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# Impact of Reflection: A Qualitative Study Measuring the Impact Reflection has on Teacher Effectiveness

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IMPACT OF REFLECTION: A QUALITATIVE STUDY MEASURING THE IMPACT  
REFLECTION HAS ON TEACHER EFFECTIVENESS

By  
Samuel Jones

A Dissertation Submitted to the  
Gardner-Webb University School of Education  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Education

Gardner-Webb University  
2020

## Approval Page

This dissertation was submitted by Samuel Jones under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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In closing, I would like to thank the participants in the study. I believe the data from this study will lead to improving the quality of educators who desire to be effective teachers. It is my hope that teachers and educational leaders will continue to reflect and foster a reflective culture in schools. Our children deserve reflective teachers, and I hope this study can help the education system in providing our students the education needed to be successful.

## Abstract

IMPACT OF REFLECTION: A QUALITATIVE STUDY MEASURING THE IMPACT

REFLECTION HAS ON TEACHER EFFECTIVENESS. Jones, Samuel, 2020:

Dissertation, Gardner-Webb University.

This research study examined current reflective practices used by kindergarten through 12<sup>th</sup> grade teachers in a single school district in North Carolina. The study sought to identify themes regarding the impact reflection has on teacher effectiveness, with effectiveness being measured by the five teaching standards of the North Carolina Department of Public Instruction. I identified participants as National Board certified teachers and Non-National Board certified teachers to study the similarities and differences in reflective practices between the two groups. A questionnaire, self-assessment, and interviews were utilized to collect participant data. This study's data showed that teachers from both groups utilized reflection and identified how it impacted their effectiveness within the North Carolina teaching standards. The data showed National Board Certified Teachers believed video-enhanced reflection to be impactful, however; due to barriers it was not utilized frequently. While both groups found reflection to be impactful, National Board Certified Teachers' perceived effectiveness was greater than Non-National Board Certified Teachers. Educational leaders should strive to create a culture where reflection is valued by providing time, support, and instructional coaching for teachers, as the benefits of reflection are impactful in developing effective teachers.

*Keywords:* reflection, video enhanced reflection, reflective practice, National Board certified teachers, student needs

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## Chapter 1: Introduction

If students have a high-performing teacher one year, they will enjoy the advantage of that good teaching in future years. Conversely, if students have a low-performing teacher, they simply will not outgrow the negative effects of lost learning opportunities for years to come. (Tucker & Stronge, 2005, para. 8)

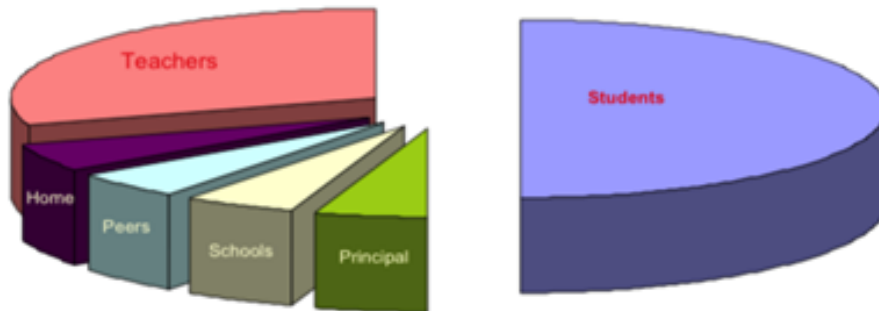
Schools across the United States are held accountable for the success of their students' performance on assessments. Policy makers are demanding an increase in student performance and promoting school accountability ratings through various media outlets. While there is a push to increase student performance, there has not been an emphasis placed on developing the practices of teachers that impact their effectiveness. Teacher effectiveness has a direct and longitudinal impact on student success and should be a focus for educational leaders (Tucker & Stronge, 2005).

To achieve school improvement, educational leaders must focus on teacher effectiveness, because teachers are the most influential variable that impacts student learning that our schools can control (Harris & Muijs, 2005). Hattie (2003) identified the attributing factors toward student achievement. Figure 1 shows students are the greatest factor that impacts achievement at 50%, followed by the teacher at 30%. The student's home, school, principal, and peers have an approximately 5-10% effect on student achievement.



**Figure 1**

*Teachers Make a Difference: What is the Research Evidence?*



*Note.* Hattie (2003). Retrieved from

[https://research.acer.edu.au/cgi/viewcontent.cgi?article=1003&context=research\\_conference\\_2003](https://research.acer.edu.au/cgi/viewcontent.cgi?article=1003&context=research_conference_2003).

Based on these factors that contribute to student achievement, educational leaders and policy makers are placing the emphasis in the wrong places.

We have poured more money into school buildings, school structures; we hear so much about reduced class sizes and new examinations and curricula; we ask parents to help manage schools and thus ignore their major responsibility to help co-educate, and we highlight student problems as if students are the problem whereas it is the role of schools to reduce these problems. Interventions at the structural, home, policy, or school level is like searching for your wallet which you lost in the bushes, under the lamppost because that is where there is light. The answer lies elsewhere – it lies in the person who gently closes the classroom door and performs the teaching act –the person who puts into place the end effects of so many policies, who interprets these policies, and who is alone with students

during their 15,000 hours of schooling. (Hattie, 2003, p. 2)

### **Problem Statement**

The primary question of this study is how does reflection impact teacher effectiveness as determined by the five teaching standards of North Carolina? “Years of research on teacher quality, support the fact that effective teachers not only make students feel good about school and learning, but also that their work actually results in increased student achievement” (Tucker & Stronge, 2005, para. 3). There are multiple factors that impact student achievement, but research suggests that teachers are the greatest factor. Educational services, facilities, and school leadership all impact student achievement, but the impact of the teacher is two to three times greater than other school-related factors (Teachers Matter: Understanding Teachers' Impact on Student Achievement, 2012).

Studies show that students who have an effective teacher in Grades 3, 4, and 5 scored on average in the 96<sup>th</sup> percentile on Tennessee's state mathematics assessment. Students who were taught by ineffective teachers scored on average in the 44<sup>th</sup> percentile on the same mathematics assessment (Sanders & Rivers, 1996). The 52-point discrepancy is clear evidence that teacher effectiveness is the greatest school-related factor that impacts student success. The study conducted by Wright et al. (1997) was designed to study the factors that teachers face, such as class size, student achievement level, and the student selection process to form classes. The results of this study well document that the most important factor affecting student learning is the teacher. In addition, the results show a wide variation in effectiveness among teachers. The immediate and clear implication of this finding is that seemingly more can be done to improve education by improving the effectiveness of teachers than by any other single factor. “Effective

teachers appear to be effective with students of all achievement levels, regardless of the level of heterogeneity in their classrooms” (Wright et al., 1997, p. 63).

According to Pallas (2013), 10% of teachers in New York City were rated as ineffective. Using a similar evaluation system, Washington, D.C. reported that 2% of their teachers were ineffective, while an additional 14% were rated as minimally effective. In both New York and Washington, D.C., they used an evaluation tool that took into account teacher evaluations and assessment scores. Coggshall et al. (2012) found that 59% of teachers surveyed in the United States reported they work with a few teachers who are ineffective. Eighteen percent of the teachers reported that there were more than a few ineffective teachers with whom they worked. Teachers are responsible for anywhere from 20 students to 200 students each year depending on the school size, class size, and school level (whether elementary or secondary; Chait, 2010, para. 8). Hanushek (2010) suggested that removing the bottom 8% of teachers would increase the United States ranking on the Organization for Economic Cooperation and Development’s Program for International Student Assessment to the same level of Finland, which is ranked seventh in the World.

The impact of effective teachers follows students into adulthood. Chetty et al. (2014) found that replacing a teacher in the bottom 5% with an average teacher for 1 year would increase the students’ lifetime income by \$250,000. The study also measured the impact of effective teachers to the following areas: college attendance, college quality, and teenage birth. The study found that students who have greater academic achievement on test scores will not only earn more money, they will have a greater chance of attending college, succeeding in college, and the teenage birth rate decreases as achievement

increases. The reality is the impact of teacher effectiveness goes beyond test scores but impacts a child's life into adulthood (Chetty et al., 2014).

In reviewing the previous research, it appears that removing the ineffective teachers would be the simplest solution. However, there has been a significant decrease in qualified teachers. From 2009 through 2014, the number of students who enrolled in teacher education programs at universities dropped by 35%. In addition to the lack of students seeking to become teachers, nearly 8% of teachers are leaving the profession annually (Sutcher et al., 2016). The conclusion of the research shows that educational leaders cannot afford to fire every ineffective teacher but rather should focus on developing the effectiveness of their teachers through reflective practices.

### **Purpose of the Study**

The purpose of this study was to assess the impact of reflection on teacher effectiveness. The greatest variable schools control and that impacts student achievement is the effectiveness of the teachers within the school (Hattie, 2003). For the purpose of this study, teacher effectiveness was measured with the five North Carolina teaching standards. There have been numerous studies conducted to measure the impact teacher effectiveness has on students. Regardless of the data used to determine effectiveness, the question still lies in what characteristics and practices make a teacher effective. According to the North Carolina Teacher Evaluation Rubric, there are five standards in which effective teachers must perform well (McRel & NC State Board of Education, 2015):

1. Teacher leadership (p. 7).
2. Teachers establish a respectful environment for a diverse population of students

(p. 7).

3. Teachers know the content they teach (p. 9).

4. Teachers facilitate learning for their students (p. 10).

5. Teachers reflect on their practice (p. 11).

### ***Teacher Leadership***

Sebastian et al. (2016) found a positive correlation between teacher leadership and school improvement. Moreover, when schools promote teacher leadership, they tend to have a more positive climate in the workplace. While the study does not find a direct correlation between teacher leadership and teacher effectiveness, it was noted in the study's findings that there is a positive correlation between climate and student achievement. An example of teacher leadership is teachers becoming mentors. Jacques et al. (2017) examined the benefits of implementing mentors and its impact. Participants in the study were broken down into four categories: student teachers, novice teachers, career teachers, and teacher leaders. Teachers in all of the categories except career stated that a mentor, whether it be formal or informal, is important in developing teacher effectiveness. Student teachers and novice teachers benefit by having someone to help guide them in developing instructional practices, classroom management, and curriculum knowledge. Mentors concluded that serving as a mentor allowed them to reflect what the best practices were and stay abreast of the latest research.

### ***Teachers Establish a Respectful Environment for Diverse Populations of Students***

For students to become engaged in learning, the teacher must understand the cultural background of their students. These understandings guide teachers on how to connect with students and deliver the content in an engaging manner (Osipova et al.,

2011). By understanding the culture in which students come from, teachers are able to provide equitable opportunities to explore and engage in content that is relative to them. When teachers do not understand or embrace the culture of their students, they are hindering the students' opportunity to learn (Callaway, 2017).

### ***Teachers Know the Content They Teach***

Content knowledge is defined as, “the concepts, principles, relationships, processes, and applications a student should know within a given academic subject, appropriate for him/her and organization of the knowledge” (Özden, 2008, p. 634). Moreover, research showed that content knowledge had a positive impact on pedagogy and overall effectiveness (Özden, 2008). Teachers are in a position to make numerous decisions every day; and often, those decisions are needed in moments of teaching. Regardless of the instructional strategies, effective teachers must understand the content knowledge well enough to provide correct knowledge and present it an engaging manner. A teacher's pedagogy speaks to their delivery and organization of instruction, but it is important to note that effective pedagogy is driven by teacher content knowledge (Mossgrove, 2014).

### ***Teachers Facilitate Learning for Their Students***

A teacher's role in facilitating learning is to put students in a position to take ownership of their learning. In return, students develop the skills needed to collaborate, communicate, and problem solve on a deeper level. The personal connection (deeper understanding) students will gain allows them to retain the knowledge over time (Facilitated Learning, 2005). “By facilitating student learning instead of presenting students with information as is common in the traditional system of education, teachers

can encourage their students to take an active role in learning” (Schreiner, n.d., para. 1).

### ***Teachers Reflect on Their Practice***

Effective teachers routinely practice reflection and determine the most effective strategies that maximize a student’s individual potential. Several strategies teachers can use to reflect are journaling, peer observation, and videotaping (Cox, 2014). Sansbury (2011) stated, “Being an effective, successful teacher does not mean you never make mistakes. It just means we learn from them” (para. 2).

Students who have teachers who routinely reflect on their practice will benefit greatly. Teachers should not only reflect on their delivery of instruction but also on student performance on informal and formal assessments. Pre-assessments provide teachers the knowledge of what prerequisite skills their students have or do not have. Post-assessments allow teachers to understand what the students learned from the content taught and identify which skills should be retaught (Oberg, 2010). The ability to differentiate instruction impacts student perceptions of their teachers. Ali and Parisa (2018) stated, “reflective teaching showed to be a significant factor in predicting EFL teachers’ success in the Iranian context. It seems that teachers with high reflective thinking ability can perform better in the EFL classrooms based on their students’ views” (p. 134).

Reflection is a powerful tool and has the potential to impact all aspects of the profession. Five questions that should be asked are, “How is my class going? How are my students doing? What am I doing well in the classroom? What could have gone better today? How can I make a positive learning experience for students even better?” (Hindman & Stronge, 2009, para. 1). When analyzing these questions through reflection,

the outcomes can lead to improvement in all five standards of the North Carolina Teacher Evaluation.

The context of teacher reflection varies greatly from visceral responses to systematic, thoughtful practice. Consider, for example, Kathleen Sharp, a teacher with 28 years of teaching experience, who wrote in the journal *Theory Into Practice*, “Thinking deeply about my work has increased my effectiveness and allowed me to assist my students in learning. My constant reflection facilitates my thinking as I consider instructional materials, activities and lessons I prepare and assign.” (Hindman & Stronge, 2009, para. 7)

### **Research Questions**

This study will investigate the impact of reflection in relation to teacher overall effectiveness. The five teaching standards of North Carolina will be used as the measures of determining teacher effectiveness: (a) teacher leadership, (b) teachers establish a respectful environment for diverse population of students, (c) teachers know the content they teach, (d) teachers facilitate learning for their students, and (e) teachers reflect on their practice (McRel & NC State Board of Education, 2015). To guide the research, the following questions will be used:

1. How does reflection impact teacher leadership?
2. How does reflection impact the ability of teachers to establish a respectful environment for a diverse population of students?
3. How does reflection impact teacher knowledge of content?
4. How does reflection impact teachers on facilitating learning for students?
5. How does reflection impact teacher practice?



My goal was to gain a deeper understanding of the impact reflection has on teacher effectiveness. North Carolina has five teaching standards on which teachers are evaluated annually. In addition to teachers being evaluated on the five standards, teachers also complete a self-assessment where they rate themselves annually on the five standards. I identified reflective practices that impact teachers in increasing their overall effectiveness by analyzing qualitative data from questionnaires, self-assessments, and interviews.

### **Significance of the Study**

Teachers are the greatest school-controlled factor in determining student achievement; therefore, teacher effectiveness is a crucial component for the success of our students (Hattie, 2003). Numerous studies have analyzed the impact of teacher effectiveness, but less research has been conducted to determine the practices and characteristics of effective teachers. This study took place in a school district that does not have a professional development plan to improve teacher effectiveness. The qualitative data collected from the study will guide district leaders to create a professional development plan to increase teacher effectiveness. Data collected from each of the research questions will be essential for the district leadership team, as they will understand teacher values, efficacy, and the impact of utilizing reflective practices.

### **Contextual Framework of the Study**

For the purpose of this study, the research focused on public school teachers in a public school district that serves students kindergarten through 12<sup>th</sup> grade. The school district was located in the Piedmont-Triad of North Carolina. Based on the 2016-2017 North Carolina school report card, the school district's student population is approximately 5,900 students. The district had 11 elementary schools, three middle

schools, three high schools, one early college, and one alternative school. The average daily attendance rate for students in the district was 94%. The school district has an average of four National Board certified teachers (NBCTs) in elementary schools, five NBCTs in middle schools, and seven NBCTs in high schools (North Carolina Department of Public Instruction, 2017). There were 41 eligible teachers for this study who have their National Board certification. I selected an additional 41 teachers who do not have their National Board certification. The difference in qualifications allowed me to form two groups to compare data and identify themes.

### **Limitations**

For the purpose of this study, potential limitations such as participant rate of participation, survey delivery, and participant bias existed. There were 82 potential participants in the study, but all participants who chose to participate did so on a volunteer basis, which may have resulted in fewer participants. The Google Forms platform utilized in the study allowed participants to complete the survey at a time of their choosing. Using an online platform required the participants to be comfortable with technology and have Internet access.

Self-assessment and interview participants also participated on a volunteer basis, which could have reduced the number of actual participants. If there was not sufficient and equitable representation in the three data collection platforms, the data collected may not accurately represent perceptions of all teachers in the district studied. Due to the fact that participants are asked to participate on a voluntary basis, the research was dependent upon the participation of completing the survey and participation in the focus groups. The final limitation for this study was participant bias. Participants in Group 1 completed

their National Board certification which required extensive reflection, work, and financial investment from the participants. Participant feelings and self-gratitude of this accomplishment could have impacted their responses.

### **Organization of the Study**

This study was written in five chapters. The breakdown of context within each chapter is as follows. Chapter 1 includes the introduction, problem statements, purpose of the study, research questions, significance of the study, contextual framework of the study, limitations of the study, and definitions of terms. Chapter 2 contains the reviews of related studies on the impact of reflection. Chapter 3 describes the methodology used to conduct the study, including the process of conducting the study and the measurements used to determine the results of the study. Chapter 4 includes the data collected throughout the study. Chapter 5 contains the analysis of the study, comparisons to related research, implications of the study, and recommendations for future research.

### **Terms and Definitions**

The following are terms used throughout the study and defined for the primary purpose of this study.

#### ***Classroom Management***

“A set of behaviors and activities by which the teacher organizes and maintains classroom conditions that brings about effective and efficient instruction” (McEwan, 2001, p. 49).

#### ***Differentiation***

The practice of adapting classroom organization, practices, routines, and instruction to best meet the needs of students.

***Mentee***

A teacher who is assigned a peer teacher who helps guide the maturation process of becoming an effective teacher.

***Mentor***

A teacher who supports a colleague through coaching, collaboration, and guidance with the intention of improving their effectiveness.

***Professional Development***

Activities designed to improve teacher effectiveness and student learning.

***Professional Learning Communities (PLCs)***

Where two or more teachers who collaborate together with intentions of improving teaching and learning.

***Reflection***

To think about specific actions and the outcomes those actions produced.

***Reflective Practice***

An avenue that one uses to reflect on action with the intention of learning from their experience.

***Video Reflection***

A type of reflective practice that utilizes recordings of action from which one can view and learn.

**Summary**

North Carolina had five standards that evaluated teachers on an annual basis to measure their effectiveness: (a) teacher leadership, (b) teachers establish a respectful environment for diverse population of students, (c) teachers know the content they teach,

(d) teachers facilitate learning for their students, and (e) teachers reflect on their practice (McRel & NC State Board of Education, 2015). The question still remained, how can teachers become more effective? This study analyzed the impact reflection had on each of the five teaching standards of North Carolina. Reflection is practiced in many different professions and in many different ways. This study added to the research that measured the benefits of reflection. Chapter 2 provides an in-depth literature review on reflective practices and its benefits.

## Chapter 2: Literature Review

The purpose of this study was to assess the impact of reflection on teacher effectiveness. To measure teacher effectiveness, this study used the teacher effectiveness rubric from North Carolina. The North Carolina Teacher Evaluation Rubric had five standards used to determine teacher effectiveness. According to McRel and NC State Board of Education (2015)m the five standards utilized are

1. Teacher leadership (p. 7).
2. Teachers establish a respectful environment for a diverse population of students (p. 7).
3. Teachers know the content they teach (p. 9)
4. Teachers facilitate learning for their students (p. 10)
5. Teachers reflect on their practice (p. 11).

