescribed sequence of their curriculum. Bridget’s analysis of children’s learning seemed to focus on whether they were progressing in a sequence, more than on how they were using vocabulary to develop content understanding. This suggests an average range on the associated assessment rubric. The edTPA also recognizes that meaningful feedback goes beyond describing how to use feedback and guides children in a manner that encourages them to use feedback to guide their own learning. Bridget shared language in the interview that would be consistent with this indicator, “I am always talking with the children. It is very personal. I will say things like: I noticed this is tricky. What can we do differently?” (Interview, Bridget, 2013).

**Bridget’s Reflective Practices.** Bridget reported to be someone who likes to “talk it” as she reflects on her teaching practices. She said that reflection was an ongoing part of everything she does and that she often “plays out” her day in her head and thinks about what she could do differently. A few of Bridget’s responses regarding reflective practice highlighted thinking about teaching at a surface level and in a more reactive way, as in thinking about what she could have done differently. However, more of her responses were consistent with pedagogical reflection, as suggested in her response, “reflection is a means to consider what one needs to do in order to be a better teacher” (Interview,
Bridget, 2013). She also asserted that reflection was about considering yourself in a specific situation, “Taking the time to think about how you are in the situation. Taking the time to look at yourself and how your actions and behaviors are affecting your students” (Interview, Bridget, 2013). These considerations of the relationship between her teaching practices and student learning are indicative of pedagogical reflection.

In describing an example of how professional reflection had helped her in her teaching practice, Bridget discussed thinking about her students and who they were and what they needed. She shared an example of one of her students who absolutely loved anything to do with art and specifically painting. However, this young student was really struggling to recognize numerals. Bridget shared that she created a paint-by-number activity for this young learner, where the child would roll a die that would show four dots and then paint the parts of the activity that had the numeral “4” on them. This example highlights Bridget’s consideration of student perspectives in her decision-making and her acknowledgement of what each student brought to the learning process. Both of these are indicative of reflection at a pedagogical level.

**Summary of Bridget.** Bridget’s teacher quality, as determined by the edTPA framework, was between the average and highest range. The relationships found between the typologies for Bridget were primarily in the function and means–end forms, with reflective practices being used for teaching quality and as a way to do quality teaching. While not dominant, there were hints of an attribution relationship between the typologies for Bridget in that there were loose connections suggesting that reflective practice was a characteristic of her teaching quality.
Case Study of Abby

Abby had just graduated in the spring of the previous year with her Bachelor’s degree in early childhood education. She had spent the previous school year as a teaching intern at two other schools—one in the first semester and another in the second semester. At the time of the study, she was in her first semester of teaching. Abby’s students were in grades one through three.

Abby’s Teaching Quality – edTPA.

Planning Domain. In considering what her students knew, what they could do, and what they were learning to do, Abby indicated that, developmentally, her students were mostly independent and that they were very good at problem solving and using their resources as well as helping each other when they did not immediately know the answer to a question. She also shared that,

Academically, my students are on grade level. Half of my students are reading below grade level. Because of this, my primary focus for my students is reading instruction, understanding of phonics, phonemic awareness, and fluency.

(Interview, Abby, 2013)

Abby planned and designed several instructional strategies, learning experiences, and assessments to support children's language and literacy development. These included individualized weekly spelling quizzes as well as reading groups that focused on characterization, plot, types of literature, and connections to literature. These strategies were designed with the incorporation of manipulatives, and formal lessons and demonstrations were followed by students’ independent practice.
Abby also discussed the importance of considering whether or not a lesson was developmentally appropriate. She also asserted that it was important to look at the human side of children and their need to feel successful. This, she said, required her to create lessons that were designed to scaffold in a way that would allow her students to succeed.

**Instructional Domain.** My visit in the initial observation of Abby’s classroom revealed a variety of high level and challenging learning activities. There was one child who was working on revisions to some writing. At another table, a child was multiplying three digits by two digits using a checkerboard and beads, a type of manipulative. Additionally, at a corner table in the classroom, another child was journaling about his math work. Meanwhile, Abby was working with a small group on a spelling activity. As she worked with a small group she was positioned in a manner that would allow her to see all arts of her classroom and all the children working in it. There was also evidence that Abby’s instruction contained subject-specific pedagogy. This was observed in the language arts and science work of one of her students:

The student is sitting at a desk writing on a lined piece of paper containing a title, “Science Journal: Magnetic Forces.” The student has written his name and date at the top and writes down (in sentence form) his experience with the magnetics kit. He writes about how the magnets repel, “When I tried to push the like ends of the magnets together it wouldn’t let me. This is called repel.” (Observation Notes, Abby, visit 2)

While the student’s expressive and written language skills are still developing, this entry and activity linked the science content with meaningful writing. This connection highlights strong subject-specific pedagogy, demonstrating that Abby had set up a
learning activity in which interdisciplinary contexts deepened and extended the child’s learning and literacy.

**Assessment Domain.** Abby stated that she gathers evidence and makes sense of what children have learned by checking their daily work and by observing them while they are working. While formal grades are not a practice at the school, artifacts revealed that she tracked student performance with both qualitative and quantitative data. When asked about how she provided meaningful feedback to her students, she said,

I have found the more immediately that I can give feedback, the better it translates for them. Students also seem to better internalize feedback when it is verbally communicated rather than with written (Interview, Abby, 2013).

Abby used both the qualitative and quantitative data to plan the next steps for instruction. She shared that while she had a sequence for what she wanted to teach, she was not married to a specific date that she may have planned for particular lesson. Further, she reported that if she saw students were struggling with a particular concept, she would stay on that concept until they were ready to move on. She feels it is more important to “move slowly and thoroughly than to move a child forward before they are ready” (Interview, Abby, 2013).

**Abby’s Reflective Practices.** Abby considered reflection as a constant and integral part of her planning and instruction. She said she questions herself often about her daily teaching practices. Further, she commented that it was not until weekends and school breaks that she could really sit down and translate her reflections to paper. She reported that this allowed her to go back and make changes to her plans for instruction and for addressing classroom environment issues. For Abby, being a reflective
practitioner meant being flexible, doing whatever it takes, being thoughtful, and “following the child.” Typically for her, being a reflective practitioner meant constantly looking at ways to teach a particular topic and presenting information in a variety of ways. This was indicative of reflecting at a pedagogical level and of her willingness to identify alternative ways of representing ideas and concepts to her students.

In the portion of the interview regarding professional reflection, Abby revealed that the school’s professional learning community was willing to challenge the status quo and commonly held beliefs by sharing a laundry list of questions the community of teachers were currently asking themselves as they reflected:

Some reflection topics that have come up recently: Why do we give homework? What does the homework look like? Are we giving homework that is most beneficial to the child and what are some practices that should be revised? What is our school mission and philosophy? How are we translating this philosophy into the classroom? What consistency exists from classroom to classroom in terms of topics covered? How can we develop consistency across the three lower elementary classrooms? Do we need to all teach the same thing at the same time to achieve this consistency or is it the end result that matters?

(Interview, Abby, 2013).

This challenge of the status quo is indicative of reflective practices at the level of critical reflection. While Abby gave credit for these questions to the community of teachers at the school, she was the only participant to bring these forward and to make the connection between these and what communities of reflective practitioners do.
Summary of Abby. Despite being a first year teacher, Abby scored in a high range on the edTPA and in the levels of reflective practice. The Universal Semantic Relationships identified in Abby’s case were those of function, means–end, and attribution. The relationship most highly identified was that of function. Abby’s responses more often demonstrated the use of professional reflection for heightening teaching quality.

Case Study of Heidi

Heidi was in her ninth year of teaching and held her Master’s degree in early childhood education. She was teaching in a classroom made up of preschoolers and kindergarteners. While she was in a co-teaching situation, her co-teacher was not a participant in this research study. Additionally, and as in the case of Theresa and Bridget, her learning environment was divided by the building’s architecture, and she and her co-teacher spent very little time in the same space.

Heidi’s Teaching Quality – edTPA.

Planning Domain. Heidi recognized the wide span of knowledge and abilities that the young students in her classroom had. She reported that she wanted to instill independence and respect and all of her children, and that if she did that, everything else would just fall into place. She spoke of wanting the children to have confidence in themselves and have a love for learning and the natural curiosity. In responding to a prompt regarding instructional strategies that she would design to support children's language and literacy development, Heidi responded that her role was primarily to make things available to children so that they could explore and follow their hearts. She justified why the learning activities she planned were developmentally appropriate, using
examples of the children’s personal assets and interests. However, in the interviews, she was not inclusive of the children’s prior learning. Upon reviewing her lesson plans, there was some evidence that Heidi did loosely consider prior learning in determining her next instructional steps in that some of her observations were marked over with notes about what activity she would next present to the child. The designed assessments that Heidi described in the interviews were inclusive of work samples and of personal communication.

Instructional Domain. In reviewing artifacts, and as found during observations, Heidi showed good use of an interdisciplinary learning experience to promote children’s development of language and literacy. She designed an activity containing small plastic spiders in an activity designed for understanding numeracy. The activity was labeled “Counting Arachnids.” This was seemingly connected with a science unit on comparing insects and arachnids, which was observed in the teacher’s lesson plans and in the science area of the classroom. In observations, Heidi gave simple messages to children, saying, “Oh, tell me more about that” (Observation notes, Heidi, visit 2). These simple messages were attempts at eliciting children’s responses related to their understanding of language and literacy. However, at no point in these interactions did she build on the children’s responses or facilitate interactions among the children. This resulted in a mid-level score on this indicator in the domain of instruction.

Assessment Domain. In the interviews, Heidi discussed analyzing specific examples of student work with her co-teacher in order to see what the children had accomplished so that they could guide them accordingly. This aligned with the mid-to-high level range of the rubric addressing analysis of children’s learning. When asked
about how she provided meaningful feedback to her students, Heidi responded that her feedback commonly included phrases and questions like, “great job”, “I see”, “Are you proud?”, and “How do you feel?” This was also observed during visits to her classroom. The edTPA rubric calls for feedback to be related to learning objectives, accurate, and inclusive of both strengths and weaknesses. Heidi’s use feedback fell on the low end of the rubric, as it did not contain any of these elements.

**Heidi’s Reflective Practices.** In her description of how she used reflection in her professional practice, Heidi discussed it as a part of the team meetings with the other preschool and kindergarten teachers at the school when discussing what was working and not working. Generally, her responses to interview questions were vague and at times difficult to follow. Evidence of this can be found in one such response to the role of reflection in her practice,

> I guess it is sort of like a learning tool for myself, because when you reflect on your work you are reflecting on the children's work. You were thinking about how to work together and what you are doing together in the classroom.
>
>(Interview, Heidi, 2013).

Prompts to elicit more content or clarity from Heidi regarding reflective practices yielded very little and were largely unsuccessful. However, there were some responses that indicated she was at times in the range of a pedagogical reflection, as in one where she described a student who was struggling with follow up on a particular activity, despite being capable. Heidi said that it was when she reflected on the student’s struggles, that she realized the time of day and location in the room might be contributing to the
student’s frustration. Based on these reflections, Heidi adjusted those factors and the student responded successfully.

**Summary for Heidi.** Overall, Heidi scored in the average range of teaching quality, with a particular weakness in assessment. Her reflection level was in the pedagogical range, yet with scarcely enough indicators to place her in that range, she was close to the border of a surface level of reflection. Universal Semantic Relationships (Spradley, 1977) were found primarily in the areas of function and means–end, with an emphasis on function. Interview responses, observation data, and artifacts revealed that Heidi looked at reflection primarily as a tool to that could be used for improving teacher quality.

**Case Study of Rebecca**

Rebecca had been teaching for seven years and held her Bachelors’ degree in elementary education. She was teaching in a multi-age classroom with students in grades one, two, and three.

**Rebecca’s Teaching Quality – edTPA.**

**Planning Domain.**

Rebecca’s use of knowledge about children to justify instructional plans was vague and did not take into consideration the students’ prior learning or personal assets. While she discussed understanding that her students had varying academic levels due to their ages, backgrounds, and learning differences, she was not able to communicate where they were developmentally. In her interview response regarding what she wanted children to learn and what she saw as the most important understandings and core concepts to develop, she replied, “My goal is that my students leave prepared for the next
level.” While this goal is not a bad one, when it stands by itself as evidenced in her response and artifacts, the associated score on the rubric is in the low-to-average range.

Data collected in Rebecca’s case did not reveal that she used her knowledge of child development in meeting children’s learning needs. Rebecca’s plans were well written and scripted but did not attend to learning differences in her classroom. Rebecca also seemed to focus more on who she was as a teacher than on what her children needed. When asked how her teaching was informed by her knowledge of children, she replied,

I feel fairly knowledgeable about children. I have my bachelor’s degree in elementary education, my 6-9 Montessori credential from AMS, and many years of experience working with children in a variety of classroom environments.

(Interview, Rebecca, 2013)

**Instructional Domain.** During the initial observation visit to Rebecca’s classroom, there were three male students working on a dinosaur research project. Their project spanned a large table that also had several books about dinosaurs on it. The students’ project included a “book” they were creating and a chart identifying the specific era in which specific dinosaurs existed. Both pieces of the project contained student writing and drawings. The students working on the project were highly engaged. This engagement promoted the language and literacy development in more than one modality and supported the active nature of children’s learning. On the aligned instructional rubric, this is consistent with the average-to-high level of performance range.

Although it was an outlier, there was also an observation of Rebecca’s disrespectful interaction with a student. The student was apparently struggling with a puzzle and went to the teacher for support. Rebecca’s response was: “It is a really hard
puzzle, that’s why it says challenge on it” (Observation narrative, Rebecca, visit 1). There was a sarcastic and impatient tone to this message that I took note of as the student went back to their desk and slumped in their seat. While an outlier in its extremeness, the two observations consistently revealed that while Rebecca demonstrated a basic level of respect for the children, she also oversaw a learning environment that served primarily in a manner to control children’s behavior. This resulted in a score on the low-to-average range on the associated rubric.