The review of literature for this study is organized in the following sections in regard to how reflection impacts each standard: (a) teachers reflect on practice, (b) teachers establish a respectful environment for diverse population of students, (c) teacher leadership, (d) teachers know the content they teach, and (e) teachers facilitate learning for their students. Within each section of the literature review, the studies will review the impact reflection has on each of the North Carolina teaching standards for effective teachers.

### **Standard 5: Teachers Reflect on Practice**

Standard 5 in the North Carolina Teacher Evaluation Rubric is Teachers Reflect on Practice. Within Standard 5, there are three elements on which teachers are evaluated (McRel & NC State Board of Education, 2015):

- Element A: Teachers analyze student learning (p. 31).
- Element B: Teachers link professional growth to their professional goals (p. 31).
- Element C: Teachers function effectively in a complex, dynamic environment (p. 31).

Reflection can be completed in the form of self-reflection, but it is also understood that reflecting with colleagues is a productive practice as well. Standal and Moe (2013) stated, “Participants found it valuable to discuss with other teachers everyday issues such as assessment, liability, and state standards for teaching” (p. 224). Regardless if reflection is done in isolation or in a collaborative setting, teacher reflection is considered the catalyst for professional growth (Stover et al., 2011).

Zhang et al. (2016) conducted research on kindergarten through 12<sup>th</sup>-grade teachers in Sichuan Province in China to determine the effectiveness of online PLCs. The study concluded online PLCs were beneficial due to the fact that the amount of time teachers have to reflect during the school day can be limited. Through technology and the internet, teachers can reflect collaboratively with peers from all over the world at essentially any time they choose. Teachers who participated in the online PLCs benefited from receiving support from colleagues. Teachers shared teaching experiences as well as how they overcame their struggles. The feedback male teachers provided was more technical than the feedback of female teachers. Moreover, teachers with 6-10 years of experience provided the least amount of technical support. Education is a demanding career and can be emotionally draining at times. Their struggles and solutions were brought to attention through reflection, and teachers were supported emotionally by

discussing them with one another. This support generated the desire to continue to reflect on their practices and improve student learning (Zhang et al., 2016).

The importance of reflective practice is not limited to the field of education. The medical and healthcare fields instill great value on reflective practice as well. Research over a 3-year period of time showed that reflective practices with oncology nurses improved the culture of the workplace, as it is now a more cohesive and supportive environment (Caley et al., 2017). The ever-changing demands placed on healthcare professionals are similar to those of educators as it relates to the mindset and demands of the job. Wain (2017) explained the importance of reflection for midwives and students:

Midwifery care often highlights the challenges that students and midwives face when meeting the demands of contemporary practice. Continuous learning and professional development is required to enable professionals to adapt to the changing landscape of midwifery care, and reflection (and the development of reflective skills) forms part of this progression to demonstrate ongoing education. Reflection can empower midwives to make decisions about individual learning requirements, and by becoming a reflective practitioner, this ultimately increases self-awareness, self-identity, and personal growth, leading to greater job satisfaction and professional fulfillment. (p. 666)

Reflection can be completed through data analysis, as it is done in almost every line of business to some degree. Research shows businesses are now using data brokers to collect personal data from consumers through online profiles to create and provide targeted advertisements to potential consumers (Parra-Arnau, 2017). Moreover, data analysis provides businesses the ability to manage their business more efficiently and



maximize their profits. According to Sastry and Babu, (2013), “cluster analysis helps in Market Intelligence for correctly assessing the demand and the net sales realization for the product to be developed. It is also possible to identify lost order opportunities and improve sales volumes for new products” (p. 108). Reflecting on sales data allows businesses to identify gaps in the sales process and brainstorm strategies to close the gaps, which results in a more efficient process (Sastry & Babu, 2013).

In addition to education, business, and healthcare, reflection is a prevalent practice in sports. Reflection allows coaches to better understand the development and performance of athletes (Cassidy et al., 2004). Carson (2008) stated the following in regard to the benefits of utilizing video reflection: “The ability to analyze performance accurately, especially in relation to best practice, should allow for better cognitive understanding of the coaching process” (p. 388).

Coaches are not the only ones reflecting in the sports arena. Technology, specifically video reflection, allows the best athletes in the world to watch others perform and determine best practices. Kobe Bryant stated in an ESPN article in 2010, “I seriously stole all of my moves” (MacMullan, 2010, para. 3). His father would challenge Kobe to watch videos of the best players from each position to determine the basketball moves he needed to learn. The hall of fame basketball player placed great value in watching videos of others as well as his own team. During halftime of NBA games, Kobe Bryant was known for watching clips from the first half to gain a better understanding of what his opponents were doing and shared his findings with his teammates to gain a competitive edge (MacMullan, 2010).

Video reflection provides more than an understanding of the physical components

of competition; it also allows coaches and athletes to reflect on the physiological components of sports. Martinent et al. (2015) suggested athletes reflect on their performance by watching the video of themselves perform. This reflection process removed the perceptions and feelings of how athletes feel they performed versus their actual performance. Athletes felt they managed their emotions much better than in actual reality. It was also determined athletes were more receptive to the self-analysis of the video of their performance than during interviews conducted after their performance. Essentially, the video removes misconceptions of perceived performance versus actual performance.

The education field demands that educators possess reflective skills and traits as Standard 5 of the North Carolina evaluation rubric states (McRel & NC Board of Education, 2015). Data are often used to inform instruction for teachers to positively impact instruction. Bishop and Mabry (2016) concluded in their research the following: “Data-informed decision making using the CIPP evaluation model supports sustainable change in instructional practice and curriculum design. This process positively impacts student learning, reinforces literacy concepts through applied learning, and alleviates instructor burnout” (p. 78).

Reflecting on student data is not something that always takes place after a post-assessment. Post-assessments are designed to demonstrate what students have learned after receiving instruction. Reflecting on student abilities prior to instruction is also valuable. “In order to provide focused lessons with multiple instructional strategies to help all learners, teachers may find it useful to adapt performance assessments as pre-assessments are used to guide the instructional process” (Ober, 2010, p. 2). Research by

Oberg (2010) concluded,

When teachers are fully informed about their students, they are better prepared to make appropriate instructional and curriculum decisions, and adapt, as necessary, their teaching practice to ensure success for all students. To learn about their students, teachers must rely on data collected from their students through a variety of methods. Student data must be rich enough in detail and breadth to provide teachers with necessary information to connect instructional strategies to their needs and skills. These data must provide information about students' current ability and knowledge within the subject matter as well as information about students' interests, learning styles, and pace. (p. 8)

Qualitative data analysis is only one type of reflective practice. Athletes and sports utilize video reflection as a way to improve their practice; it is also suggested that teachers utilize video reflection as well. Suhrheinrich and Chan (2017) focused their research on special education teachers and the impact of instructional coaching without video compared to coaching with classroom recordings. The study found that instructional coaching was beneficial regardless if recordings were utilized. However, there was increased effectiveness of coaching when recordings were utilized. One teacher shared her experience of receiving coaching with video. "After receiving video-based coaching, teachers were able to increase the percentage of effective instructional trials, as well as their frequency of specific praise, which was correlated with increases in student responding" (Suhrheinrich & Chan, 2017, p. 48). Further research conducted by Powell (2016) showed the comparison of preservice music teacher reflections prior to watching a video of their lesson to after watching a video of their lesson. Teachers who utilized

video reflection wrote approximately 65% more when they watched video in comparison to their initial written reflection without video. The focus of the reflections remained consistent throughout teacher writings. The written reflections before and after watching the recordings focused on the task teachers asked students to perform followed by their behaviors as teachers. Student behaviors were written about the least.

After watching the video and reflecting on my teaching, I realized it might not have been as bad as I thought. After I taught, I thought I really got everyone to play that eighth-note rhythm together, but now that I see the video, I was wrong. Some of the students in the back row are still late on the entrance. (Powell, 2016, p. 500)

There is a correlation with Powell's (2016) and Martinent et al.'s (2015) studies. Each of the studies' participants felt that video reflection provided a more accurate analysis of their performance than their reflection prior to watching the video.

There is great value in teachers collaborating with peers. A teacher's willingness to seek instructional guidance from colleagues is a predictor for improvement (Calandra, et al., 2014). To create collaborative opportunities for teachers, teacher rounds are a suggested practice. It is common practice in the medical field as doctors complete rounds on patients and provide notes on what they feel is best for the patient, and the same philosophy applies in education. Teachers should conduct rounds on classrooms to provide their thoughts on suggested practice to ensure best practices are being utilized. Both doctors and teachers use video recordings to reflect on their practices. Video recordings allow them to analyze the details of their profession and performances with their peers (Troen & Boles, 2014). The Center for Education Policy Research at Harvard

University (n.d.) conducted a study that examined the benefits of watching videos in a collaborative manner with peers. The benefit of video recordings allowed teachers to reflect collaboratively when it is convenient for the teachers. The collaboration does not have to take place during a specific time frame. Van Es and Sherin (2009) studied the effects of video collaboration by implementing video clubs for seven fourth- and fifth-grade teachers. For the purpose of the study, math instruction was the only content area where lessons were recorded. Teachers collaborated by reviewing each other's lessons and by meeting at a minimum of once per month for 1 school year. Parts of the study's findings were

In the exit interviews, the teachers reported learning about curriculum issues, claiming the video club helped them learn about what is taught at different grade levels. Being able to look inside each other's classrooms appears to have given teachers access to a wealth of information about how related topics were covered across grade levels, and the teachers believed it to be an important benefit of participating in the video club. (Van Es & Sherin, 2009, p. 172)

Van Es and Sherin summarized the benefits of video clubs as a great opportunity for teachers to understand their own deficits as well as gain a deeper understanding of the curriculum and how each grade connects. Observations from the study suggested that teachers began to view themselves as learners and sought ways to improve their teaching.

### **Standard 1: Teacher Leadership**

Standard 1 in the North Carolina Teacher Evaluation Rubric is Teacher Leadership. Standard 1 contains subsequent standards that measure the abilities of teachers to do the following (McRel & NC State Board of Education, 2015):

- Element A: Teachers lead in their classrooms (p. 7).
- Element B: Teachers demonstrate leadership in the school (p. 8).
- Element C: Teachers lead the teaching profession (p. 8).
- Element D: Teachers advocate for schools and students (p. 8).
- Element E: Teachers demonstrate high ethical standards (p. 8).

In order for teachers to be effective leaders, reflection plays a crucial role. Rogers (2001) stated the goal of reflection is to “integrate the understanding gained into one’s experiences in order to enable better choices or actions in the future as well as to enhance one’s overall effectiveness” (p. 41).

Harrison and Killion (2007) stated that teachers have ample opportunities to demonstrate leadership:

Teacher leaders assume a wide range of roles to support school and student success. Whether these roles are assigned formally or shared informally, they build the entire school's capacity to improve. Because teachers can lead in a variety of ways, many teachers can serve as leaders among their peers. (para. 1)

Harrison and Killion stated that for teachers to lead by supporting their colleagues, they should reflect on the practices of each other to move a school forward in a common direction. One issue that stems from promoting teacher leadership is being able to identify the exact roles for teachers in leadership. Without a clear purpose, teachers will be less receptive of feedback and not understand that teacher leaders are supportive colleagues and not authoritative figures (Boyd-Dimock & McGree, 1994). Atieno Okech (2008) showed that to overcome the unintended hierarchy roadblock, organizations

should create a model for co-leadership.

Reflective practice processes can create functional co-leader relationships that facilitate processing of complex intrapersonal and interpersonal cognitive and emotional experiences in co-leader relationships. A well-developed reflective practice paradigm may assist co-leaders in attaining insight into challenging group dynamics, triangulating experiences with group members, and situations where group leader incompetence is an impediment to group development. Such co-leaders can collaboratively address group problems, provide reciprocal supports that enhance their performance as group leaders, conceptualize complex group dynamics, and develop strategies and techniques that may ameliorate the performance of their group members. (Atieno Okech, 2008, p. 250)

Schools that possess teacher leaders who promote reflective practices with colleagues have found great value in the results of reflecting. Beginning teachers said that learning how to reflect and use the reflections to guide their planning were the two most beneficial practices their mentor teachers taught them (Jacques et al., 2016). Moreover, a mentee stated the following about their growth in reflection that was led by their lead teacher.

At the time I didn't know [how] to reflect. Having a professional look at me and say, "Okay, here's everything you're doing right [and] here's some things we need to work on," and then looking back on her reflections helped me to be reflective on things that I didn't know I was supposed to be reflective on. Having somebody teach you how to be reflective was also helpful as well. (Jacques et al., 2016, p. 9)

Not only are effective teacher leaders promoting reflective practices, they are actively reflecting themselves, which guides continuous improvement (Jacques et al., 2016).

The North Carolina Rubric for Evaluating Teachers states that effective teachers lead in their classrooms by analyzing and reflecting on student data to form instructional groups in their classrooms and reflect on their students' progress in order to guide their instruction. In addition to academic data, teachers reflect on student discipline data in order to have quality classroom management. Teachers that lead in their classrooms understand the needs of the classroom in order to lead it effectively. In order to have a true understanding on student progress both academically and behaviorally, teachers should reflect on their students' data (McRel & NC State Board of Education, 2015).

An effective teacher provides leadership at the school level by promoting best practices and provides professional development in their PLC based on the needs of the school (McRel & NC State Board of Education, 2015). Asking the question, "what are the needs of a school," can contribute discussion that is too broad to tackle. Oftentimes, solutions to the schools needs are just talk without action (Ballock, 2010). Mulford (2003) stated the process in which teachers reflect and have conversation allows teachers to be aware of their own practices as well as those of their colleagues. When reflective teachers are communicating with each other about their practices, it allows the best practices to come to the forefront. Teachers who reflect collaboratively are able to narrow their needs of improvement to a more manageable task. This can lead to a concrete and collective action plan that targets specific needs (Ballock, 2010); thus, an avenue for leading in the school is for the effective teacher to be reflective throughout their work and seek out the best practices from their colleagues in order to close the learning gaps within



the school (McRel & NC State Board of Education, 2015).

According to the North Carolina teacher evaluation rubric, leading in the teaching profession is a component of an effective teacher. The North Carolina Evaluation Rubric provides over 15 ways for teachers to demonstrate their effectiveness of leading in the teaching profession (McRel & NC State Board of Education, 2015). Several of the avenues were discussed in the paragraph above such as seeking out best practices. Two more avenues for teachers to lead in the teaching profession are seeking out professional development in order to improve student achievement and coaching colleagues (McRel & NC State Board of Education, 2015).

In order to understand the type of professional development a teacher needs, teachers must use reflection to identify their deficits. Teachers have the ability to collect data each day or from a range of dates depending on the desired outcome. Amplify and Rhode Island Department of Education (2013) explained there are three types of data conversations that take place when teachers desire to improve by reflection on data.

The first conversation should take place right after the data are collected. Teachers collaborate on the data and identify any patterns the data present. At this stage, teachers are not looking for the why but simply looking for patterns and gaps. Guiding improvement is the subsequent data conversation teachers should have. During this process, the motivation for changing their practice is revealed. Collectively, teachers share their reflections, experiences, and struggles, which leads to discovering best practices. The third data conversation Amplify and Rhode Island Department of Education (2013) shared is the finding solutions conversation. The finding solutions conversation is the least utilized of the three recommended conversations because

educators often do not admit they do not have the answer (Amplify & Rhode Island Department of Education, 2013). The third conversation with teachers may look similar to this: “I’ve identified this pattern need in the data and I know I need to re-teach this. What strategies have you used successfully” (Amplify, & Rhode Island Department of Education, 2013, p. 4). Morrison (2008-2009) wrote, “if teachers are ever to use data powerfully, *they* must become the coaches, helping themselves and colleagues draw on data to guide student learning, find answers to important questions, and analyze and reflect together on teaching practice” (para. 3). Regardless, if teachers are coaching other colleagues or identifying the areas of professional development to improve student achievement, reflecting on their current practices and student data are essential (Morrison, 2008-2009).

Within the context of Standard 1, McRel and NC State Board of Education (2015) described multiple platforms where teachers can be advocates for their schools, and not one of them directly relates to classroom instruction or student data. A few ways effective teachers can advocate for schools and students include leading an extracurricular group for students, speaking at town hall meetings, allowing students to present to community members, seeking ways for parents to be involved, and encouraging community projects. These are several platforms effective teachers can utilize to advocate for their school and students. In essence, it is about building relationships with the community (McRel & NC State Board of Education, 2015). Teaching and learning go beyond the walls of the classroom. “We have the responsibility for facilitating the learning space for each student by providing a value framework that is congruent with their own and with the communities in which they engage” (Fynn et al., 2012, p. 574).

The communities in which students live are always changing, but the backdrop of the partnership rests on the history of the communities. In order for educators to build sustainable partnerships with the communities they serve, participation in collaborative reflection is essential (Hynie et al., 2016). The needs of a school and community evolve, and joint reflection is the platform for an inclusive support system between the two. Hynie et al. (2016) concluded the following on how reflection is crucial for community engagement: “Bringing together residents, agency representatives, students, faculty, and staff to reflect on relationships, perceptions, and challenges, and to foster mutual understanding in the development of future partnership opportunities” (p. 30). For educators to understand what the perceptions, beliefs, and needs are in the community, they must provide the platform for joint reflection (Hynie et al., 2016).

The North Carolina Teacher Evaluation Rubric’s progression of Standard 1 states that effective teachers lead with high ethical standards by being attentive, treat students and coworkers with respect, follow the North Carolina Teacher Code of Ethics, and are an example to others on how to be positive throughout the work setting (McRel & NC State Board of Education, 2015). People often lose their moral compass unless they are intentional with critical self-reflection. Engaging in self-awareness reflections allows people to build and act with moral courage in their organizational lives (Hedberg, 2017). Moreover, Webster-Smith (2011) stated, “Reflection has the ability to transport an individual from a disturbing state of perplexity or disequilibrium to a harmonious state of understanding or equilibrium (Dewey, 1944)” (p. 2). When teachers get caught up in the day-to-day life of education, they are susceptible to not living by the morals that are true to them, thus the need for self-reflection is evident in order for educators to maintain a

positive and moral self (Webster-Smith, 2011).

### **Standard 2: Teachers Establish a Respectful Environment for a Diverse Population**

Standard 2 of the North Carolina Educator Evaluation System measures teacher effectiveness by assessing their ability to “establish a respectful environment for a diverse population” (McRel & NC State Board of Education, 2015, p. 8). McRel and NC State Board of Education (2015) described the five elements of Standard 2 as the following:

- Element A: Teachers provide an environment in which each child has a positive, nurturing relationship with caring adults (p. 24).
- Element B: Teachers embrace diversity in the school community and in the world (p. 24).
- Element C: Teachers treat students as individuals (p. 24).
- Element D: Teachers adapt their teaching for the benefit of students with special needs (p. 25).
- Element E: Teachers work collaboratively with the families and significant adults in the lives of their (p. 25).

Webster-Smith (2011) proclaimed that reflection is the primary tool that should be utilized to provide a quality and inclusive education. Webster-Smith wrote,

What is more, U.S. Secretary of Education, Arne Duncan (2009) asserted that education is a daily fight for social justice while it promotes opportunity and reduces inequality. He further purported that every child is entitled to a quality public education regardless of race, creed, or zip code. For these and other reasons, contemporary leaders must adopt a routine practice of reflection to

ensure that their beliefs, worldviews, and values are consistent with optimal 21st century school leadership. (p. 9)

Continuing with the Webster-Smith study, “reflection retains an ageless appeal since schools are mandated to be inclusive and to successfully educate children regardless of their culture, native tongue, learning abilities, physical abilities, socioeconomic status, or geographical idiosyncrasies” (p. 9). Webster-Smith concluded that for all students to have a chance at living productive lives, educators must provide an environment and practices that are inviting and warm and contain the necessary level of rigor for all students.