**Assessment Domain.** In the assessment domain, Rebecca’s emphasis seemed more connected to improving her delivery of content and less connected to improving instruction to better guide children’s learning and development: “There have been a few lessons this year that seemed great when I planned them, but proved to be confusing to the children. I kept notes so that I can modify next year” (Interview, Rebecca). While she is at least concerned with improving in the next school year, it was not evident how she would address a lesson that did not work with her current students. At one point, Rebecca did indicate that she used personal communication to provide feedback to her students. While this is a positive, it was noted that in her artifacts and responses Rebecca only spoke of providing feedback about weaknesses and not the strengths that students exhibited. This also resulted in a low-to-average score on the associated rubric.

However, her analysis of children’s learning contained both qualitative and quantitative evidence to demonstrate patterns of learning:

I frequently observe the children as they work as a means of informal assessment. Watching them in their approach to work gives me a lot of insight into how well they understand. I also use traditional assessments such as spelling tests, timed
tests of basic math facts, and the Slosson’s reading inventory to monitor progress. With our 3rd level students this year, we are using a weekly math review book to track retention of skills. I also keep samples of student writing so that I can see progress throughout the three-year cycle (Interview, Rebecca).

**Rebecca’s Reflective Practices.** Out of the six interviews conducted, only one response was given that was clearly recognized as consistent with the definition of pre-reflection. In her response to the prompt regarding the role of reflection, Rebecca said: “Sometimes, I feel like I’m on autopilot and all I can do is to get through the day” (Interview, Rebecca, 2013). Operating “in survival mode, reacting automatically without consideration of alternative responses” (Larrivee, 2008, p. 355) is one of the describing behaviors under the level of pre-reflection in *The Survey of Reflective Practice*.

A few of Rebecca’s responses demonstrated that while she was reflecting on her teaching, her reflections were not the type of reflections that typically recognize a larger pattern or lead to a longer-term plan. In the interview regarding how one uses reflective practice, she discussed wanting to “make changes when and if” she “felt” they were necessary. This statement was not followed up with any emphasis on emerging patterns in student learning or on what would be best for her students’ learning and development. Further, and as indicated in *The Survey of Reflective Practice*, these reflections do question some specific teaching techniques, but do not address larger scale practices or behaviors on the part of the teacher. This lack of emphasis on student learning, emerging patterns, and large scale practices are all indicative of reflecting at a surface level.

**Summary for Rebecca.** Rebecca’s overall teaching quality was in the average range. Her reflective practice was in the low range of pedagogical reflection. The
Universal Semantic Relationships found between her teaching quality and a reflective practice were those of function and means–end, with an emphasis on function. Rebecca’s responses between the two typologies quite consistently identified as the use of reflection for improving teaching quality.

**Crosscutting Observations and Summary of Key Findings**

The findings of this research study were in response to the research questions concerning the relationship between edTPA’s teacher quality levels and Larrivee's level of reflective practice as manifested by teaching practices of six teachers. The framework employed for this study was Larrivee’s *Survey of Reflective Practice* (2008). Participating teachers were employed as early childhood teachers at an independent Montessori school in the Greater Cincinnati area. While all female, the participants represented a range in ages and professional training and experience. This study employed a case study design in order to gain an in-depth understanding of the lived experiences of the participants. Additionally, a case study design was appropriate because the participants’ behaviors were not manipulated in this study (Yin, 2003). Instruments used were surveys, rubrics, observation narratives, semi-structured interviews, and artifacts. Qualitative data on reflective practice and teacher quality in all three domains was found to be rich in description.

**Discussion**

In this multiple case study, a strong relationship was found between levels of reflective practice and teacher quality scores from the edTPA instrument. Two participants, Annette and Theresa, were identified through their interview responses as having reached the highest level of reflective practice: critical reflection. Their teaching
quality, as determined by the edTPA instrument, was in the highest range. Additionally of interest is that Annette and Theresa both held Master’s degrees and were the teachers who had the most years of teaching practice among all participants.

However, this did not mean that the least experienced teacher, with a Bachelor’s degree, scored at the lowest levels of reflective practice and teacher quality. In fact, that the youngest teacher in this study, Abby, who held a Bachelor’s degree and was a first year teacher, consistently scored in the average-to-high range of reflective practice and teacher quality. It may be of further importance to note that the researcher thought it was possible that Abby graduated from a teacher education program that field-tested the edTPA instrument for pre-service teachers during her senior year and the internship phase of training. Accordingly, the researcher inquired about this possibility and found out that she had indeed used the edTPA instrument in its entirety and had completed all of the edTPA tasks and uploaded them for scoring in the spring of 2013.

Heidi and Rebecca, who both had scores in the lower levels of pedagogical reflection, also had lower ratings in teacher quality as determined by the edTPA. Their responses shared a common theme of reflecting on practice for short-term purposes, using reflections more immediately (instead of longer-term), and making planning and instructional decisions based on their own feelings and hunches (instead of knowledge or theory).

Another interesting finding is the way the teachers’ specific edTPA scores separated them into two distinct groups. One group was made up of Theresa, Annette, Abby, and Bridget all having scores in the highest ranges of teacher quality. Bridget and Heidi made up a separate group with scores that were overall in the average range. This
spacing between these two distinct sets of scores of teacher quality was also evident in the participants’ semi-structured interview responses in terms of indicators of their levels of reflective practice.

Using Spradley’s (1979) Universal Semantic Relationships afforded the opportunity to consider how the typologies of reflective practice and the typologies of teacher quality manifested themselves in the cases of each of the six participants. In the researcher’s analysis, none of the data from the typologies were representative of Spradley’s strict inclusion or rationale. All six of the participants’ data demonstrated relationships of means–end and function, although these were demonstrated at differing degrees. Three of the participants in the highest range of teacher quality demonstrated relationships of attribution and—including Annette and Theresa, who were identified as being in the highest level of reflective practice—critical reflection.
Chapter Five: Summary, Conclusions, and Recommendations

Introduction

This final chapter delivers a summary of this dissertation study’s purpose, design, procedures, and findings. Subsequently, the researcher will present conclusions from the findings in order to answer the study’s research question: What is the relationship between the edTPA’s teacher quality levels and Larrivee's level of reflective practice as manifested by six early childhood teachers? This presentation will include the research study’s limitations. This chapter (and paper) will close with recommendations for practice, policy, and future research based on the findings and conclusions of this study concerning the relationship between reflective practice and teacher quality.

Summary

This research study examined the relationship between the edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by six early childhood teachers. This relationship was considered in light of the widely discussed needs of improving teacher quality and of developing reflective practitioners in the field of education. Larrivee’s definition of reflective practice posits that a teacher’s knowledge, character and abilities that stem from a reflective process for making decisions and solving problems (2008). Linda Darling-Hammond’s definition of teacher quality was used also for this study. This definition of teaching quality includes the teacher’s abilities to design and manage learning activities efficiently, communicate well, and reflect on his or her practice in order to grow as a professional (2006).

It has been widely reported that teacher quality has a strong effect on student achievement (Darling Hammond, 2000; Seidel & Shavelson, 2007; Strong, Gargani, &
Hacifazlioglu, 2011). Additionally, because it is often recognized as a characteristic of teacher quality, reflective practice is often promoted in the preparation and development of teachers (Del Carlo et al., 2010; Furtado & Anderson, 2012; Hatton & Smith, 1995; Roberts, Crawford, & Hickmann, 2010). While there are a significant number of studies that reveal a positive impact of programs containing components of reflective practices, studies that exhibit a connection between existing levels of teacher quality and reflective practice are lacking in the literature. This lack of empirical studies, in consideration of the stress that is placed upon developing reflective practices in teachers, is problematic and led to the need for an examination of the existing relationship between these two constructs. The researcher adopted the framework of The Survey of Reflective Practice in considering reflective practice.

The main research question of the present study is: What is the relationship between edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by teaching practices of six teachers? The study employed a multiple case study design in order to best understand and to report on the six participating teachers and their unique experiences (Merriam, 1998). A purposive convenience sampling (Bernard & Ryan, 2010) of six early childhood teachers was used from within an independent Montessori school in the greater Cincinnati area with enrollment of 125 students from preschool through grade six.

The researcher employed the use of surveys, observations, artifacts, and semi-structured interviews to collect a variety of rich qualitative data. Instruments used to evaluate and consider the data were The Survey of Reflective Practice and the specific edTPA for early childhood teachers. Findings regarding this study’s question indicated a
very strong relationship between reflective practice and teacher quality. Additionally, among the six participants, the two with the most experience and education were found to be at the highest level of reflective practice and in the highest ranges of teacher quality. Of further interest is the way the analyzed data separated the participants into two distinct groups of teachers – one with scores in the higher ranges of teacher quality and reflective practice and the other in the average range of both constructs. The data revealed that of the three domains of teacher quality (planning, instruction, and assessment), assessment stood out as the domain that most consistently aligned with indicators of overall teacher quality and with increased levels of reflective practice.

Finally, conclusions were drawn regarding the types of relationships that were found in analyzing the data. Using Spradley’s (1979) Universal Semantic Relationships, it was found that, while at varying degrees, all six of the participants’ data demonstrated relationships of means–end and function and, further, that three of the participants’ data demonstrated relationships of attribution between reflective practice and teacher quality.

**Conclusions**

Through this research study and its findings, several conclusions have been derived in regards to answering the research study’s question: What is the relationship between the edTPA’s teacher quality levels and Larrivee's level of reflective practice as manifested by six early childhood teachers? These conclusions are initially drawn according to the major findings of the study. Following this, a summary of conclusions about the manifestation of the studied will be reported.

A relationship between teacher quality and reflective practice for participants. The findings of this study revealed a relationship between level of
reflective practice as determined by Larrivee’s (2008) *Survey of Reflective Practice* and of teacher quality as evaluated through the use of the edTPA early childhood rubrics. This was true both for teachers that engaged in higher-level reflection and for those who were at the lower end of the practice’s spectrum. In this study, the teachers with the highest levels of reflective practice were the teachers determined to be in the above average range of teacher quality ratings on the edTPA. Conversely, teachers with middle to lower levels of reflective practices were determined to be in the average range of teacher quality on the edTPA. This finding aligns with previous research regarding the impact of professional development programs (that contain a component of reflective practice) on aspects of teacher quality, which have found that reflective practices can positively affect a teacher’s practice (Furtado & Anderson, 2012; Killeavy & Moloney, 2010; Meier & Henderson, 2007; Moss et al., 2008; Rodgers, 2002).

**The role of experience and education.** A relationship was also observed between the number of years of teaching experience and educational level of participants and their level of reflective practice. Two of the teachers in this study were identified at the highest level of reflective practice (critical reflection). This was mirrored in the evaluations of their teaching quality via their interview responses, the researcher’s observations of their learning environments, and researcher viewed artifacts. In considering the demographic data of the participants, these two teachers were the oldest and most experienced. Additionally, the two teachers were from the group of three teachers who held Master’s degrees in education. Based on these findings, the researcher concluded that, among these participants and in this setting, teachers with more experience and education were more likely to be advanced reflective practitioners and to
exhibit higher levels of teacher quality. Thus, these teachers are more likely to reflect critically on their practice, including using reflective practices for longer-term purposes and for making decisions based on knowledge and theory rather than feelings.

While more experience was strongly related to a higher level of reflective practice and teacher quality, less experience did not necessarily correlate with lower levels of reflective practice and teacher quality. The first year teacher in this study, Abby, was also the youngest participant in this study. Her scores were consistently in the set of scores that revealed more advanced reflective practices and teacher quality. While she was less experienced, she may have had more (and more recent) experience with reflective practice through her exposure to the edTPA during her senior year, as the university she attended was a field-test site for the early childhood edTPA instrument. It was later confirmed that she had fully completed the tasks of the instrument, which would have included a significant amount of explicit reflection on practice.

**Variation in teacher levels across participants.** In reviewing the data from the six cases, two distinct sets of participants were identified. The first group – consisting of Theresa, Annette, Abby, and Bridget – was found to have teaching practices in the highest ranges of the edTPA. Alternatively, a second group – consisting of Bridget and Heidi – was found to have teaching practices in the average ranges of the edTPA. For this group of early childhood educators, there appears to be a group who is more advanced in their degree of teacher quality and a group that is less advanced. It is of further interest that Bridget and Heidi, among all the participants, were the only participants to have indicators consistent with pre-level or surface level reflective practices. This finding suggests that, although a group of teachers may be under the same leadership, dealing
with the similar populations, and being afforded the same professional development opportunities, they may be at various levels of reflective practice and teaching quality. With this variance in teacher practice and performance, one-size-fits-all professional development programs may not be meeting the professional development needs of all teachers in a single school building or department.

**Role of assessment in effective teaching.** In this study there appeared to be a link between teacher-reported assessment practices and edTPA teacher quality and reflective practice. In analyzing and considering the data, it was noted that interview responses regarding assessment were strongly related to overall teacher quality scores and to levels of reflective practice. Interestingly, key descriptors of teacher quality in the domain of assessment are to: make sense of what children have learned, provide meaningful feedback to guide children’s’ learning, and use gathered evidence to plan next instructional steps, as justified by educational research or developmental theory. These descriptors are laced with activities consistent with reflective practice. If an educator is employing sound and authentic assessment in their practice – by finding patterns in children’s learning, applying meaning to those patterns, planning based on found evidence, and employing their professional knowledge – then they are applying the tools of professional reflection in their assessment practice.

This alignment of participants’ levels of reflective practice with teacher quality in the assessment domain shows that the participants who were strongest in assessment were those who were the most highly reflective teachers. This suggests a strong link between quality assessment practices and reflective practice. In consideration of the reflection-laced indicators of best practices in assessment, it seems that reflective practitioners may
have an advantage in developing their abilities in authentic assessment as outlined in the assessment domain of The edTPA.