The focus for culturally responsive education is needed because American schools serve students with greater needs than in the history of education (Webster-Smith, 2011). Di Gennaro et al. (2014) described the process for teachers to improve their practices on teaching students with diverse needs and stated that critical reflection is the most important practice:

This approach embraces and promotes the principles on which inclusive education is based, enticing teachers to reflect on their own strengths and those of their pupils, their schools and the communities in order to transform the educational settings in which they work into inclusive environments. (p. 59)

Reflecting with peers through storytelling is another approach teachers should consider. Telling your own experiences and listening to others allow all participants to learn from each other. In order for teachers to grow and better understand the inclusive classroom, teachers need to rely on one another (Tripp et al., 2007). Tripp et al. (2007) found that changing the educational culture requires teachers to be reflective when providing an inclusive environment in physical education classrooms. Inclusive education was a

relatively new approach, and teachers must understand the ability levels of individuals in order to maximize every student's potential. Tripp et al. stated,

Changing the physical education culture in order to create a inclusive environment for all students involves rethinking taken-for granted ideas about how physical education is organized, how students are grouped, how resources are utilized, how decisions are made, and what constitutes appropriate or meaningful physical education. For physical education to be truly inclusive, teachers must look beyond the common perception of disability and think about physical education as a diverse community of learners with various skill levels.  
(p. 36)

The reality is that some teachers struggle with the concept of inclusion and understanding what depth of inclusion is appropriate. Collaboration in sharing individual needs and success is critical in overcoming any barrier with creating an inclusive culture (Tripp et al., 2007). Overcoming the cultural differences in education requires reflection from teachers on their practices and how they deliver the curriculum to students (Osipova et al., 2011). Osipova et al. (2011) studied the impact that video and self-reflection had on the improvement of instruction. The yearlong study of elementary reading teachers showed the majority of the teachers' mindsets shifted from viewing themselves as the teacher to viewing themselves as the learners through video reflection. By the end of the study, teachers were identifying their need to adapt the curriculum to meet the needs of students while still meeting the requirements for their state. Throughout the study, it was noted that teachers gained an understanding that physical components of their classroom were only a part of meeting the needs of diverse students. They began focusing on their

questioning and their language to ensure it was at the appropriate development level for their students (Osipova, et al., 2011).

Understanding the needs of students is not the only important aspect of a culturally responsive classroom. Understanding the parental needs and connecting parents to the learning process are also key indicators for effective teachers (McRel & NC State Board of Education, 2015). Effective teachers have the ability to connect the learning process for students with parents, caregivers, and community members. The study conducted by Schector and Sherri (2009) sought to determine the value of parental involvement in education and concluded that students, teachers, and parents all appreciated being involved in the students' education. Throughout the study, self-reflecting journals and video recordings were conducted to document the study as well as allowing for participants to reflect on their performances to improve the educational practices. Reflection, specifically video reflection, allows participants to deeply reflect and suggest strategies to improve. Parents appreciated the opportunity to spend time in the classroom during instruction, as it allowed them to better support the students at home. Teachers shared a similar conclusion in that they felt parents wanted to support their children and now understand that in some cases, parents do not have the knowledge or confidence to support them. In addition, students had a greater excitement about reading with their parents in class than without parents, and students also showed an appreciation for parent willingness to try new things that supported their educational experience (Schector & Sherri, 2009).

### **Standard 3: Teachers Know the Content They Teach**

The third standard in the North Carolina Teacher Evaluation rubric measures

teacher ability to facilitate learning for students. The four elements of Standard 3 are the following (McRel & NC State Board of Education, 2015):

- Element A: Teachers align their instruction with the North Carolina Standard Course of Study (p. 26).
- Element B: Teachers know the content appropriate to their teaching specialty (p. 26).
- Element C: Teachers recognize the interconnectedness of content areas/ disciplines (p. 27).
- Element D: Teachers make instruction relevant to students (p. 27).

A fundamental requirement for effective teaching and student learning is teacher knowledge of the content they are teaching (Baumert et al., 2010). Effective teachers not only understand the content they are teaching but also understand the pedagogy behind the delivery of instruction. Educators can no longer view the content knowledge and pedagogy as two separate components of teaching but rather understand how they support one another (Ediger, 2009). Yazgan-Sağ et al. (2016) concluded the following from secondary math teachers in Turkey. Effective teachers deeply understand the content they teach, but it is through reflection of the instructional process that allows teachers to improve student learning. Applying content knowledge and knowing how to teach it to students who learn at different paces and who have different background knowledge is what makes the instruction effective. In order to understand the learning process, effective teachers must reflect on their prior lessons and improve the delivery of content. Reflecting on the learning process and understanding how students learn allow teachers to plan instruction and increase the overall engagement and comprehension for students



(Yazgan-Sağ et al., 2016).

McCaughtry (2004) provided research on the impact of elementary student emotions on being engaged in the lesson and mastering the content. The study showed that when connections are made with the content and personal experiences from students, the engagement and understanding of the content were increased. The teacher researched what activities her students played in their neighborhoods and when they played them and taught corresponding activities to align with student interest. Specifically, the teacher was more successful at teaching the rules and skills of football during the fall because it was a popular game in the neighborhood during that time. Students wanted to learn about football, as it would allow them to apply that knowledge outside of school. One teacher stated the following on the importance of understanding student emotion:

What kids feel like when they learn directly affects how much they will learn. If they don't like or care about what they're learning, they won't participate enough. If they hate me or each other, they won't care about what they're learning. If they aren't successful, if they can't do it, if they feel embarrassed. It's amazing this stuff matters so much but it does, you can't get away from their emotions.

(McCaughtry, 2004, p. 37)

The study concluded that simply talking and listening to students was an effective practice that allowed teachers to understand the emotion and feelings of their students. Teachers who reflect on how their students feel are able to connect and adapt the curriculum based on the emotional needs of students (McCaughtry, 2004).

Empowering students to understand the curriculum by making it personal

increases the overall retention of content and allows students to take the learning process home where parents can support the learning process (Paige et al., 2012). Paige et al. (2012) studied two suburban schools in Australia participating in the Citizens Science Network Project that provided opportunities for teachers to develop a unit on the life of spiders. Seven teachers from both the primary and secondary levels volunteered to participate in the study. The years of teaching experience ranged from 1 to 8, and all teachers taught students with low socioeconomic backgrounds. The purpose of the study was to measure the impact of collaborative planning and reflection and the impact of personalizing the curriculum to make it relative to the students. Parts of the findings within the study were as follows:

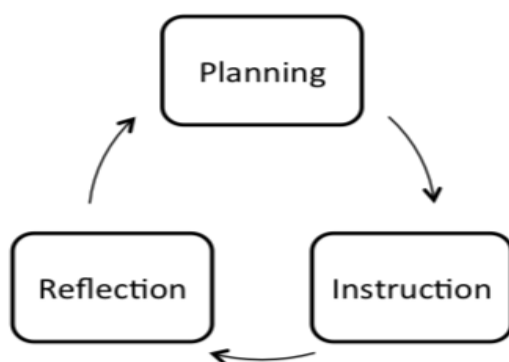
A positive outcome is more likely to be found when teachers have the opportunity to learn and share with others, such as colleagues and parents, as part of a collaborative, supportive team. They can work together towards the shared goal of improving the student's educational outcomes and this equates to a powerful partnership. Throughout the unit on spiders, I was able to observe students engaging in educational tasks within the school environment. Many students encouraged parents to share what they had observed and as a result parents were able to observe their child doing educational tasks within the home environment. Sharing the information gained from these observations is a vital part of the process to improve educational outcomes. Establishing a two-way line communication about the student takes time and trust, and the focus should remain on the person who benefits most from this process—the student. (Paige et al., 2012, p. 17)

Further findings within the research show that students who made real life connections were able to learn the content deeper and retained their knowledge over time in comparison to students who did not make a personal connection to the content (Paige et al., 2012).

Tyler (1949) wrote there is a cycle to effective teaching. Figure 2 represents the teaching cycle, which starts with planning. After planning, instruction is given and then teachers reflect.

**Figure 2**

*Basic Principles of Curriculum and Instruction* (Tyler, 1949)



Tyler (1949) suggested that each portion of the cycle impacts the next. Proper instruction cannot take place without effective planning, and effective planning requires teachers to reflect on their instruction. This process is a cycle and therefore continuously supports growth.

Tyler (1949) stated that reflection guides the planning process. Noonan et al. (2003) summarized the activities that take place in the planning process as the following: designing the purpose of the lesson, delving into the content to better understand it, and developing the pedagogical practices to engage students throughout the lesson. Effective

teachers reflect on their instruction and will use it to guide their planning and ultimately improve their instruction (Tyler, 1949).

#### **Standard 4: Teachers Facilitate Learning for Students**

The fourth standard in the North Carolina Teacher Evaluation rubric measures teacher ability to facilitate learning for students (McRel & NC State Board of Education, 2015). The seven elements of Standard 4 are the following (McRel & NC State Board of Education, 2015):

- Element A: Teachers know the ways in which learning takes place, and they know the appropriate levels of intellectual, physical, social, and emotional development of their students (p. 28).
- Element B: Teachers plan instruction appropriate for their students (p. 28).
- Element C: Teachers use a variety of instructional methods (p. 28).
- Element D: Teachers integrate and utilize technology in their instruction (p. 29).
- Element E: Teachers help students develop critical-thinking and problem-solving skills (p. 29).
- Element F: Teachers help students work in teams and develop leadership qualities (p 29).
- Element G: Teachers communicate effectively (p. 30).
- Element H: Teachers use a variety of methods to assess what each student has learned (p. 30).

Reflecting on student data allows the teacher to know which students understand

the content as well as those who do not. This information should guide instruction to ensure students are not falling through the cracks as well as provide guidance for better teaching in the future as teachers can predict which areas students may need more time to master the curriculum or a different instructional approach to understand the concepts being taught (Office of Special Education Programs New Jersey Department of Education, 2015).

Teacher reflection is not only used to analyze student academic work but also to ensure they are providing a learning environment that lends itself to student learning. Classroom management is much deeper and broader than solely focusing on student behavior; studies show it encompasses the whole learning environment, and there is a correlation between the learning environment and student learning (Jackson et al., 2013). *The Need for Reflection When Teaching* (2014) posted a series of reflective questions for teachers to complete that allow them to understand the environment as a whole and become effective leaders in their classroom:

- How did my students respond to that lesson?
- Was there meaningful student involvement?
- What aspects of the class were positive? Negative?
- Are my students willing to take risks?
- What evidence is there of students learning?
- Are my students working cooperatively with others?
- Was I giving enough wait time?
- What should I do differently? (para. 5).

It can be difficult and time consuming for teachers to scrutinize their performance, but like any other occupation it is essential for improvement. Asking deliberate questions, reflecting on the answers, then implementing changes on how you approach your teaching based on your reflection differentiates decent teachers from great teachers. (“*The Need for Reflection When Teaching,*” 2014, para. 3)

The relationship of how medical professionals and educators learn their practice and improve their skills is very similar. There is a great amount of theory and evidence-based practice that is taught to follow in the medical field and in education. However, the experience of actually practicing the skills and reflecting on their practice is what allows people in both professions to continually improve. Within the medical field, do patients want someone who has learned theory and best practices from someone else, or do patients prefer a provider who has learned theory and best practices and has also applied them and reflected on their personal experiences of implementing them (Tsang, 2009)? Tsang’s (2009) study on the impact of reflective teaching and learning concluded the following from one of the participants:

I find doing reflective learning in a discipline that is so focused on scientific and evidence-based reasoning a refreshing experience. It has made me think over each session, how it made me feel and what was done well or could have been done better / differently, set goals... Reflecting introduces a new aspect to clinic that focuses on the individual’s learning experience and allows them to grow from it in a positive manner. (p. 3)

Larrivee (2000) wrote about the demands of an effective teacher in today’s

society. Students have diverse needs and often come to school hungry, dirty, and not prepared to learn. These obstacles can lead to frustrating times for teachers, and reflection is the way to keep teachers grounded and remember why they went into the profession. Teaching is more than delivering content to students; it is about changing their lives. Larrivee stated the following on teacher understanding techniques versus believing in them:

If teachers latch onto techniques without examination of what kind of teaching practices would be congruent with their beliefs, aligned with their designated teaching structures, and harmonious with their personal styles, they will have just a bag of tricks...Unless teachers engage in critical reflection and ongoing discovery they stay trapped in unexamined judgments and interpretations. (p. 294)

Effective teachers have to be able to adapt the tools they have been taught and make them relative to their personal beliefs in order to properly apply them to enhance student learning (Larrivee, 2000).

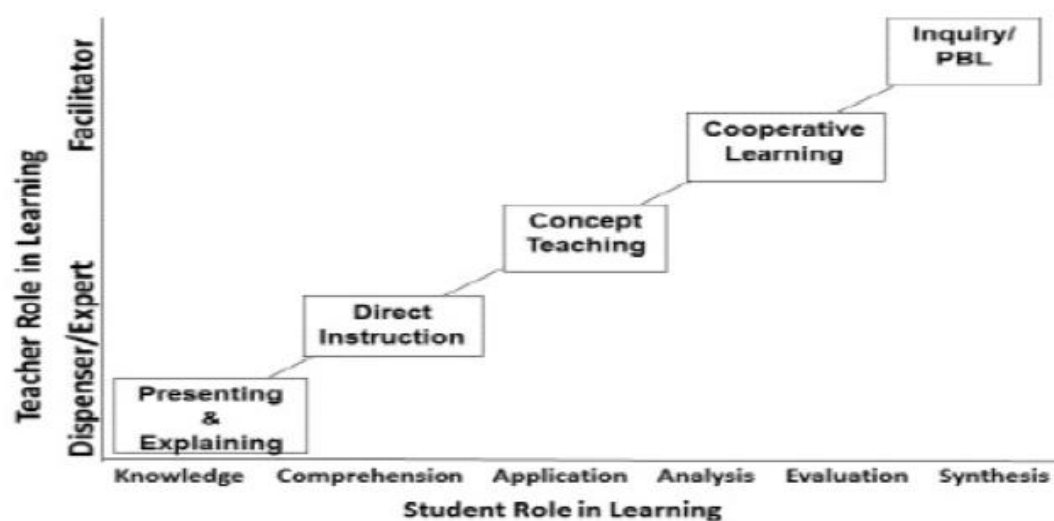
One of the aspects of effective teaching that is not always focused on is the way we communicate with students. Reflective practices have been shown to help teachers understand their students' needs and adjust their instructional methods, but reflecting through voice-only recordings allows the teacher to reflect solely on the language and communication they use in instruction. Robertson (2013) proved that self-reflection of audio recordings allows teachers to analyze their own communications in the classrooms. Teachers found they were not explicit enough in their communication and often did not provide enough information to students, which made learning more difficult. As teachers progressed throughout the study by continuing to reflect on audio recordings, the

communication and instruction became more explicit and clearer to students.

Santoyo and Zhang (2016) determined that students should be taught the basic components and key concepts of lessons explicitly. As the learning process develops, students should progressively become more independent at learning and understanding the concepts. Figure 3 demonstrates the correlation of the teacher's role in comparison to the students' level of independence and depth of knowledge. As students increase their depth of knowledge, the role of the teacher will decrease.

**Figure 3**

*Teacher-Centered to Student-Centered Spectrum (Arends, 2015)*



Kanellopoulou and Darra (2018) studied the relationship of teaching experience and student-centered work. Teachers with less experience provided more whole group and direct instruction, while teachers with more experience provided instruction that was student centered. There is a level of comfort for young professionals to begin this way, because they are in control and it is easier to instruct when the teacher is the center of the



lesson (Kanellopoulou & Darra, 2018). Kanellopoulou and Darra found that time and resources needed to plan teacher-centered lessons are fewer than when the lesson is student centered. In order to make the lessons engaging to the individual student, more reflection is needed to understand student needs. Based on Tyler's (1949) Cycle of Teaching, it can be implied that if student-centered lessons are more individualized, there is a greater need for reflection to guide the planning process to instruct students on the individual level.

### **Summary of Literature Review**

Research throughout the literature review indicates that effective teachers utilize a wide range of skills and knowledge. Moreover, the research supports that effective teachers possess the skills needed to meet the teacher standards of North Carolina (McRel & NC State Board of Education, 2015):

1. Teacher leadership (p. 7).
2. Teachers establish a respectful environment for a diverse population of students (p. 7).
3. Teachers know the content they teach (p. 9)
4. Teachers facilitate learning for their students (p. 10)
5. Teachers reflect on their practice (p. 11).

In addition to these skills, teaching is an emotionally demanding career due to the pressure placed on them by external forces. Politicians are continuously demanding new assessments and curriculum and adjusting the funding for education, and student lives often are not stable at home. With so many demands of teaching, it is difficult to determine what practices lead to effective teaching (Meador, 2019).

Educational leaders are challenged to grow teachers, and with so many demands, it can be hard to navigate the process of teacher improvement. The recurring theme throughout the research indicates that reflection is an effective practice that improves multiple components of effective teaching. Reflection provides teachers the ability to analyze all aspects of the teaching process; and more importantly, it gives teachers the power of understanding why things happen (Serra, 2015). Specifically, this research sought to assess the impact reflection has within the five teaching standards of North Carolina.

### **Chapter 3: Methodology**

The greatest variable schools control that impacts student achievement is the effectiveness of the teachers within the school (Hattie, 2003). The purpose of this study was to assess the impact reflection had on teacher effectiveness, as teacher effectiveness was measured by the five North Carolina teaching standards. “Years of research on teacher quality, support the fact that effective teachers not only make students feel good about school and learning, but also that their work actually results in increased student achievement” (Tucker & Stronge, 2005, para. 3). Teacher effectiveness has a direct and longitudinal impact on student success and should be a focus for educational leaders (Tucker & Stronge, 2005).

This qualitative study measured the impact reflection had on teacher effectiveness from teacher perspectives. This study sought to gain teacher understanding of the power of reflection through lived experiences. Chapter 3 provides information regarding the research design and methodology I used to conduct this study which include research questions, participants, research design role, data collection procedures, instruments used, limitations, delimitations, and summary of the research.

#### **Research Questions**

This study addressed the following questions:

1. How does reflection impact teacher leadership?
2. How does reflection impact the ability of teachers to establish a respectful environment for a diverse population of students?
3. How does reflection impact teacher knowledge of content?
4. How does reflection impact teachers on facilitating learning for students?

## 5. How does reflection impact teacher practice?

### **Participants**

Participants in this study were kindergarten through 12<sup>th</sup>-grade public school teachers. There were two participant groups within the study. The NBCT group consisted of participants who had completed the National Board certification process. There were 41 potential participants in the NBCT group. The Non-NBCT group had participants who had not completed the National Board certification process. All participants chose to participate on a voluntary basis, and no incentives were offered for their participation.

NBCT participants were selected through the use of purposive sampling. Participants in this study had earned their National Board certification, which required teachers to use a variety of reflective practices, specifically video reflection. “Purposeful sampling allows you to deliberately select individuals and/or research settings that will help you to get the information needed to answer your research questions” (Ravitch & Carl, 2016, p. 128). “Purposive sampling is not haphazard. Purposive sampling has a purpose; a subgroup has been identified and a rationale has been developed for studying them” (Fitzpatrick et al., 2011, p. 411).

Non-NBCT participants were selected from the list provided on school websites by using the stratified random sample process. I selected 41 potential Non-NBCT participants. In addition, the number of invited Non-NBCT participants represented the same number of invited teachers from the elementary school, middle school, and high school as was represented in the NBCT group. Although participants were randomly selected in Group 2, I used previously listed parameters to ensure both groups were proportionally represented.

It was my intention to examine the impact reflection had on teacher effectiveness through the use of questionnaires, self-assessments, and interviews. The results of the study were shared with the district's leaders to help guide the district's professional development by identifying how reflective practices impact teacher effectiveness within the North Carolina teaching standards.