It should be noted that, while the domains of planning and instruction were not as strongly aligned with reflective practice, they were still very consistent with it. This indicates that each of these domains should also be considered as positively related to reflective practice. In reviewing the language on these two domains, the researcher found that the edTPA rubrics contained less language aligned with reflective practices. This may point to the reason that the evaluations of participants’ in these two domains were less consistent with scores and indicators of reflective practice when compared to the evaluations of participants’ in the assessment domain.

**Types of relationships.** In this study, Spradley’s (1979) Universal Semantic Relationships provided a way to discover and consider the relationship between edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by the teaching practices of six teachers. In the analysis, none of the data from the typologies were representative of Spradley’s (1979, Universal Semantic Relationships) strict inclusion (X is a kind of Y) or rationale (X is a reason for doing Y). All six of the participants’ data demonstrated relationships of means–end (X is a way to do Y) and function (X is used for Y), although these were demonstrated at differing degrees. This analysis shows that for all of the participants in this study, reflective practice was a way to practice quality teaching. Further, it shows that the participants all used and employed professional reflection for the purposes of practicing quality teaching.

Three of the participants in the highest range of teacher quality demonstrated relationships of attribution (X is a characteristic of Y). These included Annette and
Theresa, who were identified as being in the highest level of reflective practice, critical reflection. These two were also in the above average ranges for teacher quality. In this study, it was then likely that if a high level of reflective practice was present, a teacher’s reflective practice was actually a characteristic of their teaching quality. This finding suggests that when levels of reflective practices are high, they are also internalized and become more than a tool being used to improve one’s teaching quality. The reflective practices become a part of who the teacher is, and they are a meaningful part of their teaching in every domain of teaching quality.

Summary of Conclusions. In considering the cases in isolation and their associated crosscutting themes, a few over-arching conclusions can be drawn. These conclusions provide answers to the study’s research question: What is the relationship between the edTPA's teacher quality levels and Larrivee's level of reflective practice as manifested by six early childhood teachers? In this setting and among these participants, teachers who were identified as highly reflective practitioners were found to have a high degree of overall teacher quality. Additionally, these high performing teachers were more likely to do well in each of the teaching quality domains and particularly well in the assessment domain. This is not surprising as the assessment domain, as revealed in the language of the edTPA assessment section, contains many reflective components in the thinking and behaviors associated with it. For this group of teachers, there were two distinct groups: teachers who were more advanced in their degree of teacher quality, and those less advanced. This is indicative of the varied levels of reflective practice and teacher quality that can exist in a single school setting. Teachers with more years of teaching experience and higher levels of education were more likely to be identified in
the highest level of reflection (critical reflection) and to attain evaluations of higher teaching quality. In this study, these were the teachers that most considered long term purposes and policies and applied knowledge of theory and development to their decision making. Based on the totality of these conclusions, it is determined that, in this setting and among these six teachers, a strong and positive relationship exists between reflective practice and teacher quality. For all of the participants, that relationship can be described in terms of reflective practice as both a way to practice quality teaching and as an employed activity for doing so. Further, and for those who had the highest level of reflective practices, reflective practice itself was more than a means to an end; it was an attribute and characteristic of their high quality teaching.

Limitations

While the presented cases, findings, and accompanying conclusions in this research study show a positive relationship between reflective practice and teacher quality in totality, there are a few limitations to this study, discussed below.

Setting. The researcher had worked for more than twenty-five years in a Montessori school, both as an early childhood teacher and as a school administrator. While the study was not conducted in the same school, the Montessori setting represents her professional background. She carries a deep respect for the method, and while she made every effort to bracket her connections and feelings for this educational approach, her possible bias should be noted.

Reliance on interview data to determine reflective practice levels. In order to determine levels of reflective practice, individual, semi-structured interviews were conducted for each participant. While the interview data revealed connections to
Larrivee’s (2008) indicators of reflective practice, there is the possibility that, during the 45 minute interview sessions, participants were not able to fully elaborate on their experiences with reflective practice. This may have resulted in indication of reflective practices being underestimated. Further, some of the indicators of reflective practice might have been better assessed through observation and through questions based on researcher observations.

**Use of the edTPA instrument.** The edTPA instrument is designed for use with pre-service teachers to determine readiness for practice. It is also intended to be a process in which they submit written work, artifacts, and video clips of learning segments they design to be aligned with the explicit tasks and rubrics of the edTPA. While the indicators of the rubrics are consistent with what pre-service teachers need to develop, they are also consistent with teacher quality for practicing teachers. It is important to note that the teachers in this study were not able to select specific learning segments to be evaluated on, nor were they responding to prompts with an understanding of the criteria to which their responses were being judged. While the data from these evaluative instruments were consistent within this research study, it cannot be compared to the scores of pre-service teachers outside of this study.

**Implications for Policy and Practice**

This multiple case study demonstrated a strong, positive relationship between reflective practice and teacher quality. Given of the indicated strength in this relationship, it would benefit practitioners to consider their own reflective practice and to make a commitment to inquiring more about how they can use reflective practice as a means for improving their teaching.
Those charged with the professional development and growth of teachers should also take note of the importance of reflective practice and devote time within the school day to establish avenues for teachers to engage in meaningful and individually targeted purposeful reflection. Additionally, schools and districts should consider policies that encourage and support formal professional development activities that provide teachers with formal strategies for improving their professional reflection. In these types of activities, teachers should be able to view and discuss forms of reflection that are desirable. These policies should also make time and financial resources available to support the development of teachers’ reflective practices in lieu of delivering prepackaged, one-size-fits-all programs or workshops that often align with just one domain of teaching.

Reflective practice, in this study, was shown to have a positive relationship with edTPA-determined teaching quality in all domains, and most notably in the assessment domain. Thus, an emphasis on the use of reflective practice in authentic assessment practices may be an effective way to impact the other two domains of teaching quality. If teachers are able, through the use of reflection activities in their assessment practice, to fully understand what their children have learned, to use that understanding in their future planning, and to instruct accordingly and as supported by research and theory, then all domains of teaching quality will be significantly impacted.

Reflective practice also seemed to have an empowering effect on the teachers who practiced it in this study. In responding to their students’ learning needs, and looking to research and theory bases to make decisions, they were actively developing and furthering their teaching quality. Further, they looked to their own thoughts and behaviors
and were unafraid to question their practices and commonly held beliefs in their work as early childhood educators. In this way, the teachers played a large role in their individualized and real-time professional development and were not simply waiting to have professional development cast upon them at a seminar or workshop on an isolated in-service day. This heightened and active role, played out with higher frequency and consistency, will result in a greater impact than a role of passivity in a short-lived encounter (Desimone, 2009). Considering the effect that reflective practice has on teaching quality, policy makers would be wise to promote the reflective practices of teachers in both their recommendations as well as in their appropriations of funding.

The Survey of Reflective Practice may work best when it is scored according to a larger data set consisting of a combination of teachers’ thoughts and behaviors across a longer period of time. Additionally, if teachers or professional developers decide to use this tool, it may be best to use it more explicitly. For example, if a teacher were to take the survey, they might base their responses on a series of videotapes of instructional practice and on written documentation. Even better, this would be completed under the guidance of a third party, who may clarify the meanings of survey indicators and may challenge teachers’ responses with thought-provoking questions. In this way, the survey may more accurately mirror the thoughts and behaviors of those who are taking it. Additionally, a teaching peer or professional developer could also support this growth with videotaped series or live observations. The tool would then be used as it was designed: as a mechanism for coaching and supporting the reflective practices of teachers.
An unexpected possibility arose from the case of Abby in this study. Abby, the first year teacher who had completed the edTPA in the previous school year, was in at a high level of pedagogical reflection and the higher range of teacher quality in all domains: planning, instruction and assessment. Her high quality indicates that the edTPA may indeed be useful in promoting reflective practices and teacher quality from the beginning of one’s teaching career. Professional developers would be wise to look into using the edTPA as a means for providing targeted, real-time and meaningful professional development to the teachers they support. Further, considering the problematic effects of overly challenged first year teachers, policy makers might continue incorporating effective and explicit reflective practice activities into teacher preparation programs and licensure requirements.

**Implications for Future Research**

Findings in this study provide needed research on links between existing levels of reflective practice and how they are related to existing levels of teacher quality determined by the edTPA. However, more research is needed given the dearth of studies that measure an existing relationship between these constructs. In consideration of this study’s limitations, it is further recommended that future studies be larger in scope and size and occur in multiple diverse educational settings. Additionally, future studies should explore preservice and practicing teachers at various levels in their growth and professional development.

Considering the expanding role that reflective practice is playing in preparation and development of teachers, this study’s findings indicating that reflective practice at the highest levels is significantly aligned with the highest levels teacher quality can serve as
an assurance that this role is indeed justified. Alternatively, if future research finds that this relationship does not make these connections, then policy makers and professional developers will need to reconsider the role the development of reflective practice plays in the training and development of our country’s teaching force.

Additionally, given that the edTPA has now been adopted in 34 states (and more states are likely to adopt it) and contains a scope that even veteran teachers may struggle to master, research on the expansion of professional development programs pedagogically aligned with edTPA is much needed. In the present study, the prior experience with the edTPA may have had a positive effect on the scores of teacher quality of the single first year teacher in the study. Given this, one wonders what possible effect the edTPA, which contains a significant degree of explicit and guided reflection activities, may have on in-service teachers. Research into this possibility may lead to increases in teacher quality in every classroom, not just those with novice teachers.
References


# Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner

## Facilitator Assessment

<table>
<thead>
<tr>
<th>Practice Indicators</th>
<th>Assessment Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LEVEL 1: PRE-REFLECTION</strong></td>
<td>Frequently</td>
</tr>
<tr>
<td>Operates in survival mode, reacting automatically without consideration of alternative responses</td>
<td></td>
</tr>
<tr>
<td>Enforces preset standards of operation without adapting or restructuring based on student responses</td>
<td></td>
</tr>
<tr>
<td>Does not support beliefs and assertions with evidence from experience, theory or research</td>
<td></td>
</tr>
<tr>
<td>Is willing to take things for granted without questioning</td>
<td></td>
</tr>
<tr>
<td>Is preoccupied with management, control and student compliance</td>
<td></td>
</tr>
<tr>
<td>Fails to recognize the interdependence between teacher and student actions</td>
<td></td>
</tr>
<tr>
<td>Views student and classroom circumstances as beyond the teacher's control</td>
<td></td>
</tr>
<tr>
<td>Attributes ownership of problems to students or others</td>
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<tr>
<td>Fails to consider differing needs of learners</td>
<td></td>
</tr>
<tr>
<td>Sees oneself as a victim of circumstances</td>
<td></td>
</tr>
<tr>
<td>Dismisses student perspectives without due consideration</td>
<td></td>
</tr>
<tr>
<td>Does not thoughtfully connect teaching actions with student learning or behavior</td>
<td></td>
</tr>
<tr>
<td>Describes problems simplistically or unidimensionally</td>
<td></td>
</tr>
<tr>
<td>Does not see beyond immediate demands of a teaching episode</td>
<td></td>
</tr>
</tbody>
</table>

| **LEVEL 2: SURFACE REFLECTION**                                                    | Frequently | Sometimes | Infrequently |
| Limits analysis of teaching practices to technical questions about teaching techniques |          |           |              |
| Modifies teaching strategies without challenging underlying assumptions about teaching and learning |          |           |              |
| Fails to connect specific methods to underlying theory                              |          |           |              |
| Supports beliefs only with evidence from experience                                |          |           |              |
| Provides limited accommodations for students' different learning styles            |          |           |              |
| Reacts to student responses differentially but fails to recognize patterns          |          |           |              |
| Adjusts teaching practices only to current situation without developing a long-term plan |          |           |              |
| Implements solutions to problems that focus only on short-term results             |          |           |              |
| Questions the utility of specific teaching practices but not general policies or practices |          |           |              |
| Provides some differentiated instruction to address students' individual differences |          |           |              |

---

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# Survey of Reflective Practice: A Tool for Assessing Development as a Reflective Practitioner

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<tr>
<td>Adapts teaching practices only to current situation without developing a long-term plan</td>
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<tr>
<td>Implements solutions to problems that focus only on short-term results</td>
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</tr>
<tr>
<td>Makes adjustments based on past experience</td>
<td></td>
</tr>
<tr>
<td>Questions the utility of specific teaching practices but not general policies or practices</td>
<td></td>
</tr>
<tr>
<td>Provides some differentiated instruction to address students' individual differences</td>
<td></td>
</tr>
</tbody>
</table>

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# Planning Rubrics

## Rubric 1: Planning for the Whole Child

**How do the candidate's plans support the active and multimodal nature of young children’s development of language and literacy?**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Candidate's plans are developmentally inappropriate or focus solely on one modality for learning.</td>
<td>Plans for instruction support language and literacy development using only one modality with little connection to the active nature of children's learning.</td>
<td>Plans for instruction build on each other to support language and literacy development through at least one modality with connections to the active nature of children's learning.</td>
<td>Plans for instruction build on each other to support language and literacy development through multiple modalities with clear connections to the active nature of children's learning.</td>
<td>Level 4 plus: Candidate provides clear examples of the interdisciplinary context in which the learning takes place.</td>
</tr>
</tbody>
</table>

- There are significant content inaccuracies that will lead to children's misunderstandings.
- OR
- Standards, objectives, learning tasks, and materials are not aligned with each other.