The school district was made up of 19 schools with 11 elementary schools, three middle schools, three traditional high schools, one early college, and one alternative school that served students in Grades 6-12. There were approximately 5,900 students in the school district. There were 41 teachers in the district who had earned their National Board certification. The average number of NBCTs in the district by school level was as follows: two per elementary school, four per middle school, and five per high school. For purpose of this study, I used 41 NBCTs and 41 Non-NBCTs as potential participants. A minimal number of participants in each group needed for this study was 10. If I was unable to obtain 10 participants, I randomly selected more teachers from school websites and invited them to participate in the research.

### **Research Design**

This study used qualitative research methods to collect data from teachers through a questionnaire, self-assessment, and interviews.

Qualitative research is a type of educational research in which the researcher relies on the views of participants; asks broad, general questions; collects data consisting largely of words (or text) from participants; describes and analyzes these words for themes; and conducts the inquiry in a subjective, unbiased manner. (Creswell, 2008, p. 46)

Through qualitative research, I examined teacher perspectives of reflection and its impact on teacher effectiveness in relation to the North Carolina teaching standards. Malterud (2001) explained, “the findings from a qualitative study are not thought of as facts that are applicable to the population at large, but rather as descriptions, notions, or theories applicable within a specified setting” (p. 486).

### **Instrumentation**

I collected data using three different instruments: a questionnaire, self-assessment, and interview questions.

#### ***Questionnaire***

The questionnaire used for this study was created by Wright (2008). I was granted permission (Appendix A) to use his questionnaire for the purpose of this study. Wright validated the instrument through multiple processes.

Member checks, field notes, and a detailed audit trail were used to verify recorded data and findings. The findings from a pilot study were also used to inform and confirm the procedures, findings, and conclusions of the study. The audit trail accounts for all of the dates and times of when I met with the teachers, principal, and committee members. In addition, it outlines the decisions, logic, and rationale I used to guide the directions and efforts of the study. I feel the findings are well supported by the people in the study because the majority of the data came from, and was later shared, and verified by the participants. I do believe, however, that sharing the final vignettes with the teachers would have augmented the conformability of the study. (p. 56)

For the purpose of this study, the questionnaire was converted to a Google Form

and was titled How Reflection Impacts Teacher Effectiveness (Appendix B). I sent the web link to the questionnaire to participants via email. By utilizing an online platform, participants had flexibility on when they chose to complete the questionnaire. The questionnaire was intended to assess the types of reflection participants practiced and the impact reflection had on their effectiveness.

### *Self-Assessment*

Participants completed the self-assessment using the Rubric for Evaluating North Carolina Teachers (Appendix C; McRel & NC State Board of Education, 2015). The self-assessment was validated, as it was required for all teachers in North Carolina to complete annually. Teachers received the self-assessment via email and needed to print the document to complete it in written form.

### *Interviews*

Participants who agreed to participate in the interviews were asked six questions (Appendix D) to assess the impact reflection had on their effectiveness in relation to the North Carolina teaching standards.

The six interview questions were validated through inter-rater reliability. The six interview questions were given to five educational leaders to ensure the question responses were beneficial to the study and would provide valid information relative to the research questions. The five educational leaders who validated the questions were an elementary school director, high school director, elementary school principal, middle school principal, and a high school principal. Each of the leaders worked in the school district where the study took place.

The identity of the participants in the questionnaire, self-assessment, and

interviews were protected throughout the study. I analyzed participant responses to identify themes, correlations, similarities, and differences of participant responses to the questionnaire, self-assessment, and the interview questions.

### **Procedures**

Prior to sending the questionnaire or self-assessment or interviewing participants, I gained approval from the Institutional Review Board and earned permission from the selected district's superintendent. Once approval and permission were granted, I contacted the principal of each school where the participants work to inform them of the study and processes that were asked of the participants if they chose to participate.

I emailed the direct link of the questionnaire and included an attachment with the self-assessment to the participants. Within the email, I explained the expectations of participants. There was a 2-week window for participants to complete the questionnaire. All self-assessments were asked to be submitted at the time of the interviews or via email, the district's inner courier mail, or mailed through United States Postal Service within 3 weeks of the date the participants received the self-assessment. If the questionnaire response rate was low within the first week, I sent an email reminding participants there was 1 week left to complete the questionnaire. Once the questionnaire and self-assessment windows closed, I examined the number of responses for both the questionnaire and self-assessment. If the number of responses was less than 10, I randomly selected more participants to participate in the study and extended the questionnaire window for 2 more weeks. In order to protect the validity of the study, newly selected participants were asked to complete the questionnaire, self-assessment, and interview.



In the last week of the survey, I contacted all the participants asking for volunteers to participate in interviews. I provided multiple opportunities to participate in interviews. I offered two group interview sessions that took place on separate days and in different weeks. I offered to interview participants in a one-on-one setting if the participants preferred that setting. Regardless of the setting, I asked the same questions and in the same order. Prior to conducting the interview, I went over expectations and procedures of the participants. I asked Question 1 and allowed all present participants to answer Question 1. Once everyone had the opportunity to answer the first question, I asked the remaining five questions using the same format used to respond to the first questions. It was my intention that all participants in the interviews had the opportunity to answer questions and be active participants in the interviews. I used consistent procedures in each interview to provide equitable representation from each interview session. I also offered online meeting platforms such as Zoom or Google Meet to offer online interview sessions and followed the same procedures used in the face-to-face interviews. I recorded all interview sessions to ensure the transcriptions were accurate.

### **Data Collection**

I used Google Forms to deliver the questionnaire to participants. As participants completed the questionnaire, responses were directly sent to a web base Google spreadsheet where they were organized by the question asked. To provide anonymity, the questionnaire did not ask for participant names, and I set the Google Form to not collect the email addresses of the participants. The questionnaire asked participants to identify if they were NBCTs. I kept responses from the NBCT and Non-NBCT groups separate. This allowed me to compare responses and identify themes from the NBCT and Non-

NBCT groups.

I informed the participants that a voice-recording device was used while conducting the interviews. This ensured participant responses were transcribed accurately. For the purpose of this study, participants in the interviews were identified as NBCTs and Non-NBCTs. If the online interview format was needed, the interview sessions were recorded to ensure accuracy. Throughout the study and at no time were the names of the participants revealed.

### **Data Analysis**

I analyzed the data collected to identify reflection practices used by the participants and the impact their practices had on teacher effectiveness in relation to the North Carolina teaching standards. I sought to identify trends, barriers, types of reflection practices used, and which practices had the greatest impact on teacher effectiveness according to the North Carolina teaching standards. Additionally, I compared the responses from the questionnaire, self-assessments, and interview responses to identify themes, similarities, or differences with the two participant groups.

### **Limitations**

For the purpose of this study, limitations such as participant rate of participation, survey delivery, and participant bias were relevant. There were 82 potential participants in the study, but all participants who chose to participate did so on a volunteer basis, which may have resulted in fewer participants. The Google Forms platform allowed participants to complete the survey at a time of their choosing. Using an online platform required the participants to be comfortable with technology and have Internet access.

Self-assessment and interview participants also participated on a volunteer basis,

which may have reduced the number of participants. If there was not sufficient and equitable representation in the three data collection platforms, the data collected may not accurately represent perceptions of all teachers in the district studied. Due to the fact that participants were asked to participate on a voluntary basis, the research was dependent upon the participation of completing the questionnaire, self-assessment, and interview.

The final limitation for this study was participant bias. The NBCT group completed their National Board certification which required extensive reflection, work, and cost for the participants. Additionally, participant feelings and self-gratitude of this accomplishment could have impacted their responses in all three instruments.

### **Delimitations**

The delimitations of the study were that participants worked for a single school district in North Carolina. Additionally, the school district had several small schools where there was only one teacher per subject or grade level. Participants who had fewer teachers to collaborate with may have limited participant reflection opportunities, such as their ability to analyze common assessment data, lesson planning with colleagues, and opportunities to participate in other reflective practices associated with PLCs. I was also a school administrator in the district where the participants worked, which could have resulted in participant bias.

### **Summary**

This qualitative study collected data from participants who were employed in a district located in rural North Carolina. It was my intention to identify types of reflective practices used by participants and the impact those practices had on teacher effectiveness according to the North Carolina teaching standards. The results of the study were shared

with the district's leaders and were intended to guide their professional development and ultimately improve teacher effectiveness throughout the district.

## Chapter 4: Results

This qualitative study assessed the impact reflection had on teacher effectiveness. For the purpose of this study, teacher effectiveness was identified by the five teaching standards of North Carolina which were reflected in the five research questions. The five research questions represent the North Carolina standards used in its teacher evaluation rubric (McRel & NC State Board of Education, 2015).

1. How does reflection impact teacher leadership?
2. How does reflection impact the ability of teachers to establish a respectful environment for a diverse population of students?
3. How does reflection impact teacher knowledge of content?
4. How does reflection impact teachers on facilitating learning for students?
5. How does reflection impact teacher practice?

Chapter 4 consists of data analysis of self-assessments using the Rubric for Evaluating North Carolina Teachers (McRel & NC State Board of Education, 2015), interviews, and the questionnaire “How Does Video Analysis Impact Teacher Reflection-for-Action” (Wright, 2008). The qualitative data analyzed were used to answer the five research questions.

Chapter 4 is organized with six sections, one for each research question and a sixth that provides a comprehensive summary of participant responses to the questionnaire. The purpose of the questionnaire was to collect data regarding reflective practices, perceptions, and barriers of practicing reflection. Within each section of Chapter 4, data from NBCT participants and Non-NBCT participants are identified for data comparison. In summary, there were a total of 20 participants who completed each

data collection tool; both NBCT and Non-NBCT groups had 10 participants each.

I analyzed questionnaire data and determined how participants used reflection and how specific reflective practices impacted their perceived teaching effectiveness. I studied data from the self-assessments, interview responses, and questionnaire to identify themes, similarities, and differences between the two participant groups. The hypothesis is that effective teachers reflect more strategically and frequently than less effective teachers, according to the North Carolina teaching standards.

### **How Does Reflection Impact Teacher Leadership?**

#### ***Self-Assessment***

In the North Carolina Teacher Evaluation Rubric (McRel & NC State Board of Education, 2015), the first standard addresses teacher leadership. Table 1 provides data from participant self-assessment ratings for all five elements of Standard 1. It also provides key analysis from the data in relation to the number of participants who rated themselves as developing, proficient, accomplished, or distinguished.

**Table 1***Teachers Demonstrate Leadership*

| Participant | Group    | Developing | Proficient | Accomplished | Distinguished |
|-------------|----------|------------|------------|--------------|---------------|
| 1           | NBCT     |            |            | A,B,C,D,E    |               |
| 2           | NCBT     |            |            | A,B,C,D,E    |               |
| 3           | NCBT     |            | B          | A,C,D,E      |               |
| 4           | NCBT     |            |            | A,B,C,D,E    |               |
| 5           | NCBT     |            |            |              | A,B,C,D,E     |
| 6           | NCBT     |            |            | A,B,C,D,E    |               |
| 7           | NCBT     |            |            | A,B,C,D,E    |               |
| 8           | NCBT     |            |            | A,B,C,D,E    |               |
| 9           | NCBT     |            | B,C,D      | A, ,E        |               |
| 10          | NCBT     |            |            | A,B,C,D,E    |               |
| 11          | Non-NCBT |            |            | A,B,C,D,E    |               |
| 12          | Non-NCBT |            |            | A,B,C,D,E    |               |
| 13          | Non-NCBT |            | A,B,C,D,E  |              |               |
| 14          | Non-NCBT |            |            | A,B,C,D,E    |               |
| 15          | Non-NCBT |            | A,B,C,D,E  |              |               |
| 16          | Non-NCBT |            |            | A,B,C,D,E    |               |
| 17          | Non-NCBT |            | D          | A,B,C,E      |               |
| 18          | Non-NCBT |            | A,B,C,D,E  |              |               |
| 19          | Non-NCBT |            | A,         | B,C,D,E      |               |
| 20          | Non-NCBT |            |            | A,B,C,D,E    |               |

*Note.* A=classroom leadership, B=school leadership, C=teaching profession leadership, D=school and student advocate, and E=demonstrates high ethical standards.

There was not a significant difference in ratings between the five elements collectively or with each group. Thirteen of 20 participants from both NBCT and Non-NBCT groups rated themselves as accomplished or higher on all five elements. The NBCT group had eight of 10 participants scoring accomplished or higher. Participant 5 self-rated as distinguished on all five elements. Moreover, three of 10 participants in the Non-NBCT group scored proficient, and six of 10 scored accomplished on all five elements. Seven participants recorded scores in the proficient range. Elements for school leadership, teaching profession leadership, and school and student advocate contained the

most proficiency ratings. The majority rated themselves as accomplished in all five elements of Standard 1; however, members of the NBCT group rated themselves higher. They had more distinguished ratings and fewer proficient ratings than the Non-NBCT group.

### *Interviews*

Data analysis from the interview data did not establish a relationship between NBCT and Non-NBCT responses and all five elements of Standard 1. Participant interview responses primarily related to leadership within the classroom. A common theme from both groups was that reflection helped teachers become better decision makers because it allowed them to improve upon past experiences. Additionally, both groups shared how reflection impacted leadership within their responsibility of providing instruction and their classroom setting. One NBCT participant stated,

I reflect in the moment, which means you have to be flexible. You have to be willing to say, this lesson did go the way I thought it would. So for tomorrow, I either need to scrap it or tweak something.

Additionally, a Non-NBCT participant stated the following on the impact reflection has on teacher leadership:

I think having the ability to continually reflect on your teaching practices and be willing to accept new ideas will help in your ability to become a teacher leader. Not always being stuck in your ways. Education is ever changing. New ideas, we are flooded with them and I think when you stop reflecting, you are doing a disservice to the children.

Both groups interpreted teacher leadership as being decision makers in regard to lesson



planning and instructional practices. In summary, both groups provided responses as to how reflection impacted their leadership within the classroom instruction.

### **How Does Reflection Impact the Ability of Teachers to Establish a Respectful Environment for a Diverse Population Of Students**

#### *Self-Assessment*

Within the North Carolina Teacher Evaluation Rubric (McRel & NC State Board of Education, 2015), the second standard addressed teachers establishing a respectful environment for a diverse population of students. Table 2 provides data from the self-assessment for all five elements in Standard 2. Each section contains summative data in relation to the number of participants who rated themselves as developing, proficient, accomplished, or distinguished.

**Table 2***Teachers Establish a Respectful Environment for a Diverse Population of Students*

| Participant | Group    | Developing | Proficient   | Accomplished  | Distinguished |
|-------------|----------|------------|--------------|---------------|---------------|
| 1           | NBCT     |            |              | A, B, C, D, E |               |
| 2           | NBCT     |            | D, E         | A, B, C       |               |
| 3           | NBCT     |            |              |               | A, B, C, D, E |
| 4           | NBCT     |            |              | A, B, C, D, E |               |
| 5           | NBCT     |            |              |               | A, B, C, D, E |
| 6           | NBCT     |            |              | D, E          | A, B, C,      |
| 7           | NBCT     |            |              | A, B, C, D, E |               |
| 8           | NBCT     |            |              | A, B, C, D, E |               |
| 9           | NBCT     |            | B, D, E      | A, C          |               |
| 10          | NBCT     |            |              | A, B, C, D, E |               |
| 11          | Non-NBCT |            |              | A, B, C, D, E |               |
| 12          | Non-NBCT |            |              | B, C, D, E    | A             |
| 13          | Non-NBCT |            | B,           | A, C, D, E    |               |
| 14          | Non-NBCT |            |              | A, B, C, D, E |               |
| 15          | Non-NBCT |            | , B, C, D, E |               |               |
| 16          | Non-NBCT |            |              | A, B, C, D, E |               |
| 17          | Non-NBCT |            |              | A, B, C, D, E |               |
| 18          | Non-NBCT |            | A, B, E      | C, D,         |               |
| 19          | Non-NBCT |            | B, E         | A, C, D,      |               |
| 20          | Non-NBCT |            |              | A, B, C, D, E |               |

*Note.* A=Teachers provide an environment in which each child has a positive, nurturing relationship with caring adults, B=Teachers embrace diversity in the school community and in the world, C=Teachers treat students as individuals, D=Teachers adapt their teaching for the benefit of students with special needs, and E=Teachers work collaboratively with the families and significant adults in the lives of their students.

In Table 2, 14 of 20 participants from both groups rated themselves as accomplished or better on all five elements. The NBCT group had a total of 13 distinguished ratings, while the Non-NBCT group had only one distinguished rating for all five elements. Participants 3 and 5 were a part of the NBCT group and represented 10 of 13 ratings at the distinguished level. The Non-NBCT group had six of 10 participants

with ratings at accomplished or better. The most frequent element that consisted of ratings below accomplished were for Element E, teachers embrace diversity in the school community and teachers work collaboratively with families and significant adults in the lives of their students. Based on the NBCT group's self-assessment ratings, the data suggested that NBCT participants were significantly more confident in their ability to establish a respectful environment for a diverse population of students than participants in the Non-NBCT group.

### *Interviews*

NBCTs consistently indicated that reflection helped teachers design a flexible classroom environment to meet student needs. Responses from NBCTs focused on differentiation of instructional resources and groups. These approaches allowed participants to support students both academically and behaviorally. Students had flexibility in seating with bean bags, exercise balls, and sensory items placed on their desks. Additionally, reflection allowed participants to understand which students worked well with one another and strategically grouped students based on academic and behavioral needs. A respondent from the NBCT group stated, "I think that reflection promotes inclusivity and makes you aware of your planning and opens your thought process on communication with students." NBCT participants shared how reflection impacted the physical setting and instructional practices of their classrooms. The environment and instructional practices correlated to three elements of Standard 2 which are: (a) teachers provide an environment in which each child has a positive, nurturing relationship with caring adults, (b) teachers embrace diversity in the school community and in the world, and (c) teachers adapt their teaching for the benefit of students with

special needs. NBCT data did not show the impact reflection had on their ability to relate to the diversity of the family dynamics of students or the community in which the students live.

Participants in the Non-NBCT group indicated that reflection was beneficial to establish a respectful environment for a diverse population of students. However, Non-NBCT respondents focused on the impact reflection had on the physical components and emotional components of their classroom. A Non-NBCT participant stated,

Learning takes place for all learners regardless of race, economic status, and gender when students are relaxed and feel safe. By creating a safe environment where it is a safe place to struggle and grow, you are establishing a respectful environment for all learners.

The common theme of Non-NBCT respondents was that reflection allowed the participants to know what physical accommodations to make and how to create a safe environment in which students feel comfortable. For example, participants referenced preferential seating and cool down spots on occasions when students became frustrated. Non-NBCT participants did not go into the depth of NBCTs on how reflection impacted instruction. Specifically, Non-NBCTs shared how reflection impacted instructional groups based on behavioral and emotional needs but not instructional. Non-NBCT interview data related to three elements of Standard 2: (a) teachers provide an environment in which each child has a positive, nurturing relationship with caring adults; (b) teachers embrace diversity in the school community and in the world; and (c) teachers treat students as individuals. Non-NBCT interview data did not address how reflection impacted their ability to adapt their teaching for the benefit of students with special needs

or how they work collaboratively with the families and significant adults in the lives of their students.

### **How Does Reflection Impact Teacher Knowledge of Content**

#### ***Self-Assessment***

Within the North Carolina Teacher Evaluation Rubric (McRel & NC State Board of Education, 2015), the third standard addressed was, “teachers know the content they teach.” Table 3 provides data from each of the four elements in Standard 3 of the self-assessment. Moreover, each section contains summative data in relation to the number of participants who rated themselves as developing, proficient, accomplished, or distinguished.