---

*Text representing key differences between adjacent score levels is shown in bold. Evidence that does not meet Level 1 criteria is scored at Level 1.*

---

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## Rubric 2: Planning to Support Varied Learning Needs

**How does the candidate use knowledge of the children to support children's varied learning needs?**

<table>
<thead>
<tr>
<th>Level 1</th>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>There is little or no evidence of planned supports. OR Candidate does NOT attend to requirements in IEPs and 504 plans.</td>
<td>The learning experiences are loosely tied to learning objectives and are presented in the same way to all children, with little consideration of differences in the children's learning approaches or needs.</td>
<td>The learning experiences include supports that are tied to the learning objectives and provide some opportunities for children with different learning approaches or needs to learn and/or demonstrate their learning. AND Candidate attends to requirements in IEPs and 504 plans.</td>
<td>The learning experiences include supports that are tied to learning objectives and promote the developmental needs of specific individuals or groups with similar needs. Candidate attends to requirements in IEPs and 504 plans.</td>
<td>Level 4 plus: Supports include specific strategies to identify and respond to developmental approximations or misunderstandings.</td>
</tr>
</tbody>
</table>
### Rubric 3: Using Knowledge of Children to Inform Teaching and Learning

**How does the candidate use knowledge of the children to justify instructional plans?**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
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<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
</table>
| Candidate's justification of learning tasks either is missing OR represents a deficit view of children and their backgrounds. | Candidate justifies learning tasks with limited attention to children's prior learning OR personal/cultural/community assets. | Candidate justifies why learning tasks (or their adaptations) are developmentally appropriate using:  
  - examples of children's prior learning  
OR  
  - examples of personal/cultural/community assets | Candidate justifies why learning tasks (or their adaptations) are developmentally appropriate using:  
  - examples of children's prior learning  
  - examples of personal/cultural/community assets | Level 4 plus:  
Candidate's justification is supported by principles from research and/or developmental theory. |

Candidate makes superficial connections to research and/or developmental theory.
Rubric 4: Identifying and Supporting Language Development

How does the candidate identify and support children's vocabulary development?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocabularies identified by the candidate in any inappropriate or not consistent with the central focus OR learning experience. OR Language supports are missing or are not aligned with the learning task.</td>
<td>Candidate identifies vocabulary vaguely related to the learning experience or central focus. Plans include general support for vocabulary development.</td>
<td>Candidate identifies vocabulary related to the learning experience and central focus. Plans include general support for vocabulary development.</td>
<td>Candidate identifies vocabulary related to the learning experience and central focus. Plans include targeted support for some children’s use of vocabulary.</td>
<td>Level 4 plus: Instructional supports are designed to meet the needs of children with different levels of language development.</td>
</tr>
</tbody>
</table>

*Developmentally appropriate sounds, words, phrases, sentences, and paragraphs that children must use or create to engage in the learning experience.*
Rubric 5: Planning Assessments to Monitor and Support Children's Learning

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The assessments only provide evidence of one mode of learning.</td>
<td>The assessments provide limited evidence to monitor children's active learning during the learning segment.</td>
<td>The assessments provide evidence to monitor children's active learning through at least one mode of learning during the learning segment.</td>
<td>The assessments provide evidence to monitor children's active learning through multiple modalities of learning throughout the learning segment.</td>
<td>Level 4 plus: The assessments are strategically designed to allow individuals or groups with specific needs to demonstrate their learning.</td>
</tr>
<tr>
<td>Assessment adaptations required by IEP or 504 plans are NOT made.</td>
<td>Assessment adaptations required by IEP or 504 plans are made.</td>
<td>Assessment adaptations required by IEP or 504 plans are made.</td>
<td>Assessment adaptations required by IEP or 504 plans are made.</td>
<td></td>
</tr>
<tr>
<td>Assessments are NOT aligned with the central focus and standards/objectives for the learning segment.</td>
<td></td>
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</tbody>
</table>
Instruction Rubrics

Rubric 6: Learning Environment

How does the candidate demonstrate a positive learning environment that supports children’s engagement in learning?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clips reveal evidence of unhealthy or disrespectful interactions between teacher and child or between children.</td>
<td>The candidate demonstrates respect for children. Candidate provides a learning environment that serves primarily to control children’s behavior, and minimally supports the learning goals.</td>
<td>The candidate demonstrates rapport with and respect for children. Candidate provides a supportive, low-risk social environment that reveals mutual respect among children.</td>
<td>The candidate demonstrates rapport with and respect for children. Candidate provides a challenging learning environment that promotes mutual respect among children.</td>
<td>The candidate demonstrates rapport with and respect for children. Candidate provides a challenging learning environment that promotes varied perspectives and promotes mutual respect among children.</td>
</tr>
</tbody>
</table>

OR

Candidate allows disruptive behavior to interfere with children's learning.
### Rubric 7: Engaging Children in Learning

#### Why does the candidate engage children in the active and multimodal nature of young children's development?

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the clip(s), children are observed in learning experiences that focus solely on one modality for learning. OR are developmentally inappropriate.</td>
<td>In the clip(s), children are participating in learning experiences that promote language and literacy development through at least one modality with vague support of the active nature of children's learning.</td>
<td>In the clip(s), children are engaged in learning experiences that promote language and literacy development in at least one modality that supports the active nature of children's learning.</td>
<td>In the clip(s), children are engaged in active, multimodal learning experiences that deepen and extend their language and literacy development in multiple modalities that support the active nature of children's learning.</td>
<td>In the clip(s), children are engaged in active, multimodal learning experiences that deepen and extend their language and literacy development and are embedded in an interdisciplinary context.</td>
</tr>
<tr>
<td>There is little or no evidence that the candidate links children's development with new learning. OR Links cause children to be confused.</td>
<td>Candidate makes vague or superficial links between children's development and new learning.</td>
<td>Candidate links children's development and prior academic learning to new learning.</td>
<td>Candidate links children's development; prior academic learning; and personal, cultural, or community assets to new learning.</td>
<td>Candidate prompts children to link prior academic learning and personal, cultural, or community assets to new learning.</td>
</tr>
</tbody>
</table>
**Rubric 8: Deepening Children's Learning**

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The candidate does most of the talking, and children provide few responses.</td>
<td>Candidate primarily asks surface-level questions and evaluates children's responses as correct or incorrect.</td>
<td>Candidate elicits children's responses related to their understanding of language and literacy.</td>
<td>Candidate elicits and builds on children's responses to promote their understanding and active development of language and literacy.</td>
<td>Candidate facilitates interactions among children so they can evaluate their own abilities to actively develop language and literacy.</td>
</tr>
<tr>
<td>OR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candidate responses include significant content inaccuracies that will lead to children's misunderstandings.</td>
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</tbody>
</table>
### Rubric 9: Subject-Specific Pedagogy

#### How does the candidate use interdisciplinary learning experiences to promote children's development of language and literacy?