**Table 3***Teachers Know the Content They Teach*

| Participant | Group    | Developing | Proficient | Accomplished | Distinguished |
|-------------|----------|------------|------------|--------------|---------------|
| 1           | NBCT     |            |            | A, B, C, D   |               |
| 2           | NBCT     |            |            | A, B, C, D   |               |
| 3           | NBCT     |            |            |              | A, B, C, D    |
| 4           | NBCT     |            |            | A, B, C, D   |               |
| 5           | NBCT     |            |            |              | A, B, C, D    |
| 6           | NBCT     |            |            |              | A, B, C, D    |
| 7           | NBCT     |            |            | A, B, C, D   |               |
| 8           | NBCT     |            |            | A, B, C, D   |               |
| 9           | NBCT     |            | B, C, D    | A            |               |
| 10          | NBCT     |            |            | A, B, C, D   |               |
| 11          | Non-NBCT |            |            | A, B, C, D   |               |
| 12          | Non-NBCT |            |            | C, D         | A, B          |
| 13          | Non-NBCT |            | B, C       | A, D         |               |
| 14          | Non-NBCT |            |            | A, B, C, D   |               |
| 15          | Non-NBCT |            | A, B, C, D |              |               |
| 16          | Non-NBCT |            |            | A, B, C, D   |               |
| 17          | Non-NBCT |            |            | A, B, C, D   |               |
| 18          | Non-NBCT |            | A, C       | B, D         |               |
| 19          | Non-NBCT |            | B, C, D    | A            |               |
| 20          | Non-NBCT |            |            | A, B, C, D   |               |

*Note.* A=Teachers align their instruction with the North Carolina Standard Course of Study, B=Teachers know the content appropriate to their teaching specialty, C=Teachers recognize the interconnectedness of content areas/disciplines, and D=Teachers make instruction relevant to students.

Participants in both NBCT and Non-NBCT groups utilized the accomplished rating more than any other. While the majority fell under the accomplished designation, NBCTs had a total of 12 distinguished ratings in comparison to two distinguished ratings for Non-NBCTs. NBCT Participants 3, 5, and 6 rated themselves as distinguished on all four elements of Standard 3. Participant 12 from the Non-NBCT group self-rated as distinguished on Element A, teachers align their instruction with the North Carolina

Standard Course of Study and Element B, teachers know the content appropriate to their teaching specialty. There were a total of 11 proficient ratings for Non-NBCT participants, compared to three proficient ratings for NBCT participants on Standard 3. Non-NBCT Participant 15 was the only one to self-rate as proficient on all four elements. In summary, NBCT participants rated themselves higher than Non-NBCT participants on Standard 3 of the self-assessment.

### *Interviews*

Analysis of NBCT interviews identified two themes. The first indicated reflection enhanced teacher understanding of curriculum and pacing guides. Most reflection was through participation in PLCs. NBCTs shared how PLCs helped participants learn to promote best practices. The second theme identified by NBCTs was the importance of a growth mindset and how reflection allowed for a greater understanding of teaching techniques and curriculum sequencing. One NBCT participant stated the following on the impact reflection had on teacher content knowledge: “Reflections keeps you abreast of your goals; it keeps you abreast of your current methods, patterns, and pedagogy. I think it opens doors to new things as well.” NBCT interview data supported all four elements of Standard 3. These reflective practices impacted the effectiveness of participants understanding the sequencing of standards and instructional techniques needed to teach the standards.

The theme that emerged from the Non-NBCT participants was that reflection helped participants understand the sequencing of curriculum, which is needed because of the continuous evolution of the curriculum and pacing guides. A Non-NBCT participant stated, “In our profession, knowledge of the content is key; it is the foundation in which

we base our instruction on.” Non-NBCT participants did not reference how reflection supported the improvement of instructional practices used to deliver the curriculum. In summary, both groups found that reflection improved content knowledge, but NBCT participants went into more depth related to the instructional practices used to teach the curriculum.

### **How Does Reflection Impact Teachers on Facilitating Learning for Students**

#### ***Self-Assessment***

Within the North Carolina Teacher Evaluation Rubric (McRel & NC State Board of Education, 2015), Standard 4 measured teacher ability to facilitate learning for students. Table 4 provides data from each of the eight elements of Standard 4 of the self-assessment. Moreover, each section contains summative data in relation to the number of participants who rated themselves as developing, proficient, accomplished, or distinguished.



**Table 4***Teachers Facilitate Learning for Students*

| Participant | Group    | Developing | Proficient    | Accomplished           | Distinguished          |
|-------------|----------|------------|---------------|------------------------|------------------------|
| 1           | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 2           | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 3           | NBCT     |            |               | B,                     | A, C, D, E, F, G, H    |
| 4           | NBCT     |            |               | A, B, C, D, E, G, H    | F                      |
| 5           | NBCT     |            |               |                        | A, B, C, D, E, F, G, H |
| 6           | NBCT     |            |               | G,                     | A, B, C, D, E, F, H    |
| 7           | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 8           | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 9           | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 10          | NBCT     |            |               | A, B, C, D, E, F, G, H |                        |
| 11          | Non-NBCT |            |               | A, B, C, D, E, F, H    | G,                     |
| 12          | Non-NBCT |            |               |                        | A, B, C, D, E, F, G, H |
| 13          | Non-NBCT |            | A, E, F, H    | B, C, D, G,            |                        |
| 14          | Non-NBCT |            |               | C, E, H                | A, B, D, F, G,         |
| 15          | Non-NBCT |            | C, F,         | A, B, C, D, E, G, H    |                        |
| 16          | Non-NBCT |            |               | A, B, C, D, E, F, G, H |                        |
| 17          | Non-NBCT |            |               | A, B, C, D, E, F, G, H |                        |
| 18          | Non-NBCT |            | A, D, E, F, H | B, C, G,               |                        |
| 19          | Non-NBCT |            | F, H          | A, B, C, D, G, E, H    |                        |
| 20          | Non-NBCT |            |               | A, B, C, D, E, F, G, H |                        |

*Note.* A=Teachers know the ways in which learning takes place, and they know the appropriate levels of intellectual, physical, social, and emotional development of their students; B=Teachers plan instruction appropriate for their students; C=Teachers use a variety of instructional methods; D=Teachers integrate and utilize technology in their

instruction; E=Teachers help students develop critical-thinking and problem-solving skills; F=Teachers help students work in teams and develop leadership qualities; G=Teachers communicate effectively; and H=Teachers use a variety of methods to assess what each student has learned.

Participants in both groups (16 of 20) rated themselves as accomplished or better on all eight elements. Two of the 20 participants rated themselves as distinguished on all eight elements. All 10 NBCT participants rated themselves as accomplished or better on all eight elements. The Non-NBCT group had six of 10 participants rate themselves as accomplished or higher with Participant 12 identifying themselves as distinguished for all eight elements. The majority of the Non-NBCT participants rated themselves as accomplished or better; however, four of 10 participants had multiple ratings in the proficiency range. The most frequent proficiency rating was on Element F, teachers help students work in teams and develop leadership qualities.

### ***Interviews***

Participants in both groups revealed a theme that reflection benefited participants in facilitating learning. NBCT participants primarily focused on student performance and how reflecting on student data drove the decision-making as they planned differentiated instruction, determined resources, and formed instructional groupings. An NBCT participant shared,

Reflection keeps you accountable; are you addressing the students' needs? For example, their IEP, if that is the case; it keeps you accountable for the learning style that is most effective to the whole body of students and the individual. It drives the way you present and works best for your students.

Non-NBCT participants also communicated a theme that promoted the benefits of reflection and how it impacted participant ability to facilitate learning. Non-NBCT participants indicated that reflection allowed participants to choose the best resources to meet student needs. Non-NBCT participants primarily focused on instructional materials and how student performance data guided their instruction. A Non-NBCT participant stated, “I don’t see how a teacher could be effective unless they analyzed data. I mean, how do I know if I am meeting students’ needs unless I look at the data.” Another Non-NBCT participant provided a similar response:

Differentiation comes into play with this question. I think about a pre-test, and how one would reflect on what students need the most based on that data.

Reflecting on a post-test and comparing pre and post-tests, as well as checking in with the kids during the teaching process; I can see what students are still lacking as a whole and what can be taught in small groups. Reflecting on the manner the content was taught is very important to consider. Even switching it up a little, going from whole group, small groups, flex groups, pairing kids up based on the type of learner they are and their level of abilities. Reflecting on what went well with each and how you guided the instruction and what may work better for certain lessons in the future. I think about the different kinds of learning styles when I reflect on how I want to be better about reaching out to kinesthetic, visual, spatial, auditory, etcetera learners to help kids reach their fullest potential.

In summary, both groups found that reflection allowed participants to analyze student data to determine effective resources and guide their instruction.

## **How Does Reflection Impact Teacher Practice**

### ***Self-Assessment***

Within the North Carolina Teacher Evaluation Rubric (McRel & NC State Board of Education, 2015), Standard 5 measured how teachers reflected on practice. Table 5 provides data from each of the three elements of Standard 5 in the self-assessment. Moreover, each section contains summative data in relation to the number of participants who rated themselves as developing, proficient, accomplished, or distinguished.

**Table 5***Teachers Reflect on Practice*

| Participant | Group    | Developing | Proficient | Accomplished | Distinguished |
|-------------|----------|------------|------------|--------------|---------------|
| 1           | NBCT     |            |            | C            | A, B,         |
| 2           | NBCT     |            | C          | A, B,        |               |
| 3           | NBCT     |            |            |              | A, B, C       |
| 4           | NBCT     |            | C          | A, B,        |               |
| 5           | NBCT     |            |            |              | A, B, C       |
| 6           | NBCT     |            |            | C            | A, B,         |
| 7           | NBCT     |            |            | A, B, C      |               |
| 8           | NBCT     |            |            | A, B, C      |               |
| 9           | NBCT     |            | B, C       | A,           |               |
| 10          | NBCT     |            |            | A, B, C      |               |
| 11          | Non-NBCT |            |            | A, B, C      |               |
| 12          | Non-NBCT |            |            |              | A, B, C       |
| 13          | Non-NBCT |            | A, B, C    |              |               |
| 14          | Non-NBCT |            |            | A, B, C      |               |
| 15          | Non-NBCT |            |            | A, B, C      |               |
| 16          | Non-NBCT |            |            | A, B, C      |               |
| 17          | Non-NBCT |            | B, C       | A,           |               |
| 18          | Non-NBCT |            | A, B, C    |              |               |
| 19          | Non-NBCT |            | C          | A, B,        |               |
| 20          | Non-NBCT |            |            | A, B, C      |               |

*Note.* A=Teachers analyze student learning, B=Teachers link professional growth to their professional goals, and C=Teachers function effectively in a complex, dynamic environment.

The data show that 13 of 20 participants rated themselves accomplished or higher on all three elements. The NBCT group had seven of those participants and the Non-NBCT group had five. Element C, teachers to function effectively in a complex, dynamic environment, had the most proficiency ratings with seven. Teachers link professional growth to their professional goals and have the second most proficiency ratings. In summary, NBCT participants rated themselves higher overall than Non-NBCT participants on Standard 5 elements of the self-assessment.

## *Interviews*

NBCT participants provided themes indicating that reflection was beneficial to improving teacher practice and stating how participants reflected on practice. First, participants who reflected on practice identified areas of strength and weaknesses within their teaching. Moreover, NBCT questionnaire data addressed how video-enhanced reflection for the National Board certification process revealed how little they moved around the classroom and how frequently participants called on specific students to answer questions. An NBCT participant response to the questionnaire stated, “By watching myself on video, I was able reflect on my actions. Did I stand in the same place during instruction? Did I call on the same student every time? Did I ask the right questions?” Additionally, NBCT participants indicated that reflection was a key practice to improving teacher effectiveness as a whole. One NBCT participant stated,

Reflection is what allows a teacher to be willing to change and improve. If a teacher does not reflect, then they can’t identify what needs to be changed or areas they need to get better in. A teacher, who doesn’t reflect, is not willing to change.

NBCT participants reported they reflected daily or weekly on their performance and student performance. This guided participants to adapt their approach for the following day. The frequent reflection theme specifically related to Element C of Standard 5 which addresses functioning in a complex, dynamic environment.

Non-NBCT participants also presented a theme that reflection improved teacher practice. Non-NBCT participants reported that their reflection was a summative process at the conclusion of each school year. Non-NBCT participants specifically referenced

how they adapted their class structure and instructional practices each year and had minimal reference to daily reflection, and no participant referenced video-enhanced reflection. The following is a quote from a Non-NBCT participant:

What may have worked this year, may not work next year. You have to have flexibility. As you go through your lessons throughout the year, make notes, use sticky notes, and jot down what didn't work. By the end of the year, it's hard to remember what worked and what didn't.

In summary, both NBCT and Non-NBCT participants believed that reflection improves practice. However, the interview data showed NBCT participants practiced formative reflection which guided them more often in their daily instruction than did the Non-NBCT participants.

### **How Does Video Analysis Impact Teacher Reflection-for-Action Questionnaire**

Participants who completed the questionnaire provided insight on their views of reflection and how they participated in reflection. I identified six themes after analyzing the data from the questionnaire.

1. Methods of reflections
2. Purpose of reflection
3. Effectiveness of different reflection methods
4. Frequency that participants reflect
5. Barriers to practice reflection
6. Comparison of NBCT and Non-NBCT

### ***Methods of Reflection***

All participants stated they had participated in reflection in some form. Both

groups responded that they used written reflection and reflecting with colleagues most often. When reflecting with colleagues, the focus was on student data and comparing student performance to determine best practice. The only other form of reflective practices utilized was video-enhanced reflection. Video-enhanced reflection was only utilized by NBCT participants during the National Board certification process.

### ***Purpose of Reflection***

Both groups' data suggested a common theme when identifying the purpose of reflection, which was to improve teacher effectiveness. Specifically, the purpose of reflecting on student data was that it improved participant effectiveness because they were able to learn from past behaviors. In addition, NBCT participants felt that the purpose of video-enhanced reflection was to identify what participants could improve upon as the teacher and not reflecting solely on student performance. NBCT participants analyzed how they moved with the classroom, their communication to students, the questions they asked, and how they maintained student engagement. Video-enhanced reflection took away the bias because participants reviewed live footage and did not have limitations from reflecting from memory. This process put the focus on participant behaviors. Non-NBCT participant data did not present a theme related to video-enhanced reflection. However, Non-NBCT participant data did suggest a theme that written reflection and reflecting with colleagues allowed participants to identify strengths and weaknesses of their practices but did not speak to potential biases that come with reflecting from memory.

### ***Effectiveness of Different Reflection Methods***

Data from both groups suggested that written reflection and reflection with



colleagues were common practices. NBCT data added an additional method of video-enhanced reflection. Written reflection was more practical for participants as it required less time and resources to complete. Anecdotal notes and journaling allowed participants to reflect before teaching the next lesson or when they taught the same concept again at a later time.

As with written analysis, reflecting with colleagues was a common practice among both groups. It allowed participants to share student performances such as what went well in a lesson, what did not go well, and what practices were needed to meet student needs. Reflecting with colleagues naturally took place during the school day as it happened frequently and informally during planning periods, lunch breaks, recess, and after school.

Additionally, video-enhanced reflection was utilized by NBCT participants. The effectiveness of video-enhanced reflection allowed participants to see how they moved around the classroom, how they engaged students, and how they addressed student needs. Data from NBCT participants suggested a clear reason why video-enhanced reflection was effective. Video-enhanced reflection allowed them to analyze their behavior firsthand. They did not have to analyze student data or recall their behavior from memory. Non-NBCT participant data did not suggest a theme related to video-enhanced reflection as they did not participate in that form of reflection.

### ***Frequency of Reflection***

Participants from both groups reflected regularly by describing the frequency in which they reflect was either daily or weekly. Those who reflected daily spent anywhere from 5 minutes to 1 hour each day. Those who reflect weekly spend approximately 1 to 2

hours per week. These times represent the frequency of written reflection or reflecting with colleagues. NBCT participants utilized video-enhanced reflection no more than one time per year. Most NBCT participants utilized video-enhanced reflection for the National Board certification process, and most participants had not completed video-enhanced reflection since the National Board certification process.

### ***Barriers to Practice Reflection***

A common theme emerged from the data: Both groups identified time as the biggest barrier to practicing written reflection or reflecting with colleagues. Both groups supported having fewer duties and protected planning periods which would have allowed for more time to practice either written reflection or reflection with peers.

NBCT data identified three clear barriers for video-enhanced reflection: time, technology, and self-efficacy. The common barrier of time applied to video-enhanced reflection was that it required protected time for teachers to review the video. If the video recording was 30 minutes long, it took the participants at least 30 minutes to review. In addition to time needed to review the video, there was time needed to set up the video recorder and ensure it was working properly. This leads to the second barrier that NBCT data identified, technology. There was frustration with using technology as it was not always reliable, available, and easy to use. The final barrier for video-enhanced reflection was self-efficacy. NBCT participants believed the process should be completed either privately, with a close friend, or with administration only. Participants felt vulnerable to others watching them teach and had anxiety before even practicing video-enhanced reflection. A response in the questionnaire data demonstrated the worry and lack of confidence in practicing video-enhanced reflection. An NBCT stated, "It was stressful. I

had not videotaped myself before. Would the technology work? Would my students be put off by a camera being in their faces? Would there be interruptions?" In summary, time, technology, and efficacy were the clear barriers for participants to practice reflection.

### ***Comparison of NBCTs and Non-NBCTs***

All participants participated in written reflection and reflection with colleagues either daily or weekly. Only NBCTs participated in video-enhanced reflection, but rarely outside of the National Board certification process. This was the key difference in the analysis of the questionnaire. Both groups believed in the power of reflections and believed they improved teacher effectiveness. Moreover, all participants preferred written reflection and reflecting with colleagues because these practices could be implemented in their daily schedule. Time was the primary and common barrier for all methods of reflection to take place.

Both groups focused on how reflection impacted instructional practices, strategic grouping, and student learning. Both groups practiced reflection regularly and believed it was beneficial. The main difference was that NBCT participants had completed video-enhanced reflection. It should be noted that NBCTs do not practice video-enhanced reflection regularly; most had not practiced video-enhanced reflection since participating in the National Board certification process. In summary, all participants value reflection and believe it improved their effectiveness as a teacher.

### **Summary**

Both NBCTs and Non-NBCTs believed that reflection impacted teacher effectiveness as defined by the North Carolina teaching standards. Based on the interview

data from the second research question, NBCT participants utilized reflection to understand student diversity in regard to their academic needs, and Non-NBCTs only focused on the physical and emotional components. Data from the study that related to teacher content knowledge showed that both groups utilized reflection to determine the progression of curriculum standards. NBCT group data showed reflection also impacted lesson planning and instructional design. The sole difference in reflective practices used by participants was that NBCTs had utilized video-enhanced reflection while obtaining their National Board certification. However, according to the questionnaire data, both groups practiced written reflection and reflection with colleagues almost exclusively. Additionally, the most common rating utilized on the self-assessment was the accomplished rating. NBCTs consistently rated themselves higher on the self-assessment than Non-NBCTs. In closing, both groups' data from the interviews and questionnaire supported that reflection impacted their effectiveness according to the North Carolina Evaluation Rubric.

## Chapter 5: Discussion

### Introduction

The study's goal was to assess the impact of reflection on teacher effectiveness. The greatest variable schools control and that impacts student achievement is the effectiveness of the teachers (Hattie, 2003). For the purpose of this study, teacher effectiveness was measured by the five teaching standards, according to the North Carolina Teacher Evaluation Rubric. Each research question was related to these standards.

I designed this study to explore and understand how teachers utilized reflective practices and the impact reflection had on teacher effectiveness from the perspective of the participants. I utilized self-assessments using the Rubric for Evaluating North Carolina Teachers (McRel & NC State Board of Education, 2015), interviews, and the questionnaire "How Does Video Analysis Impact Teacher Reflection-for-Action" (Wright, 2008) to collect qualitative data. I utilized the following questions to guide the research.

1. How does reflection impact teacher leadership?
2. How does reflection impact the ability of teachers to establish a respectful environment for a diverse population of students?
3. How does reflection impact teacher knowledge of content?
4. How does reflection impact teachers on facilitating learning for students?
5. How does reflection impact teacher practice?

I identified relationships between the data from all three instruments as well as the comparison of NCBTs and Non-NBCTs. My goal was to identify what reflective

practices teachers utilized, the frequency of application, the impact of the reflective practices, and barriers that limit teacher ability to practice reflection.

## **Discussion of Results**

### ***How Does Reflection Impact Teacher Leadership***

Rogers (2001) stated the goal of reflection was to “integrate the understanding gained into one’s experiences in order to enable better choices or actions in the future, as well as to enhance one’s overall effectiveness” (p. 41). Data reported from both NBCT and Non-NBCT participant interview responses showed that reflection positively impacted teacher leadership as a teacher within the classroom setting.

Data collected from the interviews implied that reflection impacted participant ability to lead within their classroom setting. More specifically, participants learned from prior experiences to plan lessons and make decisions within their classroom. Participants did not expand on teacher leadership at the school level or in other professional settings outside of their classroom. Element B related to teachers leading at the school level by being involved in developing school improvement goals and school budgets, professional development, and leading in PLCs (McRel, & NC State Board of Education, 2015). The data showed that 13 of the 20 participants participated in leadership within their school as measured by the self-assessment, but the interview data did not support their self-assessment ratings. A potential reason for participants not viewing leadership beyond the classroom is due to their school’s leadership hierarchy. Atieno Okech (2008) noted that to overcome the unintended hierarchy roadblock, organizations should create a model for co-leadership. This research suggested that a reflective paradigm was not present in the participants’ respective school buildings. Atieno Okech spoke to the importance of a

reflective paradigm and its role in supporting teacher leadership.

Reflective practice processes can create functional co-leader relationships that facilitate processing of complex intrapersonal and interpersonal cognitive and emotional experiences in co-leader relationships. A well-developed reflective practice paradigm may assist co-leaders in attaining insight into challenging group dynamics, triangulating experiences with group members, and situations where group leader incompetence is an impediment to group development. Such co-leaders can collaboratively address group problems, provide reciprocal supports that enhance their performance as group leaders, conceptualize complex group dynamics, and develop strategies and techniques that may ameliorate the performance of their group members. (Atieno Okech, 2008, p. 250)

Based on the data, a relationship between the research from Atieno Okech (2008) and the data from this study could not be established. Specifically, the data did not show a relationship between reflection and the other four elements: (b) teacher leadership at the school level, (c) in the teaching profession, (d) advocating for school and students, and (e) demonstrating high ethical standards. In summary, the interview data from both groups aligned more with the proficiency rating than the accomplished rating of the self-assessment. The self-assessment data showed that eight of 10 NBCT participants utilized the accomplished rating compared to six of 10 Non-NBCT participants. NBCTs had a greater perceived effectiveness on Standard 1 as their ratings were higher than Non-NBCTs; however the interview data from neither group supported the accomplished ratings on the self-assessment.

*How Does Reflection Impact the Ability of Teachers to Establish a Respectful Environment for a Diverse Population of Students*

Webster-Smith (2011) stated, “reflection retains an ageless appeal since schools are mandated to be inclusive and to successfully educate children regardless of their culture, native tongue, learning abilities, physical abilities, socioeconomic status, or geographical idiosyncrasies” (p. 9). Webster-Smith concluded that for all students to have a chance at living productive lives, educators must provide an environment and practices that are inviting and warm and contain the necessary level of rigor for all students. The data showed 14 of 20 participants rated themselves as accomplished or distinguished on the five elements of Standard 2: (a) teachers provide an environment in which each child has a positive, nurturing relationship with caring adults; (b) teachers embrace diversity in the school community and in the world; (c) teachers treat students as individuals; (d) teachers adapt their teaching for the benefit of students with special needs; and (e) Teachers work collaboratively with the families and significant adults in the lives of their students. The interviews showed that NBCT participants utilized reflection to adapt their classroom environment both physically and instructionally to meet student needs. In comparison, the Non-NBCT data reflected that six of 10 participants utilized the accomplished rating on all five elements. Non-NBCT participants demonstrated that reflection allowed participants to establish a safe environment both physically and emotionally in which students could learn. Non-NBCT participants did not share how reflection impacted the instructional components needed to establish a respectful learning environment, whereas NBCTs did.

Neither group provided evidence in the interviews of how reflections impacted



Element E of Standard 2 which states, “Teachers work collaboratively with the families and significant adults in the lives of their students” (McRel & the NC State Board of Education, 2015, p. 1). Di Gennaro et al. (2014) described the importance of reflection to improve practices on teaching students with diverse needs and stated that critical reflection is the most important practice. Di Gennaro et al. stated,

This approach embraces and promotes the principles on which inclusive education is based, enticing teachers to reflect on their own strengths and those of their pupils, their schools and the communities in order to transform the educational settings in which they work into inclusive environments. (p. 59)

Schechter and Sherri (2009) showed the importance of teachers knowing their students on a personal level and understanding the family dynamics of their students. By reflecting on the families, teachers were able to collaborate with families and involve them in the learning process. Teachers from Schechter and Sherri believed that parents wanted to support their children in the learning process; but in some cases, they did not have the knowledge or confidence to support them. This research showed the importance of understanding students’ families and their backgrounds in providing effective instruction. In order to make family connections and involve them in the learning process, teachers must reflect and understand the family dynamics to create appropriate opportunities in which parents could participate.

In conclusion, NBCT participants perceived their effectiveness at establishing a respectful environment for diverse student populations was greater than Non-NBCT participants. In addition to NBCTs having higher self-assessment ratings, their interview data provided a theme that reflection had a greater impact on establishing a respectful

environment for a diverse population within their classroom setting through instructional approaches. Neither of the groups' interview data related to the research on how reflection impacted collaboration with families. In summary, the data supported the impact of reflection but not to the extent of the literature. The interview data from neither group had any relationship to Element E which states, "Teachers work collaboratively with families and significant adults in the lives of their students" (McRel & the NC State Board of Education, 2015, p. 1).

### ***How Does Reflection Impact Teacher Knowledge of Content***

The research from Ediger (2009) not only demonstrated the importance of Standard 3 but also added support for the impact reflection had on teacher content knowledge. Moreover, research showed that content knowledge had a positive impact on pedagogy and overall effectiveness (Özden, 2008). Educators can no longer view content knowledge and pedagogy as two separate components of teaching; rather, teachers must understand how the two support one another. Effective teachers not only understand the progression of standards but also know how to teach them through meaningful and engaging activities. Data showed that both NBCT and Non-NBCT groups identified themselves as accomplished more frequently than any other rating. NBCT participants utilized the distinguished rating 12 times compared to two distinguished ratings from the Non-NBCT group. Both groups were effective teachers within Standard 3 based on their perceived effectiveness on the self-assessment; however, the NBCT group rated themselves higher. The analysis of NBCT participant and Non-NBCT participant interview data showed that reflection allowed for teachers to gain a deeper understanding of curriculum and pacing guides which allowed for instructional approaches to evolve

based on the needs of students. One NBCT participant stated,

Reflecting with people outside of my building is key. I am the only one who teaches my content in my school. I have to reach out to others which allows me to see what new things teachers are doing. I learn how different approaches are used to meet the standards.

In addition to learning new instructional approaches, there was a common theme that curriculum and pacing guides were documents that continuously evolved; thus, there was a need to reflect on these regularly.

Both groups felt that PLCs were the most common method for reflecting on curriculum and pacing documents. NBCT participants spoke to the relationship of reflection with knowing the progression of standards, when to teach standards, and how to teach standards. Participants showed a clear pedagogical connection by not only reflecting on the standards but also in their instructional practices used to teach them. NBCT participants' data also supported the research from McCaughtry (2004). The research concluded that talking and listening to students was an effective practice that allowed teachers to understand the emotion and feelings of their students. Teachers who reflected on how students felt were able to connect and adapt the curriculum based on their emotional needs.

In conclusion, the data in Chapter 4 agreed with the research from Ediger (2009) and McCaughtry (2004). The self-assessment data showed NBCT participants rated themselves higher than Non-NBCT participants on Standard 3 of the self-assessment. Additionally, NBCT interview data suggested that they reflected on curriculum guides, pacing guides, and curriculum presentations in PLCs. The Non-NBCT participants

focused on understanding the progression of standards and not the instructional strategies needed to teach the standards. Non-NBCT interview data supported Element A of Standard 3 which states that teachers align their instruction with the North Carolina Standard Course of Study. NBCT data support all four Elements of Standard 3: (a) teachers align their instruction with the North Carolina Standard Course of Study; (b) teachers know the content appropriate to their teaching specialty; (c) teachers recognize the interconnectedness of content areas/disciplines; and (d) teachers make instruction relevant to students.

In summary, the data and research showed reflection positively impacts teacher perceived effectiveness in regard to teachers knowing the content they teach. However, NBCT participants showed that reflection had a greater impact on perceived effectiveness with Standard 3 than Non-NBCT participants. Additionally, NBCTs focused on the instructional resources and pedagogy needed to teach the standards, where Non-NBCTs did not.

### ***How Does Reflection Impact Teachers on Facilitating Learning for Students***

The research from Robertson (2013) suggested that analyzing audio recordings allowed teachers to reflect on their communications with students. Additionally, the research from *The Need for Reflection When Teaching* (2014) shared the importance of reflection and how it impacted teacher knowledge of their students.

It can be difficult and time consuming for teachers to scrutinize their performance, but like any other occupation it is essential for improvement. Asking deliberate questions, reflecting on the answers, then implementing changes on how you approach your teaching based on your reflection

differentiates decent teachers from great teachers. (*The Need for Reflection When Teaching*,” 2014, para. 3)

Kanellopoulou and Darra (2018) shared that in order for teachers to make the lessons engaging to individual students, they must reflect to understand student needs. Both NBCT and Non-NBCT groups provided data that agreed with the research and the importance of reflection to be effective on all elements of Standard 4. All 10 NBCTs rated as accomplished or higher on the eight elements of Standard 4, compared to six of 10 Non-NBCTs. This perceived effectiveness from the self-assessment aligned to the interview data as well. One Non-NBCT stated,

As I have moved throughout my career, specifically when I moved from teaching kindergarten and first grade, to teaching upper elementary, I had fears on what was appropriate. Were my expectations too low or are my expectations too high. What were the students capable of? Constant reflection shapes how I facilitate learning in the classroom. The first thing that I learned from reflection was that I was doing too much. I should not be working harder than the students. I realized me standing in front of the group was not successful. I realized that I was not engaging students and they did not comprehend what I was teaching. At that point, I realized the importance of small group instruction. Students were not able to hide by just following along with their classmates. I was able to have personal conversations with students which helped student engagement and comprehension.

In summary, the interview data agreed with research that reflection had a positive impact on teacher effectiveness with Standard 4: Teachers facilitate learning for students.

Both groups specifically spoke to how reflection allowed participants to meet the needs of students by choosing appropriate resources and differentiating instruction. NBCT and Non-NBCT participants utilized the accomplished rating more than other ratings on Standard 4 of the self-assessment. The NBCT group had four more participants self-rate themselves as accomplished or higher than Non-NBCT participants on the self-assessment, which suggested that NBCTs were more confident with a greater perceived effectiveness measured by Standard 4 on the self-assessment. The interview data did not have this disparity; both groups shared how reflection impacted their ability to facilitate learning for students.

### ***How Does Reflection Impact Teacher Practice***

The data collected related to Standard 5 addressed the impact of reflection on practice as well as how participants practiced reflection. NBCT questionnaire data supported Van Es and Sherin's (2009) study that video reflection was beneficial. NBCT participants utilized video reflection and found that video-enhanced reflection allowed teachers to identify what they needed to improve upon as a teacher. One participant from the NCBT group stated, "Video-enhanced reflection forced me to watch myself and not focus on students. I learned a lot about what I could improve upon and not just what my students needed to improve upon." Van Es and Sherin showed the benefits of practicing video-enhanced reflection with peers in video clubs. These provided a great opportunity for teachers to understand their own deficits as well as gain a deeper understanding of the curriculum and how each grade connects. Observations from the study suggested that teachers began to view themselves as learners and sought ways to improve their teaching. The questionnaire data, however, did not completely agree with the literature. NBCT

participants found that video reflection was beneficial and saw themselves as learners but did not support the notion it should be done collaboratively. NBCTs were not comfortable with colleagues reviewing their videos. They felt they would be judged by their colleagues and it would put both themselves and their colleagues in uncomfortable positions. The questionnaire data also suggested that NBCT did not practice video-enhanced reflection regularly and many had not participated in it outside of the National Board certification process.

The benefits of teachers practicing video-enhanced reflection are similar to those of athletes. Martinent et al. (2015) suggested athletes reflect on their performance by watching the video of them competing. This reflection process removed the perceptions and replaced them with an accurate, visual record of the performance. Athletes were more receptive to the self-analysis of the video of their performance than during interviews conducted after their performance. Essentially, the video removes misconceptions of perceived performance versus actual performance. In summary, video-enhanced reflections allow the teacher to reflect beyond the science of teaching by examining the art of teaching.

In addition to video-enhanced reflection, NBCT and Non-NBCT data suggested that reflecting daily and weekly allowed participants to adapt their instruction frequently. Written reflection and reflection with colleagues were easier to implement during planning periods or after school. Essentially, there were fewer barriers to practice written reflection and reflection with colleagues. Participant mindsets on the importance of being a reflective teacher were also brought to light in the interviews. An NBCT participant stated,

Reflection is what allows a teacher to be willing to change and improve. If a teacher does not reflect, then they cannot identify what needs to be changed or areas they need to get better in. A teacher, who does not reflect, is not willing to change.

Non-NBCT data also suggested that reflection impacted teacher perceived effectiveness within Standard 5. Most Non-NBCT participants reflected annually and assessed how they should structure their classrooms and instructional practices in the future. The interview data from the Non-NBCT group supported the research from Van Es and Sherin (2009) that suggested that when teachers view themselves as learners, growth will come. One participant from the Non-NBCT group stated,

It does not matter the university you graduate from, the school you teach, the times you have been teacher of the year, you have the top scores. All of those things will come if you are willing to look at yourself. Critically think about the instructional practices you've embraced, and ask yourself hard questions. Be willing to change when things are not working; be willing to admit you as the teacher need to improve sometimes and be willing to change with a positive attitude; be willing to productively struggle along with the kids, and teachers who embrace reflection will continue to grow and be successful. Because as time changes so do students, so do curriculums and expectations, so sticking with the same routine year after year will not produce results. We constantly lecture our kids of a growth mindset, so as adults we have to embrace that as well.

Data from the questionnaire "How Does Video Analysis Impact Teacher Reflection-for-Action" supported that Non-NBCT participants reflected either daily or weekly, which



was more frequently than shared in their interviews. As with NBCT participants, the most common types of reflection Non-NBCT participants utilized were written and reflecting with peers.

The study's data agreed with the overarching research themes which were that reflection impacted teacher perceived effectiveness as measured by Standard 5 on the self-assessment. Data showed that seven of 10 NBCT participants utilized the accomplished rating or higher compared to five of 10 Non-NBCT participants. The interview data indicated NBCT group members utilized reflection more frequently. It should be noted that the questionnaire data suggested that both groups reflected either daily or weekly. NBCT members rated themselves higher than Non-NBCTs on the self-assessment, which correlated to a greater perceived effectiveness.

The one area in which the data did not agree with the literature is on video-enhanced reflection. NBCTs did not believe they should participate in collaborative reflection while analyzing their recorded lessons due to a lack of efficacy. Participants lacked confidence and had anxiety with practicing video-enhanced reflection. Additional barriers to practice video-enhanced reflection were time and the inconsistent performance of technology. Element C of Standard 5 measures teacher ability to function in a complex and dynamic environment. Element C had the lowest rating of all 25 elements of the self-assessments with a total of seven proficiency ratings from both groups. The questionnaire data support the effectiveness of video-enhanced reflection, but participants chose not to use it regularly as a form of reflection and most indicated they had not practiced video-enhanced reflection since earning their National Board certification. Data from Element C and the questionnaire suggest that participants are uncomfortable with the technology

and do not have enough time to practice video-enhanced reflection, even if doing so independently. The data suggest the complexity and dynamics of video-enhanced reflection hinder the efficacy to practice video-enhanced reflection.

### **Implications for Practice**

A reflective culture empowers teachers to understand the emotional, behavioral, and academic needs to create an environment that promotes inclusivity of a diverse population. Schools that promote reflection will have teachers who take responsibility for the growth of the entire organization and work collaboratively with their peers. Sebastian et al. (2016) found a positive correlation between teacher leadership and school improvement. Moreover, when schools promote teacher leadership, they tend to have a more positive climate in the workplace. Sebastian et al. showed a positive correlation between climate and student achievement. Educational leaders, who focus on reflective practices and promote a reflective culture, will be more effective in meeting the needs of all stakeholders than those who do not.

Self-assessment and questionnaire data showed that teachers are less confident in a complex and dynamic environment; therefore, leaders need to focus on structure and consistent expectations for practicing reflection. Educational leaders can learn from other professions in regard to establishing a reflective culture in complex environments. The ever-changing demands placed on healthcare professionals are similar to those of educators as it relates to the mindset and demands of the job. Research over a 3-year period of time showed that reflective practices with oncology nurses improved the culture of the workplace, as it is now a more cohesive and supportive environment (Caley et al., 2017). Designated times for teachers to reflect independently and with colleagues should

be assigned. Teachers will benefit from this structure, as they will have the opportunities to support each other and learn from one another. Standal and Moe (2013) stated, “Participants found it valuable to discuss with other teachers everyday issues such as assessment, liability, and state standards for teaching” (p. 224). Moreover, Webster-Smith (2011) stated, “Reflection has the ability to transport an individual from a disturbing state of perplexity or disequilibrium to a harmonious state of understanding or equilibrium (Dewey, 1944)” (p. 2).

Participants indicated lower perceived effectiveness of functioning in a complex and dynamic environment than in any other element on the self-assessment. These data showed the need for educational leaders to designate time, space, and resources needed for collaborative reflection. When reflective teachers communicate with each other about their practices, it allows the best practices to come to the forefront. Teachers who reflect collaboratively are able to narrow their needs of improvement to a manageable task. This can lead to a concrete and collective action plan that targets specific needs (Ballock, 2010). Regardless if reflection is done in isolation or in a collaborative setting, teacher reflection is considered the catalyst for professional growth (Stover et al., 2011).

According to interview data, reflection allowed teachers to determine their students’ physical, emotional, and academic needs. Through reflection, teachers adapted their classroom’s physical setting and instructional approaches. Interview data showed that teachers supported different learning styles and differentiated instruction to meet the needs of students. The interview data agree with Mossgrave (2014) who said effective teachers must understand the content knowledge well enough to provide correct knowledge and present it an engaging manner. A teacher’s pedagogy speaks to their

delivery and organization of instruction, but it is important to note that effective pedagogy is driven by teacher content knowledge. The impact of reflection reaches beyond the needs of students and classrooms. Reflection also develops teacher skill levels. Teachers who reflect on data with peers are able to determine best practices and resources to provide a better educational experience for students than teachers who do not. Sansbury (2011) stated, “Being an effective, successful teacher does not mean you never make mistakes. It just means we learn from them” (para. 2).

Additionally, the questionnaire data showed teachers feared and were not comfortable practicing video-enhanced reflection. However, participants who had practiced video-enhanced reflection found it beneficial. To overcome the barriers presented, leadership should provide consistent technology and training on how to use the technology. The complexity of video-enhanced reflection comes into account when teachers are not given the time to prepare the technology and review the recorded lessons. By providing designated time and support, administrators would reduce the barriers of time and the burden of using technology.