<table>
<thead>
<tr>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning experiences seen in the clips promote language and literacy development with little to no attention to interdisciplinary connections.</td>
<td>In the clips, the candidate makes vague or superficial reference to interdisciplinary connections to promote language and literacy development.</td>
<td>In the clips, the candidate makes interdisciplinary connections to promote language and literacy development.</td>
<td>In the clips, the candidate makes interdisciplinary connections in ways that deepen children's development of language and literacy.</td>
<td>Level 4 plus: Candidate helps children make their own interdisciplinary connections in ways that promote the development of language and literacy.</td>
</tr>
</tbody>
</table>

OR

Materials used in the clips include significant content inaccuracies that will lead to children's misunderstandings.
**Rubric 10: Analyzing Teaching Effectiveness**

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>candidate suggests changes unrelated to evidence of children's learning.</td>
<td>candidate proposes changes that are focused primarily on improving directions for learning tasks or task/behavior management.</td>
<td>candidate proposes changes that address children's collective learning needs related to the central focus.</td>
<td>candidate proposes changes that address children's individual and collective learning needs related to the central focus.</td>
<td>level 4 plus: candidate justifies changes using principles of research and/or developmental theory.</td>
</tr>
</tbody>
</table>

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## Assessment Rubrics

### Rubric 11: Analysis of Children's Learning

**How does the candidate analyze evidence of children's learning?**

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<tbody>
<tr>
<td>The analysis is superficial or not supported by either sources of evidence or the summary of children's learning. OR The evaluation criteria, learning objectives, and/or analysis are not aligned with each other.</td>
<td>The analysis focuses solely on children's strengths OR needs, supported by the sources of evidence or summary of children's learning.</td>
<td>The analysis focuses on what the focus children's strengths AND needs and is supported by the sources of evidence. Analysis includes some differences in whole class learning.</td>
<td>Analysis uses specific examples from the sources of evidence to demonstrate patterns of strengths and needs for the focus children. Patterns are described for whole class.</td>
<td>Analysis uses specific examples from the sources of evidence to demonstrate patterns of learning—both quantitative and qualitative—for the whole class related to children's strengths and needs, and addresses interests that can be used to further their learning.</td>
</tr>
</tbody>
</table>
### Rubric 12: Providing Feedback to Guide Learning

#### What type of feedback does the candidate provide to focus children?

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Feedback is unrelated to the learning objectives OR is inconsistent with the analysis of children's learning. OR Feedback contains significant content inaccuracies. OR Feedback is developmentally inappropriate.</td>
<td>Feedback addresses only errors, needs, OR strengths generally related to the learning objectives. OR Feedback is inconsistently provided to focus children.</td>
<td>Feedback is accurate and primarily focuses on needs AND strengths related to specific learning objectives, although there may be greater attention to one than the other. Feedback is provided consistently for the focus children.</td>
<td>Feedback is accurate and addresses both strengths AND needs related to specific learning objectives. Feedback is provided consistently for the focus children.</td>
<td>Level 4 plus: Candidate provides feedback that will guide focus children to understand their own strengths and needs.</td>
</tr>
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### Rubric 13: Children’s Use of Feedback

**How does the candidate provide opportunities for focus children to use the feedback to guide their further learning?**

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<tr>
<td>Opportunities for applying feedback are not described.</td>
<td>Candidate provides a vague explanation for how focus children will use feedback to support subsequent learning.</td>
<td>Candidate describes how focus children will be able to apply feedback on their strengths and needs to support language and literacy development.</td>
<td>Candidate describes how she will support focus children to apply feedback on their strengths and needs to support language and literacy development.</td>
<td>Level 4 plus: Candidate guides focus children to generalize feedback to support further learning.</td>
</tr>
<tr>
<td>OR</td>
<td>Candidate provides limited or no feedback to inform children’s learning.</td>
<td></td>
<td></td>
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</tbody>
</table>
### Rubric 14: Analyzing Children’s Language Development

**How does the candidate analyze children’s use of vocabulary\(^{11}\) to develop content understanding?**

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</tr>
</thead>
<tbody>
<tr>
<td>Candidate identifies language use that is unrelated to identified vocabulary. OR Candidate does not support development of children's vocabulary.</td>
<td>Candidate provides evidence that children are introduced to vocabulary associated with the learning experience.</td>
<td>Candidate explains and provides evidence that children use the vocabulary associated with the learning experience.</td>
<td>Candidate explains and provides evidence of how children use the vocabulary to promote content understandings.</td>
<td>Level 4 plus: Candidate explains and provides evidence of vocabulary use and content learning for children at different levels on the developmental continuum.</td>
</tr>
</tbody>
</table>

\(^{11}\) Developmentally appropriate sounds, words, phrases, sentences, and paragraphs that children use or create to engage in the learning experience.
## Assessment Rubrics continued

### Rubric 15: Using Assessment to Inform Instruction

**How does the candidate use the analysis of what children know and are able to do to plan next steps in instruction?**

<table>
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<th>Level 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next steps do not follow from the analysis.</td>
<td>Next steps focus on procedural issues (repeating instruction, pacing, or classroom management issues) with little attention to the substance of learning.</td>
<td>Next steps propose general support that improves children’s learning related to: - language and literacy development - the active nature of young children’s learning</td>
<td>Next steps provide both general support for the group as well as targeted support to individuals or groups to improve their learning relative to: - language and literacy development - the active and multimodal nature of young children’s learning</td>
<td>Next steps provide both general support for the group as well as targeted support to individuals and groups to improve their learning relative to: - language and literacy development - the active and multimodal nature of young children’s learning</td>
</tr>
</tbody>
</table>

OR

Next steps are not relevant to the standards and learning objectives assessed.

OR

Next steps are not described in sufficient detail to understand them.
Appendix C

Interview Protocol

1. The participant and I will find a comfortable space to sit down for the interview.

2. Identify myself.

3. Help the participant feel at ease by being friendly, cheerful and professional.

4. I will let them know that I am audio recording the information so that I can focus on listening to them.

5. Model the types of responses I am looking for by using good descriptive information about the interview.

6. When a response is short and not in-depth enough, I will prompt the participant by saying, “tell me more” or “I would like to hear more about that” etc.

7. When a response is full and detailed I will provide the participant with positive feedback and tell them how helpful that type of response is.

8. I will allow my participants to experience occasional silences in our conversation and leave room for them to continue with and elaborate on their responses.

Interview Questions for Teachers re: Reflective Practice (questions are informed by the Survey of reflective practice).

1. Could you describe how you have used reflection regarding your professional practice?

2. What is the role of reflection in your practice?

3. What does it mean to be a reflective practitioner?

4. Please describe an example of how professional reflection has helped you in your practice? Are there any ways reflection has proved not to be helpful?
5. How does professional reflection fit into your formal or informal professional learning community or collaboration with other teachers?

6. How does your professional learning community or other teachers you work with view reflection?

7. What are some goals you may have regarding professional reflection?

**Interview Questions for Teachers re: Teacher Quality (questions are taken from the first and third domains of the edTPA).**

**First Domain: Planning**

1. What do your children know, what can they do, and what are they learning to do?

2. What do you want your children to learn? What are the important understandings and core concepts you want children to develop?

3. What instructional strategies, learning experiences, and assessments will you design to support children’s language and literacy development?

4. How is your teaching informed by your knowledge of children?

**Third Domain: Assessment**

1. How do you gather evidence and make sense of what children have learned?

2. How do you provide meaningful feedback to your children?

3. How do you use evidence of what children know and are able to do to plan instructional next steps?

4. How do you identify evidence and explain children’s use of language that demonstrates the development of language and literacy?