In addition to setting the expectations and structures for teachers to practice reflection, administrators and instructional coaches should take the lead role in video-enhanced reflection. For teachers to overcome the fears and anxiety as shared in the questionnaire, instructional walk-through forms should shift from written feedback to video clips. Leadership could record the walk-through and drop the video clip into an online folder specific to that teacher. In the beginning stages, only the administration, instructional coaches, and teacher should have access to the video clips. According to the questionnaire data from this study, keeping the video clips confidential would build trust,

as participants did not believe it should be shared with colleagues. As efficacy increases throughout the building, the folders and clips could be shared with all members within the PLC. Eventually, as new teachers are hired or best practices are discovered, the walk-through clips could be shared with anyone who could benefit from watching expert teachers in a specific area. Collaborating on video-enhanced reflection supports the research from Carson (2008), as it allows the best practices to be brought to the forefront in PLCs. Carson stated, “The ability to analyze performance accurately, especially in relation to best practice, should allow for better cognitive understanding of the coaching process” (p. 388). Moreover, teachers should take advantage of being able to learn from others to develop their own skill set. The great basketball player, Kobe Bryant, stated, “I seriously stole all of my moves” (MacMullan, 2010, para. 3). Teachers who have a similar mindset will benefit from collaboration as their craft will continuously evolve as they will learn from others.

Data from the self-assessments show that teachers are confident in their perceived effectiveness according to the North Carolina teaching standards. Table 6 shows the total responses, which are broken down by how participants rated themselves on the self-assessment.

**Table 6**

*Summative Responses of Self-Assessments*

|          | Developing | Proficient | Accomplished | Distinguished |
|----------|------------|------------|--------------|---------------|
| Total    | 0          | 77         | 340          | 83            |
| NBCT     | 0          | 16         | 171          | 63            |
| Non-NBCT | 0          | 61         | 169          | 20            |

There are several key points from Table 6 to identify. First, no participant utilized

the developing rating for any of the 25 elements. Non-NBCT participants utilized the proficiency rating 45 more times than NBCTs. There was a difference of two responses in accomplished ratings between the two groups. Sixty-eight percent of the ratings from participants in both groups were accomplished, and the NBCT group utilized the distinguished rating 43 more times than the Non-NBCT group. The self-assessment data showed NBCT participants were more confident in their perceived effectiveness than Non-NBCT participants. However, the interview data showed many similarities between the two groups. This data discrepancy for perceived effectiveness should be considered by administrators. Administrators need to identify effective practices and share them with staff. Establishing concrete approaches to effective teaching supports the research from Ballock (2010), as it narrows teacher focus on what is needed to improve upon.

During the time period this study was conducted, Covid-19 was rampant, and a worldwide pandemic took place. All schools in the district where this study took place, as well as across North Carolina, the United States, and the world, shifted to virtual instruction. The pandemic forced teachers to record their lessons to share with their students, parents, colleagues, and administrators. Most teachers have since practiced video-enhanced instruction and have learned how to record lessons to share with the world. This situation may have reduced the complexity and fear teachers had of recording their instruction. Leaders should leverage this and begin implementing video-enhanced reflection. In the current situation, educational leaders are unsure when school will return to face-to-face instruction. Therefore, by implementing video-enhanced reflection, educational leaders can provide the structure needed for teachers to reflect and improve their effectiveness regardless if teachers are teaching virtually or face to face. In addition

to video-enhanced reflection, PLCs could also be facilitated online. Zhang et al. (2016) determined the effectiveness of online PLCs. The study concluded online PLCs were beneficial due to the amount of time teachers have to reflect during the school day can be limited. Through technology and the internet, teachers can reflect collaboratively with peers from all over the world at essentially any time they choose.

### **Suggestions for Future Research**

In relation to the implications of practice, further research is needed to determine if teacher perceived effectiveness and administrator perceptions of effective teachers are aligned. The self-assessment data were clear in regard to how those teachers perceived they were effective. Even with the structures of teacher evaluation standards, which are intended to measure teacher effectiveness, there is still room for interpretation on what demonstrates effectiveness. If needed, future studies should be conducted on how to close the gap on interpreting teacher effectiveness, as it would provide a clear avenue to increasing teacher effectiveness.

In addition to resolving differences in perceptions between teachers and administrators, examining the relationship between perceived effectiveness and student achievement is also needed. Do teachers' perceived effectiveness assessments correlate with their assigned students' achievement ratings? A similar question exists at the school level: Is there a correlation between administrators' perceived effectiveness and school performance? In classrooms and schools where there are positive correlations between these factors, researchers can examine the instructional practices that result in increased student achievement.

Although the study's data agreed that reflection impacted teacher effectiveness, it

showed teachers were not comfortable with the process of video-enhanced reflection because it made them feel vulnerable. More research is needed to identify the elements of a successful reflective culture. What are the components of a school where the efficacy of teachers who reflect is high? The study should look at the collaboration of teachers, master schedules, resources, and climate of these schools.

NBCTs had a greater perceived effectiveness than Non-NBCTs on the self-assessment. Both NBCT and Non-NBCT participants practiced reflection regularly and primarily used written reflection and reflection with colleagues. Is the reason for this discrepancy related to the limited use of video-enhanced reflection, or does the National Board certification process lead teachers to understand the impact of reflection to a greater degree than their counterparts? The interview and questionnaire data showed similar use of reflection and the overall impact of reflection were aligned within the two groups. Therefore, the question stands, why did the NBCT group rate themselves as more effective teachers than Non-NBCTs on the self-assessment when the interview and questionnaire data showed similarities between the two groups?

### **Limitations**

The inability to identify individual responses from the three instruments hindered my ability to triangulate all three data sources. Limitations that stemmed from this lack of demographic data included the inability to correlate specific responses from individual participants from the self-assessment, questionnaire, and interviews. Due to lack of participants who agreed to participate and the length of time participants used to complete the instruments, I collected data over 11 months. During this time period, if participants' perceived effectiveness or use of reflective practices evolved, the



relationship from the three data sources would have been affected. For example, if a participant completed the self-assessment in July and did not complete the interviews until May, the correlation or relationship of data may not have been as strong as it would have been if completed within a 3-week time period. An additional limitation that stemmed from the lack of demographic data was the inability to identify which respondents participated in each data collection instrument. Participants voluntarily participated and had the option to only participate in the instruments of their choice. If a participant did not complete all three instruments, the relationship from the data would be affected. During the time period when this study took place, the Covid-19 pandemic existed. In March 2020, instruction shifted online, and teachers worked remotely from home. Teachers were not able to meet in person with students and colleagues. The inability to be face to face may have impacted their reflective practices. Additionally, participant perception of effective teaching may have evolved as teaching remotely requires different skills than teaching face to face.

### **Final Reflection**

The data presented in Chapter 4 supported the research in Chapter 2 and showed a relationship between reflection and teacher effectiveness. The data from the self-assessment presented a pattern that NBCTs had a greater perceived effectiveness than Non-NBCTs. The questionnaire data showed both groups practiced frequently and benefited from reflection. However, Standard 5 interview data indicated that NBCTs reflected more frequently than Non-NBCTs. The themes identified in the interview data analysis showed that reflection impacted the effectiveness of teachers within all five teaching standards in North Carolina for NBCT and Non-NBCT participants.

The interview data suggested that NBCT participants applied reflection to more elements of the teaching standards than Non-NBCT participants. Based on interview data, NBCT participants had a greater understanding of student diversity when designing instruction. This conclusion related to the data from the second and third research questions. From the Standard 2 data, NBCTs and Non-NBCTs directly spoke to how reflection allowed them to meet diverse needs by adapting their physical components of the classroom. Additionally, NBCTs spoke to how reflection also allowed them to adapt the instructional resources to meet the needs of all learners. Data from Standard 3 showed that both groups utilized reflection to determine the progression of standards. NBCTs provided more insight by addressing how reflection also impacted their lesson planning and instructional design to meet the standards. Overall, the interview data from both groups were aligned to one another with the two key differences being mentioned above.

The data from the questionnaire “How Does Video Analysis Impact Teacher Reflection-for-Action” showed that both groups utilized written reflection and collaboration with peers most frequently. Written reflection and PLCs were the most common practices used because participants could practice them in their daily roles as teachers. The data suggested that teachers or educational leaders who are in the early stages of reflection should start with written reflection, as it does not require colleagues or a specific environment.

In conclusion, participants believed that reflection impacted teacher effectiveness as measured by the five North Carolina teaching standards. NBCT participants found that video-enhanced reflection was effective but chose not to practice it regularly. The self-assessment data concluded that NBCT participants perceived their effectiveness was

greater than participants in the Non-NBCT group. In closing, the data agreed with the research and found many benefits to practicing reflection. Successful reflection is not the sole responsibility of the teacher; educational leaders should strive to provide the structure, time, resources, and culture to support teacher reflection.

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Appendix A

Permission to Use Dr. Geoffrey Wright's Questionnaire



Samuel Jones  
to geoffwright

Sun, Feb 17, 12:10 AM ☆ ↩

Dr. Wright,

I am an elementary school principal in North Carolina and I am currently enrolled at Gardner-Webb University where I am working to obtain a doctorate in educational leadership. The purpose of my research and dissertation is to study the impact that teacher reflection has on teacher effectiveness. Specifically, I am conducting a study with k-12 National Board Certified teachers who work in our local school districts. I have chosen National Board Certified teachers because of their requirement to utilize video enhanced reflection. Moreover, teacher reflection is a part of our North Carolina teaching standards. I am hoping to gain more insight on the impact of video enhanced reflection in comparison or in conjunction with other reflective practices.

Through my research, I read your study *How Does Video Analysis Impact Teacher Reflection-for-Action* and appreciate the research tools and design you utilized. I am requesting permission to use your Video Enhanced Reflection Survey with the participants in my study. This request is specific to my dissertation and will be used to collect information and data from teachers who participate in the study.

If needed, I am more than happy to discuss this request in greater detail via email or phone. Please let me know if you have questions or concerns.

Sincerely,

Samuel Jones

Geoffrey Wright <geoffwright@byu.edu>  
to me

Sun, Feb 17, 1:02 PM ☆ ↩ ⋮

Thank you for contacting me - I appreciate your professionalism.

I fully support your research and request - feel free any of the material as needed; if you need anything don't hesitate to contact me.

All the best -

Geoff



**Dr. Geoffrey A. Wright**  
Technology and Engineering Studies  
Brigham Young University  
Office 801-422-7804 | Cell 801-822-9952  
Fax 801-422-0653 | [geoffwright@byu.edu](mailto:geoffwright@byu.edu)

Appendix B

How Reflection Impacts Teacher Effectiveness

4/13/2019

How Reflection Impacts Teacher Effectiveness?

## How Reflection Impacts Teacher Effectiveness?

Thank you for taking the time to complete the survey - your answers will provide wonderful insight and evidence towards further developing this research.

This survey has 34 questions; the first 5 questions are demographic questions, the remaining 29 questions relate to your reflection practices. There are several questions specific to video enhanced reflection. If you do not have experience with video taping your teaching, please write in NA.

Please be as honest as possible - your anonymity will be preserved. The survey will take at the most between 15-20 minutes (depending on how fast you can read and type)

Again, we thank you for your willingness to help support this important research project.

I agree to start and complete this survey, and answer as truthfully as possible. I also permit my answers to be used for purposes of this research study.

Yes

No

Are you a National Board Certified Teacher?

Yes

No

Gender

Male

Female



4/13/2019

How Reflection Impacts Teacher Effectiveness?

### Years of Formal Teaching Experience

- 1-3 Years
- 4-10 Years
- 10-20 Years
- 20 or more Years

### Current Level Teaching

- Elementary School
- Middle School
- High School

Describe the video enhanced reflection process that you participated in.

Your answer

What do you think the purpose of the process was?

Your answer

Tell me about the your experiences engaging in this process?

Your answer

Compare written self reflection to the video enhanced enhanced reflection process. (Like, Dislike, Effective, Non-Effective, etc.)

Your answer



4/13/2019

How Reflection Impacts Teacher Effectiveness?

What does it mean to reflect?

Your answer

Is reflection important to you?

Yes

No

Is reflection more important to you than before you engaged in the video enhanced reflection?

Yes

No

When was the time you spent most of your time reflecting on your teaching? (ie. home, school, both)

Your answer

How much time do you usually spend reflecting?

Your answer

How much time do you spend reflecting during the video enhanced reflection process?

Your answer

According to you, what would an effective method of reflection?

Your answer



4/13/2019

How Reflection Impacts Teacher Effectiveness?

What are a few things that could make reflection more effective?

Your answer

What did you get of this process?

Your answer

Did this process have any influence on your reflection abilities/desire, etc.? (If so, how?)

Your answer

Did this process have any impact/influence on your teaching? If so, explain

Your answer

Did this process influence your consultation with your principal? If so, explain.

Your answer

Tell me a few bad/difficult things about this process.

Your answer

Tell me a few good/helpful things about this process.

Your answer

How could this process be improved?

Your answer



Has your ability to reflect since starting this process increased? If so, explain.

Your answer

Do you think this process has or can positively influence/increase your reflective abilities/aptitude? Please explain.

Your answer

Do you think reflection for action can improve your performance (is there a correlation with reflection and performance)? Explain.

Your answer

What kind of impact has this process had on your reflection abilities? Explain

Your answer

Can you better now identify areas for improvement (action) because of the video enhanced reflection process?

Your answer

Are you better able to critique the areas for improvement (action) you identified as a result of the video enhanced reflection process?

Your answer

Are you better able to support/justify the need (or lack of need) for action as a result of the video enhanced reflection process?

Your answer



4/13/2019

How Reflection Impacts Teacher Effectiveness?

What is the effort involved (cost for video enhanced reflection, not the cost for National Board Certification) to you to implement the video enhanced process?

Your answer

Was the effort (cost) worth what you got out of it?

Yes

No

Other Feedback?

Your answer

SUBMIT

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Google Forms





Appendix C

Rubric for Evaluating North Carolina Teachers

## Rubric for Evaluating North Carolina Teachers (Required for Self-Assessment and for Observations)

This form should be used for the teacher self-assessment, classroom observation, and the summary evaluation.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

School: \_\_\_\_\_ District: \_\_\_\_\_

Evaluator: \_\_\_\_\_ Title: \_\_\_\_\_

Start Time: \_\_\_\_\_ End Time: \_\_\_\_\_

### Standard I: Teachers Demonstrate Leadership

|  |   |   |  |  |  |
|--|---|---|--|--|--|
| <b>Observation</b>   | <p><b>Element Ia. Teachers lead in their classrooms.</b> Teachers demonstrate leadership by taking responsibility for the progress of all students to ensure that they graduate from high school, are globally competitive for work and postsecondary education, and are prepared for life in the 21st century. Teachers communicate this vision to their students. Using a variety of data sources, they organize, plan, and set goals that meet the needs of the individual student and the class. Teachers use various types of assessment data during the school year to evaluate student progress and to make adjustments to the teaching and learning process. They establish a safe, orderly environment, and create a culture that empowers students to collaborate and become lifelong learners.</p> |   |  |  |  |
|  | <b>Developing</b>   | <b>Proficient</b>   | <b>Accomplished</b>  | <b>Distinguished</b>   | <b>Not Demonstrated<br/>(Comment Required)</b> |
|  | <p><input type="checkbox"/> Understands how they contribute to students graduating from high school.</p> <p><input type="checkbox"/> Uses data to understand the skills and abilities of students.</p>  | <p>... and</p> <p><input type="checkbox"/> Takes responsibility for the progress of students to ensure that they graduate from high school.</p> <p><input type="checkbox"/> Provides evidence of data-driven instruction throughout all classroom activities.</p> <p><input type="checkbox"/> Establishes a safe and orderly classroom.</p> | <p>... and</p> <p><input type="checkbox"/> Communicates to students the vision of being prepared for life in the 21st century.</p> <p><input type="checkbox"/> Evaluates student progress using a variety of assessment data.</p> <p><input type="checkbox"/> Creates a classroom culture that empowers students to collaborate.</p> | <p>... and</p> <p><input type="checkbox"/> Encourages students to take responsibility for their own learning.</p> <p><input type="checkbox"/> Uses classroom assessment data to inform program planning.</p> <p><input type="checkbox"/> Empowers and encourages students to create and maintain a safe and supportive school and community environment.</p> |  |
| ✓  |   |   |  |  |  |
| <p><b>Element Ib. Teachers demonstrate leadership in the school.</b> Teachers work collaboratively with school personnel to create a professional learning community. They analyze and use local, state, and national data to develop goals and strategies in the school improvement plan that enhances student learning and teacher working conditions. Teachers provide input in determining the school budget and in the selection of professional development that meets the needs of students and their own professional growth. They participate in the hiring process and collaborate with their colleagues to mentor and support teachers to improve the effectiveness of their departments or grade levels.</p> |   |   |  |  |  |
|  | <p><input type="checkbox"/> Attends professional learning community meetings.</p> <p><input type="checkbox"/> Displays awareness of the goals of the school improvement plan.</p>   | <p>... and</p> <p><input type="checkbox"/> Participates in professional learning community.</p> <p><input type="checkbox"/> Participates in developing and/or implementing the school improvement plan.</p>   | <p>... and</p> <p><input type="checkbox"/> Assumes a leadership role in professional learning community.</p> <p><input type="checkbox"/> Collaborates with school personnel on school improvement activities.</p>  | <p>... and</p> <p><input type="checkbox"/> Collaborates with colleagues to improve the quality of learning in the school.</p> <p><input type="checkbox"/> Assumes a leadership role in implementing school improvement plan throughout the building.</p>   |  |

North Carolina Teacher Evaluation Process

|             |   |   |  |   |  |
|-------------|---|---|--|---|--|
| Observation | <b>Element Ic. Teachers lead the teaching profession.</b> Teachers strive to improve the teaching profession. They contribute to the establishment of positive working conditions in their school. They actively participate in and advocate for decision-making structures in education and government that take advantage of the expertise of teachers. Teachers promote professional growth for all educators and collaborate with their colleagues to improve the profession. |   |  |   |  |
|             | <b>Developing</b>   | <b>Proficient</b>   | <b>Accomplished</b>  | <b>Distinguished</b>  | <b>Not Demonstrated<br/>(Comment Required)</b> |
|             | <input type="checkbox"/> Has knowledge of opportunities and the need for professional growth and begins to establish relationships with colleagues.   | ... and<br><input type="checkbox"/> Contributes to the:<br><input type="checkbox"/> improvement of the profession through professional growth.<br><input type="checkbox"/> establishment of positive working relationships.<br><input type="checkbox"/> school's decision-making processes as required. | ... and<br><input type="checkbox"/> Promotes positive working relationships through professional growth activities and collaboration.                            | ... and<br><input type="checkbox"/> Seeks opportunities to lead professional growth activities and decision-making processes.   |  |
|             | <b>Element Id. Teachers advocate for schools and students.</b> Teachers advocate for positive change in policies and practices affecting student learning. They participate in the implementation of initiatives to improve the education of students.  |   |  |   |  |
|             | <input type="checkbox"/> Knows about the policies and practices affecting student learning.   | ... and<br><input type="checkbox"/> Supports positive change in policies and practices affecting student learning.  | ... and<br><input type="checkbox"/> Participates in developing policies and practices to improve student learning.   | ... and<br><input type="checkbox"/> Actively participates, promotes, and provides strong supporting evidence for implementation of initiatives to improve education.                                    |  |
|             | <b>Element Ie. Teachers demonstrate high ethical standards.</b> Teachers demonstrate ethical principles including honesty, integrity, fair treatment, and respect for others. Teachers uphold the <i>Code of Ethics for North Carolina Educators</i> (effective June 1, 1997) and the <i>Standards for Professional Conduct</i> adopted April 1, 1998. ( <a href="http://www.ncptsc.org">www.ncptsc.org</a> )   |   |  |   |  |
|             | <input type="checkbox"/> Understands the importance of ethical behavior as outlined in the <i>Code of Ethics for North Carolina Educators</i> and the <i>Standards for Professional Conduct</i> .   | ... and<br><input type="checkbox"/> Demonstrates ethical behavior through adherence to the <i>Code of Ethics for North Carolina Educators</i> and the <i>Standards for Professional Conduct</i> .   | ... and<br><input type="checkbox"/> Knows and upholds the <i>Code of Ethics for North Carolina Educators</i> and the <i>Standards for Professional Conduct</i> . | ... and<br><input type="checkbox"/> Models the tenets of the <i>Code of Ethics for North Carolina Educators</i> and the <i>Standards for Professional Conduct</i> and encourages others to do the same. |  |

Comments:

Examples of Artifacts:

- |  |  |   |
|--|--|---|
| <input type="checkbox"/> Lesson plans                | <input type="checkbox"/> Class rules and procedures                            | <input type="checkbox"/> National Board Certification |
| <input type="checkbox"/> Journals                    | <input type="checkbox"/> Participation in the Teacher Working Condition Survey | <input type="checkbox"/> Discipline Records           |
| <input type="checkbox"/> Student handbooks           | <input type="checkbox"/> Professional Learning Communities                     | <input type="checkbox"/> _____                        |
| <input type="checkbox"/> Student work                | <input type="checkbox"/> Membership in professional organizations              | <input type="checkbox"/> _____                        |
| <input type="checkbox"/> School improvement planning | <input type="checkbox"/> Formal and informal mentoring                         | <input type="checkbox"/> _____                        |
| <input type="checkbox"/> Service on committees       | <input type="checkbox"/> Surveys   | <input type="checkbox"/> _____                        |
| <input type="checkbox"/> Relevant data               |  |   |

## Standard II: Teachers Establish a Respectful Environment for a Diverse Population of Students

| Observation | <b>Element IIa. Teachers provide an environment in which each child has a positive, nurturing relationship with caring adults.</b> Teachers encourage an environment that is inviting, respectful, supportive, inclusive, and flexible.  |  |   |  |  |
|-------------|--|--|---|--|--|
|             | Developing   | Proficient   | Accomplished  | Distinguished  | Not Demonstrated<br>(Comment Required) |
| ✓           | <input type="checkbox"/> Appreciates and understands the need to establish nurturing relationships.  | . . . and<br><input type="checkbox"/> Establishes an inviting, respectful, inclusive, flexible, and supportive learning environment.                             | . . . and<br><input type="checkbox"/> Maintains a positive and nurturing learning environment.  | . . . and<br><input type="checkbox"/> Encourages and advises others to provide a nurturing and positive learning environment for all students.                                 |  |
|             | <b>Element IIb. Teachers embrace diversity in the school community and in the world.</b> Teachers demonstrate their knowledge of the history of diverse cultures and their role in shaping global issues. They actively select materials and develop lessons that counteract stereotypes and incorporate histories and contributions of all cultures. Teachers recognize the influence of race, ethnicity, gender, religion, and other aspects of culture on a student's development and personality. Teachers strive to understand how a student's culture and background may influence his or her school performance. Teachers consider and incorporate different points of view in their instruction. |  |   |  |  |
| ✓           | <input type="checkbox"/> Acknowledges that diverse cultures impact the world.  | . . . and<br><input type="checkbox"/> Displays knowledge of diverse cultures, their histories, and their roles in shaping global issues.                         | . . . and<br><input type="checkbox"/> Uses materials or lessons that counteract stereotypes and acknowledges the contributions of all cultures. | . . . and<br><input type="checkbox"/> Promotes a deep understanding of cultures through the integration of culturally sensitive materials and ideas throughout the curriculum. |  |
| ✓           | <input type="checkbox"/> Demonstrates awareness of the diversity of students in the classroom.   | <input type="checkbox"/> Acknowledges the influence of race, ethnicity, gender, religion, socio-economics, and culture on a student's development and attitudes. | <input type="checkbox"/> Consistently incorporates different points of view in instruction.   | <input type="checkbox"/> Capitalizes on diversity as an asset in the classroom.  |  |
|             | <b>Element IIc. Teachers treat students as individuals.</b> Teachers maintain high expectations, including graduation from high school, for students of all backgrounds. Teachers appreciate the differences and value the contributions of each student in the learning environment by building positive, appropriate relationships.  |  |   |  |  |
| ✓           | <input type="checkbox"/> Holds high expectations of students.  | . . . and<br><input type="checkbox"/> Communicates high expectations for all students.   | . . . and<br><input type="checkbox"/> Encourages and values contributions of students, regardless of background or ability.                     | . . . and<br><input type="checkbox"/> Helps students hold high expectations for themselves and their peers.  |  |

North Carolina Teacher Evaluation Process

| Observation  | <b>Element IId. Teachers adapt their teaching for the benefit of students with special needs.</b> Teachers collaborate with the range of support specialists to help meet the special needs of all students. Through inclusion and other models of effective practice, teachers engage students to ensure that their needs are met. |   |   |               |                                     |
|--|---|---|---|---------------|-------------------------------------|
|  | Developing  | Proficient  | Accomplished  | Distinguished | Not Demonstrated (Comment Required) |
| <input checked="" type="checkbox"/> Recognizes that students have a variety of learning needs.<br><br><input checked="" type="checkbox"/> Is knowledgeable of effective practices for students with special needs.   | ... and<br><br><input type="checkbox"/> Collaborates with specialists who can support the special learning needs of students.<br><br><input type="checkbox"/> Provides unique learning opportunities such as inclusion and research-based, effective practices for students with special needs.                                     | ... and<br><br><input type="checkbox"/> Understands the roles of and collaborates with the full range of support specialists to help meet the special needs of all students.<br><br><input type="checkbox"/> Effectively engages special needs students in learning activities and ensures their unique learning needs are met. | ... and<br><br><input type="checkbox"/> Anticipates the unique learning needs of students and solicits assistance from within and outside the school to address those needs.<br><br><input type="checkbox"/> Adapts instruction for the benefit of students with special needs and helps colleagues do the same for their students. |               |                                     |
| <b>Element Iie. Teachers work collaboratively with the families and significant adults in the lives of their students.</b> Teachers recognize that educating children is a shared responsibility involving the school, parents or guardians, and the community. Teachers improve communication and collaboration between the school and the home and community in order to promote trust and understanding and build partnerships with all segments of the school community. Teachers seek solutions to overcome cultural and economic obstacles that may stand in the way of effective family and community involvement in the education of their students. |   |   |   |               |                                     |
| <input type="checkbox"/> Responds to family and community concerns.  | ... and<br><br><input type="checkbox"/> Communicates and collaborates with the home and community for the benefit of students.  | ... and<br><br><input type="checkbox"/> Recognizes obstacles to family and community participation and conscientiously seeks solutions to overcome them.  | ... and<br><br><input type="checkbox"/> Promotes trust and understanding throughout the school community.   |               |                                     |

Comments:

**Examples of Artifacts:**

- |   |   |                                |
|---|---|--------------------------------|
| <input type="checkbox"/> Student profiles                               | <input type="checkbox"/> Communications w/parents/community                               | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Student surveys                                | <input type="checkbox"/> Professional development on cultural attitudes and awareness     | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Cooperation with ESL teachers                  | <input type="checkbox"/> Use of technology to incorporate cultural awareness into lessons | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Lessons that integrate international content   |   | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Documentation of referral data and use of IEPs |   | <input type="checkbox"/> _____ |



**Standard III: Teachers Know the Content They Teach**

| Observation  | <b>Element IIIa. Teachers align their instruction with the North Carolina Standard Course of Study.</b> In order to enhance the <i>North Carolina Standard Course of Study</i> , teachers investigate the content standards developed by professional organizations in their specialty area. They develop and apply strategies to make the curriculum rigorous and relevant for all students and provide a balanced curriculum that enhances literacy skills. Elementary teachers have explicit and thorough preparation in literacy instruction. Middle and high school teachers incorporate literacy instruction within the content area or discipline. |   |  |               |  |
|--|---|---|--|---------------|--|
|  | Developing  | Proficient  | Accomplished   | Distinguished | Not Demonstrated<br>(Comment Required) |
| ✓ <input type="checkbox"/> Demonstrates an awareness of the <i>North Carolina Standard Course of Study</i> and references it in the preparation of lesson plans.<br><br>✓ <input type="checkbox"/> <i>Elementary:</i> Begins to integrate literacy instruction in selected lessons.<br><br>✓ <input type="checkbox"/> <i>Secondary:</i> Recognizes the importance of integrating literacy strategies within the content areas.   | . . . and<br><br><input type="checkbox"/> Understands the <i>North Carolina Standard Course of Study</i> , uses it in preparation of lesson plans, and applies strategies to make the curriculum rigorous and relevant.<br><br><input type="checkbox"/> <i>Elementary:</i> Integrates effective literacy instruction throughout the curriculum.<br><br><input type="checkbox"/> <i>Secondary:</i> Incorporates a wide variety of literacy skills within content areas to enhance learning.  | . . . and<br><br><input type="checkbox"/> Develops and applies strategies based on the <i>North Carolina Standard Course of Study</i> and standards developed by professional organizations to make the curriculum balanced, rigorous and relevant.<br><br><input type="checkbox"/> <i>Elementary:</i> Evaluates and reflects upon the effectiveness of literacy instruction.<br><br><input type="checkbox"/> <i>Secondary:</i> Evaluates and reflects upon the effectiveness of literacy instruction within content areas. | . . . and<br><br><input type="checkbox"/> Assists colleagues in applying such strategies in their classrooms.<br><br><input type="checkbox"/> <i>Elementary:</i> Makes necessary changes to instructional practice to improve student learning.<br><br><input type="checkbox"/> <i>Secondary:</i> Makes necessary changes to instructional practice to improve student learning. |               |  |
| <b>Element IIIb. Teachers know the content appropriate to their teaching specialty.</b> Teachers bring a richness and depth of understanding to their classrooms by knowing their subjects beyond the content they are expected to teach and by directing students' natural curiosity into an interest in learning. Elementary teachers have broad knowledge across disciplines. Middle school and high school teachers have depth in one or more specific content areas or disciplines. |   |   |  |               |  |
| ✓ <input type="checkbox"/> Demonstrates a basic level of content knowledge in the teaching specialty to which assigned.  | . . . and<br><br><input type="checkbox"/> Demonstrates an appropriate level of content knowledge in the teaching specialty to which assigned.   | . . . and<br><br><input type="checkbox"/> Applies knowledge of subject beyond the content in assigned teaching specialty. Motivates students to investigate the content area to expand their knowledge and satisfy their natural curiosity.   | . . . and<br><br><input type="checkbox"/> Extends knowledge of subject beyond content in their teaching specialty and sparks students' curiosity for learning beyond the required course work.   |               |  |

North Carolina Teacher Evaluation Process

| Observation  | Element IIIc. Teachers recognize the interconnectedness of content areas/disciplines. Teachers know the links and vertical alignment of the grade or subject they teach and the <i>North Carolina Standard Course of Study</i> . Teachers understand how the content they teach relates to other disciplines in order to deepen understanding and connect learning for students. Teachers promote global awareness and its relevance to subjects they teach. |  |   |               |                                     |
|--|--|--|---|---------------|-------------------------------------|
|  | Developing   | Proficient   | Accomplished  | Distinguished | Not Demonstrated (Comment Required) |
| <input checked="" type="checkbox"/> Understands the links between grade/subject and the <i>North Carolina Standard Course of Study</i> .<br><br><input checked="" type="checkbox"/> Displays global awareness.   | ... and<br><input type="checkbox"/> Demonstrates knowledge of links between grade/subject and the <i>North Carolina Standard Course of Study</i> .<br><br><input type="checkbox"/> Promotes global awareness and its relevance to the subjects.  | ... and<br><input type="checkbox"/> Demonstrates knowledge of the links and vertical alignment of the grade or subject area and the <i>North Carolina Standard Course of Study</i> . Relates content to other disciplines.<br><br><input type="checkbox"/> Integrates global awareness activities throughout lesson plans and classroom instructional practices. | ... and<br><input type="checkbox"/> Collaborates with teachers from other grades or subject areas to establish links between disciplines and influence school-wide curriculum and teaching practice.<br><br><input type="checkbox"/> Promotes global awareness and its relevance to all faculty members, influencing curriculum and teaching practices throughout the school. |               |                                     |
| Element III d. Teachers make instruction relevant to students. Teachers incorporate 21 <sup>st</sup> century life skills into their teaching deliberately, strategically, and broadly. These skills include leadership, ethics, accountability, adaptability, personal productivity, personal responsibility, people skills, self-direction, and social responsibility. Teachers help their students understand the relationship between the <i>North Carolina Standard Course of Study</i> and 21 <sup>st</sup> century content, which includes global awareness; financial, economic, business and entrepreneurial literacy; civic literacy; and health awareness. |  |  |   |               |                                     |
| <input checked="" type="checkbox"/> Identifies relationships between the <i>North Carolina Standard Course of Study</i> and life in the 21 <sup>st</sup> century.  | ... and<br><input type="checkbox"/> Identifies relationships between the core content and 21 <sup>st</sup> century content.  | ... and<br><input type="checkbox"/> Integrates core content and 21 <sup>st</sup> century content throughout lesson plans and classroom instructional practices.  | ... and<br><input type="checkbox"/> Deepens students' understandings of 21 <sup>st</sup> century skills and helps them make their own connections and develop new skills.   |               |                                     |

Comments:

Examples of Artifacts:

- |   |  |                                |
|---|--|--------------------------------|
| <input type="checkbox"/> Display of creative student work   | <input type="checkbox"/> Content standards | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Use of NC Standard Course of Study | <input type="checkbox"/> _____             | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Lesson plans                       | <input type="checkbox"/> _____             | <input type="checkbox"/> _____ |





## North Carolina Teacher Evaluation Process

| Observation   | <b>Element IVd. Teachers integrate and utilize technology in their instruction.</b> Teachers know when and how to use technology to maximize student learning. Teachers help students use technology to learn content, think critically, solve problems, discern reliability, use information, communicate, innovate, and collaborate. |  |  |   |  |
|---|--|--|--|---|--|
|   | <b>Developing</b>  | <b>Proficient</b>  | <b>Accomplished</b>  | <b>Distinguished</b>  | <b>Not Demonstrated<br/>(Comment Required)</b> |
| ✓   | <input type="checkbox"/> Assesses effective types of technology to use for instruction.  | . . . and<br><input type="checkbox"/> Demonstrates knowledge of how to utilize technology in instruction.  | . . . and<br><input type="checkbox"/> Integrates technology with instruction to maximize student learning.   | . . . and<br><input type="checkbox"/> Provides evidence of student engagement in higher level thinking skills through the integration of technology.                                      |  |
| <b>Element IVe. Teachers help students develop critical-thinking and problem-solving skills.</b> Teachers encourage students to ask questions, think creatively, develop and test innovative ideas, synthesize knowledge, and draw conclusions. They help students exercise and communicate sound reasoning; understand connections; make complex choices; and frame, analyze, and solve problems.      |  |  |  |   |  |
| ✓   | <input type="checkbox"/> Understands the importance of developing students' critical thinking and problem solving skills.  | . . . and<br><input type="checkbox"/> Demonstrates knowledge of processes needed to support students in acquiring critical thinking skills and problem-solving skills. | . . . and<br>Teaches students the processes needed to: <ul style="list-style-type: none"> <li><input type="checkbox"/> think creatively and critically,</li> <li><input type="checkbox"/> develop and test innovative ideas,</li> <li><input type="checkbox"/> synthesize knowledge,</li> <li><input type="checkbox"/> draw conclusions,</li> <li><input type="checkbox"/> exercise and communicate sound reasoning,</li> <li><input type="checkbox"/> understand connections,</li> <li><input type="checkbox"/> make complex choices, and</li> <li><input type="checkbox"/> frame, analyze and solve problems.</li> </ul> | . . . and<br><input type="checkbox"/> Encourages and assists teachers throughout the school to integrate critical thinking and problem solving skills into their instructional practices. |  |
| <b>Element IVf. Teachers help students work in teams and develop leadership qualities.</b> Teachers teach the importance of cooperation and collaboration. They organize learning teams in order to help students define roles, strengthen social ties, improve communication and collaborative skills, interact with people from different cultures and backgrounds, and develop leadership qualities. |  |  |  |   |  |
| ✓   | <input type="checkbox"/> Provides opportunities for cooperation, collaboration, and leadership through student learning teams.   | . . . and<br><input type="checkbox"/> Organizes student learning teams for the purpose of developing cooperation, collaboration, and student leadership.               | . . . and<br><input type="checkbox"/> Encourages students to create and manage learning teams.   | . . . and<br><input type="checkbox"/> Fosters the development of student leadership and teamwork skills to be used beyond the classroom.  |  |

North Carolina Teacher Evaluation Process

| Observation   | Element IVg. Teachers communicate effectively. Teachers communicate in ways that are clearly understood by their students. They are perceptive listeners and are able to communicate with students in a variety of ways even when language is a barrier. Teachers help students articulate thoughts and ideas clearly and effectively. |  |   |               |                                     |
|---|--|--|---|---------------|-------------------------------------|
|   | Developing   | Proficient   | Accomplished  | Distinguished | Not Demonstrated (Comment Required) |
| <input checked="" type="checkbox"/> Demonstrates the ability to effectively communicate with students.<br><br><input checked="" type="checkbox"/> Provides opportunities for students to articulate thoughts and ideas.   | . . . and<br><br><input type="checkbox"/> Uses a variety of methods for communication with all students.<br><br><input type="checkbox"/> Consistently encourages and supports students to articulate thoughts and ideas clearly and effectively.   | . . . and<br><br><input type="checkbox"/> Creates a variety of methods to communicate with all students.<br><br><input type="checkbox"/> Establishes classroom practices which encourage all students to develop effective communication skills.             | . . . and<br><br><input type="checkbox"/> Anticipates possible student misunderstandings and proactively develops teaching techniques to mitigate concerns.<br><br><input type="checkbox"/> Establishes school-wide and grade appropriate vehicles to encourage students throughout the school to develop effective communication skills.                                   |               |                                     |
| Element IVh. Teachers use a variety of methods to assess what each student has learned. Teachers use multiple indicators, including formative and summative assessments, to evaluate student progress and growth as they strive to eliminate achievement gaps. Teachers provide opportunities, methods, feedback, and tools for students to assess themselves and each other. Teachers use 21 <sup>st</sup> century assessment systems to inform instruction and demonstrate evidence of students' 21 <sup>st</sup> century knowledge, skills, performance, and dispositions. |  |  |   |               |                                     |
| <input checked="" type="checkbox"/> Uses indicators to monitor and evaluate student progress.<br><br><input checked="" type="checkbox"/> Assesses students in the attainment of 21 <sup>st</sup> century knowledge, skills, and dispositions.   | . . . and<br><br><input type="checkbox"/> Uses multiple indicators, both formative and summative, to monitor and evaluate student progress and to inform instruction.<br><br><input type="checkbox"/> Provides evidence that students attain 21 <sup>st</sup> century knowledge, skills and dispositions.                              | . . . and<br><br><input type="checkbox"/> Uses the information gained from the assessment activities to improve teaching practice and student learning.<br><br><input type="checkbox"/> Provides opportunities for students to assess themselves and others. | . . . and<br><br><input type="checkbox"/> Teaches students and encourages them to use peer and self-assessment feedback to assess their own learning.<br><br><input type="checkbox"/> Encourages and guides colleagues to assess 21 <sup>st</sup> century skills, knowledge, and dispositions and to use the assessment information to adjust their instructional practice. |               |                                     |

Comments:

Examples of Artifacts:

- |  |  |                                |
|--|--|--------------------------------|
| <input type="checkbox"/> Lesson plans                  | <input type="checkbox"/> Documentation of differentiated instruction                     | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Display of technology used    | <input type="checkbox"/> Materials used to promote critical thinking and problem solving | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Professional development      | <input type="checkbox"/> Collaborative lesson planning                                   | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Use of student learning teams |  | <input type="checkbox"/> _____ |

Appendix D  
Interview Questions

Interview Questions:

1. How does reflection impact teacher leadership?
2. How does reflection impact the ability of teachers to establish a respectful environment for diverse population of students?
3. How does reflection impact teachers' knowledge of content knowledge?
4. How does reflection impact teachers on facilitating learning for students?
5. How does reflection impact teachers' reflection on practice?
6. Is there anything else you would like to add regarding the impact that reflection has on your effectiveness as teacher?